

**WEEKLY PROGRESS UPDATE
FOR MAY 8 – MAY 12, 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 May 8 to May 12, 2000.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of May 12 is summarized in Table 1.

Table 1. Drilling progress as of May 12, 2000				
Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-100	Impact Area Response Well (P-4)	214	80	164-174 179-189
MW-101	Impact Area Response Well (P-5)	220	87	131-141 158-168
MW-102	Impact Area Response Well (P-21)	230	83	
MW-103	Impact Area Response Well (P-17)	28		
MW-104	Target 9 Well	52		
bgs = below ground surface bwt = below water table				

Well installation was completed at MW-100 and MW-101 (Impact Area response wells P-4 and P-5). Drilling commenced on MW-102 (Impact Area response well P-21), MW-103 (Impact Area response well P-17), and MW-104 (Target 9 well). The development of newly installed wells continued.

Samples collected during the reporting period are summarized in Table 2. Soil samples were collected from the remaining craters of the UXO detonated on 5/2/00 at the P-19 pad. Groundwater sampling commenced for the Long Term Monitoring wells. Groundwater sampling continued for the second round of the Demo 1 wells. Groundwater profile samples were collected from MW-101 (P-5) and MW-102 (P-21). Deep soil samples were collected during drilling at the borings for MW-102, MW-103, and MW-104. Soil samples were collected from the four Gun and Mortar control grids.

The Guard, EPA, and MADEP had a meeting on May 11 to discuss technical issues, including the following:

- Ogden distributed copies of the memorandum of resolution on the PEP Report, the response to comments for the Phase IIb Workplan, the revised Rapid Response Action schedule, and the September BIP Report.
- Jacobs presented an update of the CS-19 investigation. Copies of the presentation from last night's JPAT meeting were distributed for review, including the CS-19 plume in plan view and cross section. EPA asked why 58MW0011 was not included. Jacobs indicated that they did not include data that they believed were background. EPA indicated that 58MW0011 should be included in the FS map. Ogden asked the status of the anomalies detected in the UXO survey. Jacobs indicated that UXO

located on the surface was detonated and subsurface anomalies have not been investigated. EPA asked how they would be discussed in the report. Jacobs indicated that the size, location, and a comparison of the anomalies to known UXO would be done. Ogden asked if the subsurface COPCs from the risk assessment included leachability to groundwater. Jacobs stated that the risk assessment did not include leachability.

- JPO provided an update of the Water Supply Investigation. A handout of the Site 1 groundwater results was distributed for review. Site 2 should be ready later this week and Site 4 next week. Site 5 may be dropped from consideration because of elevated radon, pipeline access difficulties, and limited production. A proposal for the pump test of site 3 has been submitted which will include the installation of the pump well and 3 to 5 monitoring wells. The pump test for Site 3 should be started by May 24. The pump tests for sites 1 and 2 should be complete by the end of June, and site 4 by the end of July. EPA asked if the pump test monitoring wells are sampled after they are installed. JPO stated that they would have to look into it. The Guard and MADEP requested electronic copies of the ZOCs for all sites. JPO requested that the Groundwater study release one of the drill rigs if at all possible. Ogden indicated that in order to keep on schedule they would need all three rigs until June.
- Tetra Tech provided an update of the Munitions Survey Investigation. The geophysics survey started at Donnelly Pond. It will take a day or two to determine how well it is working, and expect to take a few weeks to complete the ponds. Some of the surface metal at the slit trench will have to be removed prior to the survey, which is expected to begin in a few weeks. Revising the HUTA work plan and should be distributed tomorrow. Final locations for the HUTA are needed by next week. Tetra Tech UXO personnel will be licensed to do the UXO detonations as of this Friday. EPA asked the status of the Impact Area response wells survey and back tracks. Ogden indicated that the inner transect could be done in one week. EPA indicated that they would like this information before the selection of the HUTA area if possible. EPA asked if the REC for the HUTA has been done yet. Tetra Tech indicated that it has not been completed yet. DEP suggested that courtesy copies be sent to Fish and Wildlife and a copy to the DEM. UXO clearance continues on the J-2 Range with two items located that require disposal. EPA provided comments on the J-2 Range geophysics plan.
- There was a discussion of the training schedule, and potential impacts on investigations. A 44-page schedule of training events was handed out. Ogden and Tetra Tech will identify potential impacts on operations and coordinate with the Guard to ensure no delays.
- Ogden provided an update to the Rapid Response Action. The response to agency comments was delivered on May 5th. A comment resolution conference call has been scheduled for Tuesday (5/16) at 9:00. Ogden indicated that they would mobilize the soil sampling crews for next week. Ogden asked EPA the status of the cleanup standards and EPA indicated that they believe that they will approve what was discussed last week (2,4-DNT at 700 ppb, lead at 300 ppm, copper and barium at 1,000 ppm and cadmium at 30 ppm). Ogden indicated that they had missed some Phase 1 data that had a detection of 2,4-DNT at above 700 ppb. The revised FSP will have grids around this point.
- Ogden provided an update of the Groundwater Investigation. Currently drilling on MW-102 (P-21). Setting up on P-17 and the Target 9 well. Groundwater sampling of the long term monitoring wells commenced. EPA suggested the P-21 boring go to bedrock instead of the 150 feet bwt. Ogden indicated that the particle tracks from the recent detects along the inner transect probably would not go any deeper than 130 feet bwt in this area. Ogden will provide an estimate of the maximum depth for the agencies consideration. It was agreed to drill to 150 feet bwt and evaluate the data before drilling further. TRC asked if the Guard could get the USGS to provide the depth of a particle at the outer transect if released at the top of the mound. EPA indicated that they would get the list to Ogden today of LTM wells they request to have field filtration for metals. Ogden indicated that the

groundwater sampling of the LTM wells is slowing the sampling of the Impact Area response wells. It was agreed that selected Impact Area response wells (to be determined) would be sampled before the LTM wells.

- A map of the Demo 1 RDX plume was distributed for review. There was a discussion of data gaps in this area. It was agreed that one additional well was required south of MW-34, therefore the contour lines in this area would be dashed. Also, the 20-ppb contour would be change to 10 ppb. There was a discussion of travel time, and whether the apparent 10-year length of the plume was consistent with the site history. EPA requested cross sections (longitudinal and transverse) showing the plume. EPA stressed their desire to have these maps as handouts and insets with the detection maps for the IART meeting. DEP requested the well names on the ZOCs.
- EPA distributed a conditional approval letter for the draft J-2 Range Workplan. The comment response letter is due to the agencies on the May 26.
- The central Impact Area map with ZOC and profile data added was distributed. It was requested that all ZOCs be labeled. A few corrections to well symbols were discussed.
- Additional Impact Area response wells were discussed. The Guard suggested adding a well to the north and south ends of the inner transect. The Guard also suggested adding a well to the north end of the outer transect and possibly the south end. The Guard proposed to wait until the well data and particle tracking are available before selecting up and down gradient locations. EPA requested adding a well south of the P-21 location, on the particle track from MW-1 as originally proposed.

There was a discussion of the timing of the additional response wells. It was agreed that the new wells could be installed after the remaining 5 wells, in June. An evaluation of additional response well locations was proposed in the draft FS Workplan to be completed in July. EPA indicated they would like to compress the schedule for selection and installation of these additional wells, so that the Screening Report for the central Impact Area could be completed by January 2001. EPA indicated it might not be necessary to prepare the 10/12/00 Tech Memo on the response well results. The Guard will review this proposal.

- Miscellany: EPA indicated that the ILTGM sampling can begin as proposed. The Guard indicated that they requested AFCEE to send a letter to Raytheon in regard to the overdue 104e request. The Guard will have the draft scope of work for the Archive Search Report to the agencies today. EPA distributed an approval letter for the Popper Kettle Work Plan. The Guard indicated that there will be a FS-12 modeling meeting on Monday at 2:00.
- The Action Items from the 4/5/00 IART Meeting were discussed.
 1. EPA sent MAARNG a letter requesting a written inventory of the number and types of items remaining in the ASP.
 2. The letter from Mr. Zanis requesting the MAARNG move the active ranges on Greenway Road has not been recieved yet.
 3. The Guard agreed that any future munitions, soil, or other cleanup activities outside the Impact Area Cleanup will be discussed at the weekly technical meetings prior to the implementation of the activities.
 4. The NGB distributed copies of all maps submitted by Textron as part of the 104e request.
 5. The microphone system for the IART meeting is at a maximum and additional microphones can not be added.
 6. The information on the two metal detectors being used by Tetra Tech was distributed to the IART.

7. The plotting of plumes, ZOC's and sources of contamination on Impact Area maps was discussed at the technical meetings.
8. Presentation materials will be modified to change "mortar targets" to "targets" as requested by EPA.

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:

- Soil samples from the composite P-19 105mm, the discrete J-2 Range LAW11, the discrete J-2 Range LAW3, and the discrete J-2 Range LAW4 detonation craters had detections of RDX and HMX, which were verified by PDA spectra.
- Soil samples from the composite Target 9 81mm mortar, the discrete J-2 Range 81mm mortar, and the discrete J-2 Range 60 mm mortar had detections of RDX, which were verified by PDA spectra.
- Soil samples from the discrete Target 9 81mm mortar detonation crater sample had detections of RDX and PETN, which were verified by PDA spectra.
- Soil samples from the discrete P-19 105mm detonation crater sample had detections of RDX, HMX, nitroglycerin, and 2-nitrotouene. The RDX and HMX were verified by PDA spectra.
- The groundwater samples from 90MW0003 had detections of 1,3,5-trinitrobenzene, 2-nitrotoluene, and 3-nitrotoluene, which were not verified by PDA spectra.
- The groundwater samples from MW-75M2, MW-86S, MW-86M2, and MW-87M2 had detections of RDX, which were verified by PDA spectra. These locations are response wells for Demo 1 and the Central Impact Area, the latter being sampled for the first time. Detections were consistent with earlier monitoring well or profile sample results.
- The groundwater samples from MW-76M2, MW-76S, and MW-87M1 had detections of RDX and HMX, which were verified by PDA spectra. These locations are response wells for Demo 1 and the Central Impact Area, the latter being sampled for the first time. Detections were consistent with earlier monitoring well or profile sample results.
- The groundwater sample from MW-77M1 had a detection of tetryl, which was not verified by PDA spectra.

- The groundwater sample from the Demo 1 response well MW-77M2 had detections of RDX, HMX, and 4-amino-2,6-dinitrotoluene. The RDX and HMX were verified by PDA spectra. Results were consistent with the previous sample for this well.
- A groundwater profile sample from MW-101 had detections of 2,6-DNT, tetryl, PETN, which were not verified by PDA spectra.

3. DELIVERABLES SUBMITTED

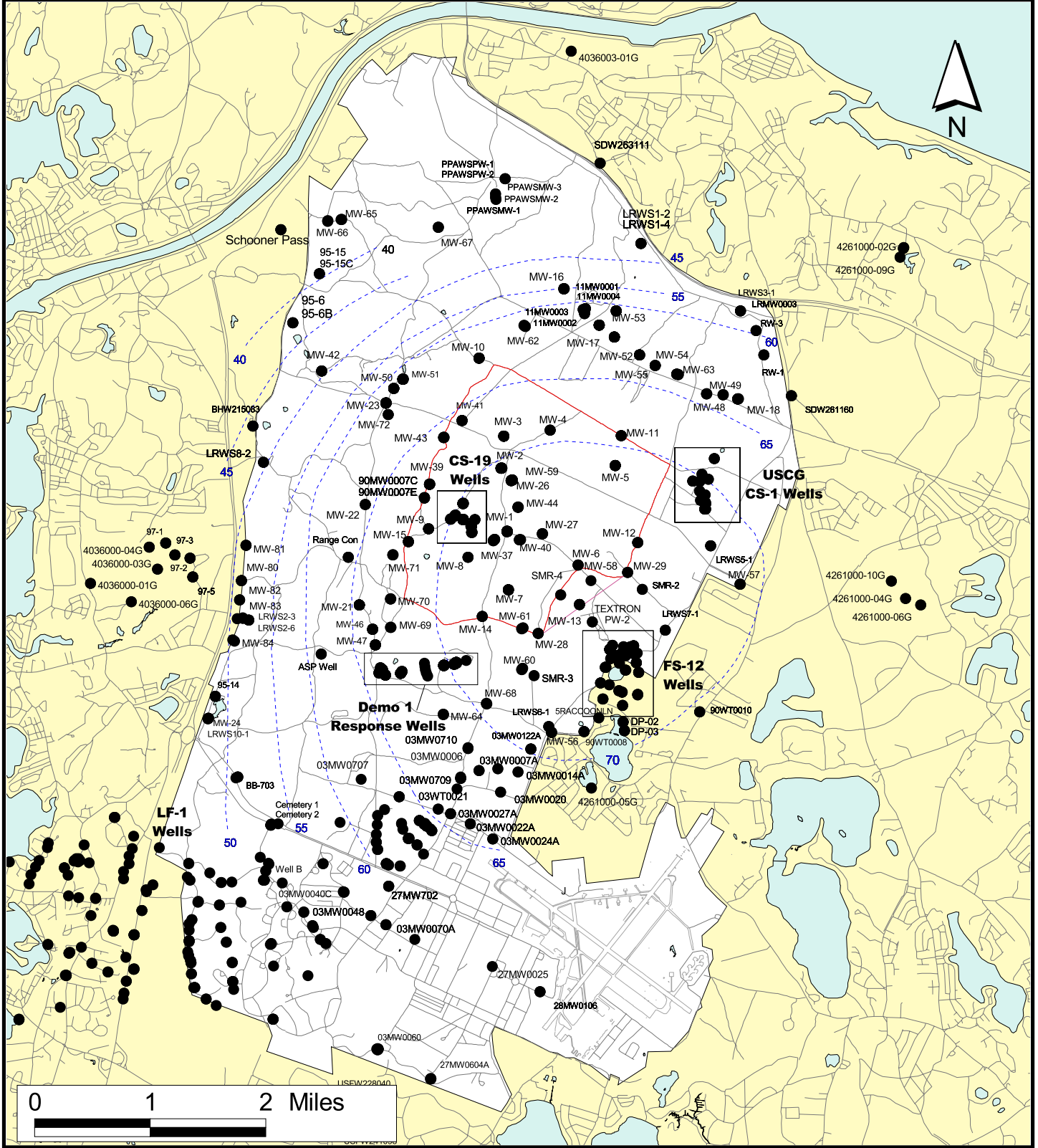
Monthly Progress Report #37 for April 2000	5/10/00
Draft Summary Report – 30 September 1999 UXO Detonation	5/10/00

4. SCHEDULED ACTIONS

Scheduled actions for the week of May 15 include the construction of monitoring wells at MW-102 (P-21); continued drilling of P-17 and the Target 9 well; and the continued groundwater sampling of the Long Term Monitoring wells and Impact Area response wells.

5. SUMMARY OF ACTIVITIES FOR DEMO 1

The geophysical data for Demo 1 are being processed for evaluation of anomalies. Preparation of the draft technical memorandum for the Demo 1 response actions is underway. The draft FS Workplan for AO3 (including Demo 1) is under review by the regulatory agencies and other stakeholders.



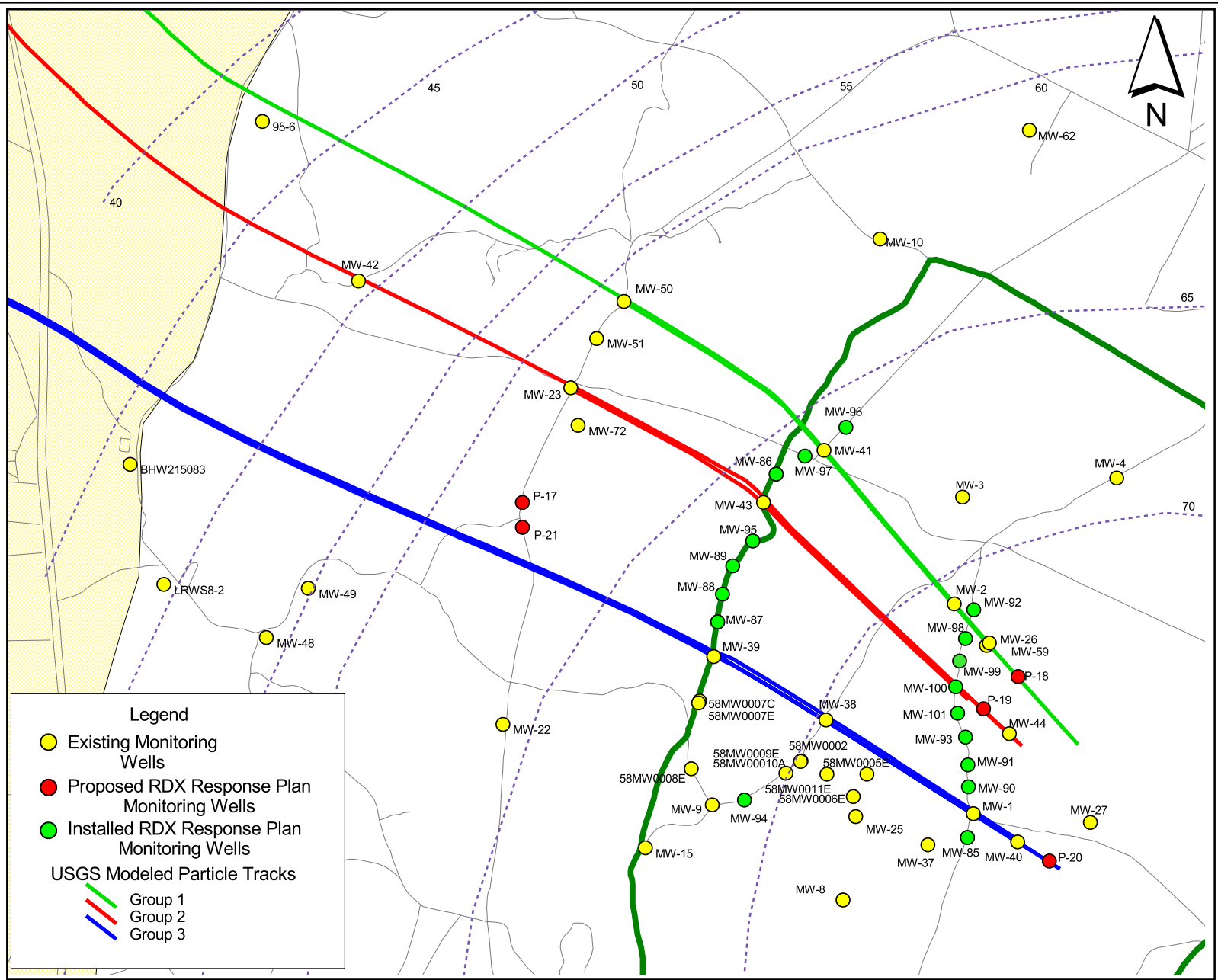
Sources & Notes

Map Coordinates: Stateplane,
 NAD83, Zone 4151, Meters
 Source: MASSGIS

Location of Existing and Proposed Groundwater Monitoring Wells As Of 12/16/99



December 16, 1999 DRAFT



0 1000 2000 Feet

Proposed RDX Response Plan Wells In The Impact Area

Figure
A

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May 16, 2000