

**WEEKLY PROGRESS UPDATE
FOR JULY 17 – JULY 21, 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 17 to July 21, 2000.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of July 21 is summarized in Table 1.

Table 1. Drilling progress as of July 21, 2000				
Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-108b	Impact Area Response Well (P-22)	330	163	
MW-111	Impact Area Response Well (P-26)	240	103	
bgs = below ground surface bwt = below water table				

Drilling continued on MW-108b (P-22) and on MW-111 (P-26). UXO clearance of the J-2 Range drill pads and access roads continued. Development of newly installed wells continued.

Samples collected during the reporting period are summarized in Table 2. Air samples were collected during the firing of M-16s at the C Range. Soil from the crater of the UXO detonated on the J-2 Range was sampled. Groundwater profile samples were collected during drilling at the boring for MW-111. Deep soil samples were collected during the drilling of MW-111. A sample was collected from the white material located in GP-11 (Area 61) that was identified during reconnaissance of Grenade Court 2. Additional delineation soil grid samples were collected in the KD Range (Area 44) as part of the RRA.

The Guard, EPA, and MADEP had a meeting on July 20 to discuss technical issues, including the following:

- There was no update from Jacobs on the CS-19 Investigation. EPA indicated that comments on the CS-19 Report were submitted last night and that the major comment was that more work was required. DEP indicated that their comments would be submitted on Friday.
- The Guard provided an update of the Water Supply Investigation. The pump test for Site 2 has been completed with a rate of 1 million gallons per day. The next step is to define the ZOCs as required for the permit. The EA was submitted last week and the pipeline design continues. EPA did not think that they were going to comment on the EA but did note that the data set they were using was from May and that the pipeline was going through the FS-12 Area.
- Tetra Tech provided an update of the Munitions Survey. The preliminary data set for the aerial geophysics is completed and the final data set is being prepared. A handout of the response to agency comments on the HUTA Workplan was distributed to the agencies. The Guard indicated that AEC had comments on the Workplan. Tetra Tech suggested that the AEC comments would be addressed in a separate document. 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 the REC is being withheld by MAARNG State Environmental Supervisor pending evaluation/coordination with NGB concerning cumulative impacts of AO activities on local

environment. The surface clearance of the HUTA and processing area has commenced. UXO surface clearance of the J-2 Range continues and the brush clearing has just commenced. The J1/J3 areas of interest have been finalized. The preliminary work will begin with the land survey. Tetra Tech requested that the Guard obtain an electronic copy of the J-3 Range map from Textron. The Gun and Mortar validation study will be conducted on GP 10 and 11. Both the Gun and Mortar and Demo 1 validation will have a 45-mV threshold. The Guard asked for the schedule of the validation study. Tetra Tech indicated that they would have a better idea next week. EPA asked what the preliminary data for the slit trench showed. Tetra Tech indicated that there were lots of little anomalies. Tetra Tech asked if their GIS person had been in touch with Ogden. Ogden indicated that they had not.

- Ogden provided an update of the Rapid Response Action. Currently addressing DEP's comments to the Work Plan and require agency approval on the response to FEC and the public responsiveness summary. The Guard indicated that FEC submitted comments to the SMB and asked why is it being addressed in the Work Plan. EPA suggested that they be treated as any other public comment. The DEP assigned a file number of SE66-1112 to the J-3 Wetland NOI. The final hearing at the Sandwich Conservation Commission was last night. The Commission was looking for the DEP file number. The Guard submitted a letter to the Commission addressing their two conditions. The Commission requested a copy of the final RRA Work Plan. The third round of soil delineation sampling will commence this week in the KD Range. Six additional grids at three depths are proposed. The APC site walk has been canceled based upon the completion of the extent determination. The Treatability study continues. A #140 screen has been selected as the cut point. Envirogen has received the soil less than the cut point and has begun the biotreatment. Due to the low explosive concentrations, the soil has been spiked to track the percentage reduction during biotreatment. It was agreed that the agencies would receive the data before the Treatability Study Report is out. The base map for the containment pad has been received from the surveyor.
- Ogden provided an update of the Groundwater Investigation. Continue to drill on MW-108b and should install the wells this week. Completed drilling on MW-111 (P-26) and will need to select screens on Monday. The draft boring log for MW-111 was distributed. No groundwater sampling this week. Groundwater sampling of the August LTM round and the third round of the Demo 1 response wells is scheduled to commence the week of July 31. Unable to sample MW-23S due to five feet of silt and only six inches of water in the well. There may be a problem with the screen, which requires further investigation. Continue to develop the newly installed wells. UXO clearance continues in the J-2 Range. Commence UXO avoidance for the additional grids in KD Range. The date of small arms firing has changed from Tuesday through Thursday to Friday through Sunday. A handout of the Phase I and Phase II soil sample locations at the popper kettle were distributed. EPA indicated that during a recent visit to the popper kettle debris stockpile they observed some staining on the plastic or color change of the soil under the plastic and asked that it be examined to ensure that there is no reaction occurring.
- A handout of the draft IART Agenda was distributed. It was agreed that Action Items from the previous meeting, that will be discussed later as part of the Agenda, should be noted on the Status of the Action Items sheet.
 - #3 - The DEP asked for an update on an inventory of weapons systems no longer used. The Guard will ask the MA Guard to look into this.
 - #4 - The DEP indicated that there was no discussion of a CS-19 presentation at the JPAT. EPA will look into this and suggested that the text be changed to indicate that AFCEE has been invited.
 - #9 - Change text from Unexploded Ordnance (UXO) to Munitions and the date should be changed to 7/27/00.
- The Guard provided an update of the UXO detected on the J-2 Range at the J2P-4 drill pad (Disposal Area 1). Approximately fifty-one 81-mm mortars were excavated in a burial pit and thirty 81-mm mortars were excavated in a second burial pit. The photograph of the first excavated pit was distributed. There is the possibility of two additional pits that have not been excavated yet. The UXO contractor should be finished with the clearance of the pad by the end of the day. The rounds were practice training rounds with live fuzes and possible spotting charges. Due to the hazard of the live

fuzes, the rounds must be detonated in place. EPA indicated that the excavation of these rounds and future rounds should not disturb the soil of a proposed soil grid if possible. It was agreed to have a conference call Friday (7/21) at 9:00 to discuss the total number of items detected, the plan for the detonation, and the public notice.

- The Guard distributed a handout of the proposed responsibilities for the IART Assistant Facilitator for review. It was agreed to change the text from "hiring of three individuals in the near future, one of who will be" to "hiring of an individual who will be". It was agreed to add that this facilitator will be an employee of CH2MHill and will be a different job from the meeting recorder.
- A handout of the revised Small Arms Range soil sampling grid was distributed for review. The Guard suggested that they might add a standard 5-point composite grid as a comparison.
- The DEP asked the status of the C-4 that was buried at Demo 2. The Guard indicated that it is currently in the safe holding area and they are looking for a RCRA permitted disposal facility that will handle the material.
- The Tank Alley and Turpentine Road Targets FSP response to comments was distributed to the Agencies for review. The Agencies agreed with the responses.
- The Supplemental Response to EPA Comment 53 on the Draft J-1, J-3, L Ranges Workplan was distributed to the Agencies for their comments.
 - EPA indicated that before work started in the J-1 disposal area that Textron should show the exact location.
 - EPA suggested that the USGS look at Attachment 1 to make sure they agree.
 - EPA requested that the J1P-7 location be closer to the disposal area.
 - EPA indicated that the J1P-4 well is in the wrong location and it should be moved to the popper kettle as discussed in last weeks Tech Meeting.
 - EPA agrees with the J3P-1 particle track error and the location.
 - EPA indicated in regards to J3P-7 that there were going to be three Textron wells or three Guard wells. EPA cannot locate the three other wells. EPA suggested meeting with Textron on the location of the wastewater disposal area. EPA will coordinate a meeting with Textron but indicated that their attorney is out this week.
 - EPA suggested that J3P-10 be moved from Greenway Road to closer to the Workshop dry well area.
 - EPA suggested that J1P-2 and J3P-1 be profiled and not just water table locations.
- A handout of the plan view, the inner transect cross section, and impact area boundary transect cross section with the estimated extent of explosive in groundwater were distributed for review.
 - Change the color of the plan view to match the cross sections.
 - Add supplemental CIA well locations.
 - Well 58MW0018 need the results.
 - Add transect locations to the plan view.
 - MW-50 color should be yellow.
 - Make the plan view agree with the inner transect between wells MW-98, MW-99 and MW-100.
 - Label the bedrock line
 - Correct the spelling of transect.
 - Make the results arrows show through the shading.
 - Remove the circle on the MW-95 F interval.
 - MW-89S need a concentration box.
 - DEP asked if this was going to be a handout or just on the screen for the IART meeting. It was agreed to have it as both a handout and on the screen but it should be stamped draft with a date. The Guard requested that "Data as of " the date is added to the title.
- The Response to Comments on the Revised Draft Interim LTM Groundwater Plan was distributed to the agencies.
- DEP requested an update on the status of the Textron responses to the RCRA 3007 information request. EPA indicated that they are reviewing it.

- EPA distributed a paper on the Environmental Fate and Behavior of Munitions in Plant Systems. EPA requested sample procedure and the results of the brush chip sample from Demo 1.
- DEP requested a list of people interviewed for the CI Plan. EPA indicated that EPA and DEP were supposed to be included in the interview process. The Guard indicated that they will get the list of people and include the agencies in future interviews.
- The priorities for agency review were discussed.
 1. Draft FS Work Plan
 2. Demo 1 Tech Memo
 3. Background Groundwater Tech Memo
 4. Profile vs. Well Comparison Tech Memo
- The Guard indicated that the meeting notes from last week on the HUTA REC should be corrected to "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 Guard also noted that the citizen members of the IART would not be allowed to observe the SAR firing and sampling due to safety precautions. EPA requested that they be notified of the SAR soil sampling date so they may observe the sampling process.
- EPA distributed copies of their field notes from the Bob Clark interview.
- The Guard distributed a revised UXO Table and the revised UXO Incident Report. EPA requested that Ogden check to see what the soil collected from under the pyrotechnic residual was sampled for because it should have been sampled for 8321.
- A review of the screen selected for MW-108b indicated that the 110' -120' bwt screen overlapped with one of the screens in MW-108. It was agreed to move the 110' -120' bwt screen to 150'-160' bwt.

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-111 had detections of picric acid (2 intervals), 2,6-dinitrotoluene (1 intervals), nitroglycerine (4 intervals), PETN (2 intervals), RDX (1 interval), and HMX (1 interval). The RDX and HMX were verified by PDA spectra.

3. DELIVERABLES SUBMITTED

The following deliverables were submitted during the reporting period.

J-3 Wetland Technical Memorandum (TM 99-4)

07/21/00

4. SCHEDULED ACTIONS

Scheduled actions for the week of July 24 include the construction of monitoring wells at MW-108b (P-22 and MW-111 (P-26); detonate and collect soil samples from UXO located in the J-2 Range; the continued UXO clearance of the drilling pads and soil grids in the J-2 Range; commence UXO clearance of soil sample locations in the L Range; commence UXO clearance of soil sample locations at the Tank Alley and Turpentine Road Targets; 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
 07/16/2000-07/22/2000

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
ASCRANGE-D	ASCRANGE-D	7/21/00	AIR	0.00	0.00		
ASCRANGE-U	ASCRANGE-U	7/21/00	AIR	0.00	0.00		
HDJ281MM7	HDJ281MM7	7/18/00	CRATER GRAB	0.00	0.25		
G111DAE	FIELDQC	7/18/00	FIELDQC	0.00	0.00		
G111DIE	FIELDQC	7/19/00	FIELDQC	0.00	0.00		
HD61K1AAE	FIELDQC	7/21/00	FIELDQC	0.00	0.00		
HDJ281MM7-E	FIELDQC	7/18/00	FIELDQC	0.00	0.00		
HDJ281MM7-T	FIELDQC	7/18/00	FIELDQC	0.00	0.00		
S111DFE	FIELDQC	7/17/00	FIELDQC	0.00	0.00		
DW0717	GAC WATER	7/17/00	IDW				
G111DAA	MW-111	7/18/00	PROFILE	140.00	140.00	2.90	2.90
G111DBA	MW-111	7/18/00	PROFILE	150.00	150.00	12.90	12.90
G111DCA	MW-111	7/18/00	PROFILE	160.00	160.00	22.90	22.90
G111DDA	MW-111	7/18/00	PROFILE	170.00	170.00	32.90	32.90
G111DEA	MW-111	7/18/00	PROFILE	180.00	180.00	42.90	42.90
G111DED	MW-111	7/18/00	PROFILE	180.00	180.00	42.90	42.90
G111DFA	MW-111	7/18/00	PROFILE	190.00	190.00	52.90	52.90
G111DGA	MW-111	7/18/00	PROFILE	200.00	200.00	62.90	62.90
G111DHA	MW-111	7/18/00	PROFILE	210.00	210.00	72.90	72.90
G111DIA	MW-111	7/19/00	PROFILE	220.00	220.00	82.90	82.90
G111DJA	MW-111	7/19/00	PROFILE	230.00	230.00	92.90	92.90
G111DJD	MW-111	7/19/00	PROFILE	230.00	230.00	92.90	92.90
G111DKA	MW-111	7/19/00	PROFILE	240.00	240.00	102.90	102.90
S111DFA	MW-111	7/17/00	SOIL BORING	40.00	42.00		
S111DGA	MW-111	7/17/00	SOIL BORING	50.00	52.00		
S111DHA	MW-111	7/17/00	SOIL BORING	60.00	62.00		
S111DIA	MW-111	7/17/00	SOIL BORING	70.00	72.00		
S111DJA	MW-111	7/17/00	SOIL BORING	80.00	82.00		
S111DKA	MW-111	7/17/00	SOIL BORING	90.00	92.00		
S111DLA	MW-111	7/18/00	SOIL BORING	100.00	102.00		
S111DMA	MW-111	7/18/00	SOIL BORING	110.00	112.00		
S111DNA	MW-111	7/18/00	SOIL BORING	120.00	122.00		
S111DOA	MW-111	7/18/00	SOIL BORING	130.00	132.00		
HD61K1AAA	61K	7/21/00	SOIL GRID	0.00	0.25		
HC44CAB1BAE	FIELDQC	7/20/00	FIELDQC	0.00	0.00		
HC44CAB1BAA	44CA	7/20/00	SOIL GRID	1.50	2.00		
HC44CAB1BAD	44CA	7/20/00	SOIL GRID	1.50	2.00		
HC44CABA1AAA	44CA	7/20/00	SOIL GRID	0.00	0.50		
HC44DAA1BAA	44DA	7/20/00	SOIL GRID	1.50	2.00		
HC44DAAA1AAA	44DA	7/20/00	SOIL GRID	0.00	0.50		
HC44DAB1BAA	44DA	7/20/00	SOIL GRID	1.50	2.00		
HC44DABA1AAA	44DA	7/20/00	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

BWTE = Depth below water table, end depth, measured in feet

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 7/16/00-7/22/00

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G111DAA	MW-111	7/18/00	PROFILE	140.00	140.00	2.90	2.90	8330N	2,6-DINITROTOLUENE	NO
G111DAA	MW-111	7/18/00	PROFILE	140.00	140.00	2.90	2.90	8330N	PICRIC ACID	NO
G111DBA	MW-111	7/18/00	PROFILE	150.00	150.00	12.90	12.90	8330N	PICRIC ACID	NO
G111DCA	MW-111	7/18/00	PROFILE	160.00	160.00	22.90	22.90	8330N	NITROGLYCERIN	NO
G111DDA	MW-111	7/18/00	PROFILE	170.00	170.00	32.90	32.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5	YES
G111DDA	MW-111	7/18/00	PROFILE	170.00	170.00	32.90	32.90	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7	YES
G111DEA	MW-111	7/18/00	PROFILE	180.00	180.00	42.90	42.90	8330N	NITROGLYCERIN	NO
G111DED	MW-111	7/18/00	PROFILE	180.00	180.00	42.90	42.90	8330N	NITROGLYCERIN	NO
G111DFA	MW-111	7/18/00	PROFILE	190.00	190.00	52.90	52.90	8330N	PENTAERYTHRITOL TETRANITRO-1,3,5,7	NO
G111DGA	MW-111	7/18/00	PROFILE	200.00	200.00	62.90	62.90	8330N	NITROGLYCERIN	NO
G111DGA	MW-111	7/18/00	PROFILE	200.00	200.00	62.90	62.90	8330N	PENTAERYTHRITOL TETRANITRO-1,3,5,7	NO
G111DHA	MW-111	7/18/00	PROFILE	210.00	210.00	72.90	72.90	8330N	NITROGLYCERIN	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

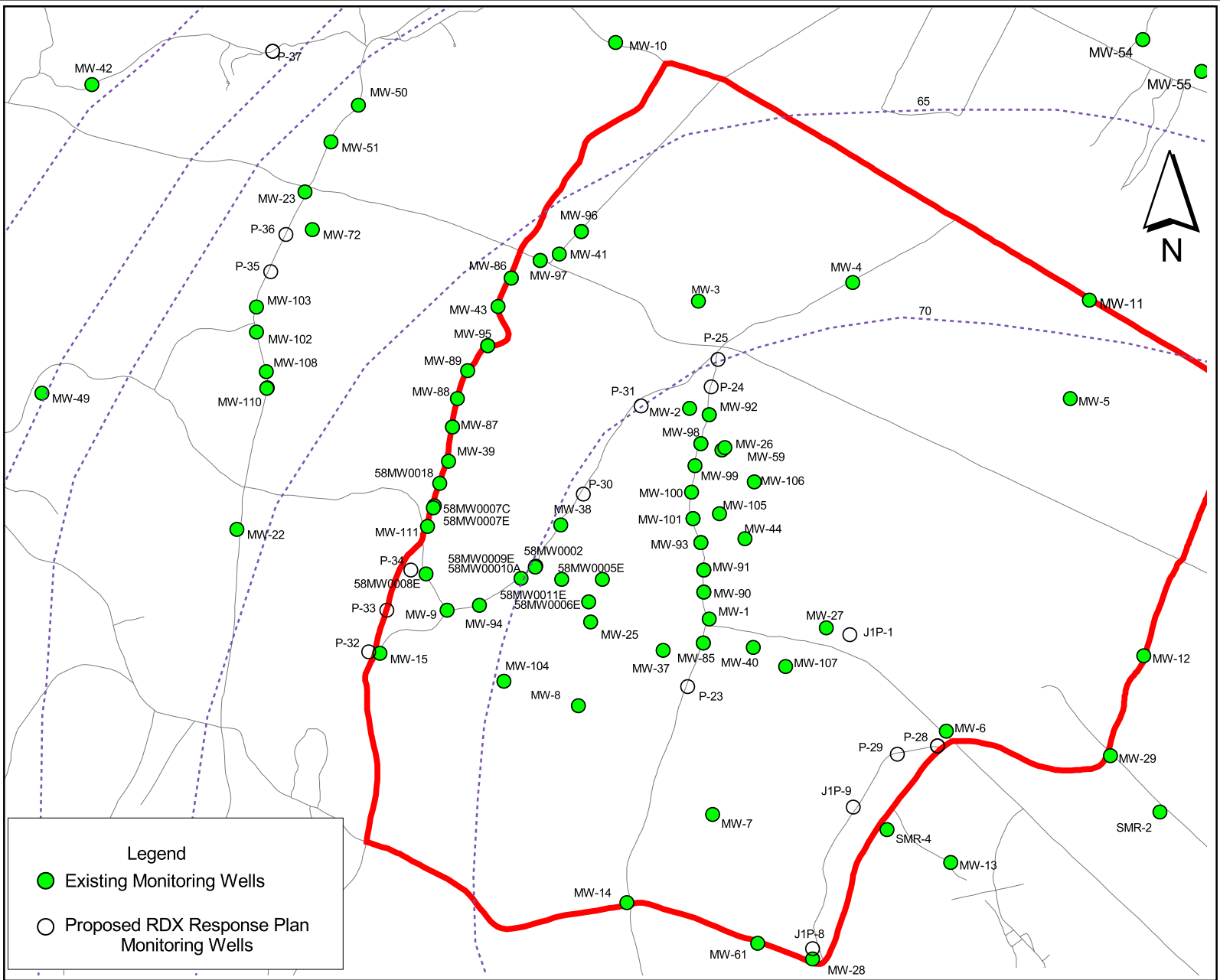
SED = SAMPLE COLLECTION END DEPTH IN FEET BGS

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



0 800 1600 Feet

Proposed RDX Response Plan Wells In The Impact Area



Figure
1

L:\MWR\GIS\July2000\July_27_00_RDX_response_updates
G:\MWR\rdx_response_maps_june_rmg_apr
July 27, 2000