

**WEEKLY PROGRESS UPDATE  
FOR FEBRUARY 23 – FEBRUARY 27, 2004**

**EPA REGION I ADMINISTRATIVE ORDERS SDWA 1-97-1019 and 1-2000-0014**

**MASSACHUSETTS MILITARY RESERVATION  
TRAINING RANGE AND IMPACT AREA**

The following summary of progress is for the period from February 23 through February 27, 2004.

**1. SUMMARY OF ACTIONS TAKEN**

Drilling progress as of February 27, 2004 is summarized in Table 1.

<b>Table 1. Drilling progress as of February 27, 2004</b>				
<b>Boring Number</b>	<b>Purpose of Boring/Well</b>	<b>Total Depth (ft bgs)</b>	<b>Saturated Depth (ft bwt)</b>	<b>Completed Well Screens (ft bgs)</b>
MW-306	J-1 Range (J1P-22)	304	180	165-175; 185-195; 282-292
MW-307	J-2 Range (J2P-28)	331	224	
MW-308	Western Boundary (CBP-3)	373	175	255-265; 325-335
MW-310	J-2 Range (J2P-22)	322	237	
MW-311	Demo Area 2 (D2P-5)	250	52	200-210; 222-232
MW-312	Demo Area 2 (D2P-6)	220	67	
MW-313	J-2 Range (J2P-34)	337	215	
MW-314	Northwest Corner (NWP-14)	146	120	24-34; 45-55;
MW-315	J-1 Range (J1P-27)	318	193	
MW-318	J-2 Range (J2P-35)	100		
MW-319	J-2 Range (J2P-21)	200	107	
bgs = below ground surface bwt = below water table				

Completed well installation at MW-306 (J1P-22), MW-308 (CBP-3), MW-311 (D2P-5), and MW-314 (NWP-14); completed drilling at MW-312 (D2P-6) and MW-313 (J2P-34); and commenced drilling at MW-318 (J2P-35) and MW-319 (J2P-21).

Samples collected during the reporting period are summarized in Table 2. Groundwater profile samples were collected from MW-312, MW-313, and MW-319. Groundwater samples were collected from Bourne water supply and monitoring wells, residential wells, recently installed wells, and as part of the December round of the Draft 2003 Long-Term Groundwater Monitoring Program. An investigation-derived waste (IDW) sample was collected from the Granular Activated Carbon (GAC) treatment system. Soil samples were collected from grids at Demo Area 1.

The following are the notes from the February 26, 2004 Technical Team meeting of the Impact Area Groundwater Study Program office at Camp Edwards:

### Participants

Hap Gonser (IAGWSPO)	Ben Gregson (IAGWSPO)	Bill Gallagher (IAGWSPO)
Paul Nixon (IAGWSPO)	Dave Hill (IAGWSPO)	Karen Wilson (IAGWSPO)
Todd Borci (EPA)	Meghan Cassidy (EPA)	Jane Dolan (EPA)
Desiree Moyer (EPA)	Jim Murphy (EPA)	Len Pinaud (MADEP)
Mark Panni (MADEP)	Dave Williams (MDPH)	Gina Kaso (ACE)
Frank Fedele (ACE)	Ed Wise (ACE)	Katarzyna Chelkowska (ACE)
Dave Margolis (ACE)	Darrin Smith (ACE)	Michelle Clemens (ACE)
Scott Michalak (ACE)	Kim Harriz (AMEC)	Chris Fairney (ECC)
Mike Goydas (Jacobs)		

### Punchlist Items

- #1 Provide update on requested access letter to Regional Technical School (IAGWSP). Bill Gallagher (IAGWSPO) has not received the requested written response from Barry Motta (JPRTS) to date. IAGWSPO is still interested in pursuing this well location.
- #2 Provide update on access agreement to install a monitoring well at Schooner Pass Condominium Association (IAGWSPO). The Schooner Pass Property Manager has requested a meeting with the Army Corps Real Estate to discuss the appraisal prepared for the easement request. In addition, the condominium association has indicated enough residents may not be available to constitute a quorum to vote on the easement until next month.
- #3 Provide results of J-1 EM-31 survey results (ACE). The information is currently being reviewed by Army Corps geophysicists and will be provided to the agencies tomorrow.
- #4 Provide update on protocol and timelines for MW installation and sampling (ACE). Dave Margolis indicated that there were 5 or 6 wells that had been profiled; the current schedule has them all being sampled by 3/15. From now on, the wells will be developed as soon as the well is installed instead of in batches, which had been the practice to maximize efficiency. The cable-tool rig will still be used for well installation, after profiling is completed with the Barber Rig. Mr. Margolis agreed to provide the agencies with a schedule for each outstanding well (drilled but not sampled) with sampling date and a date indicating when unvalidated/validated data will be available.

### Fieldwork Update

Frank Fedele (ACE) provided an update on the IAGWSP fieldwork.

- As part of AMEC's investigation, well installation was completed at MW-309 (NWP-9), MW-311 (D2P-5), and MW-314 (NWP-14). Drilling was completed at MW-308 (CBP-3) at 373 ft bgs and MW-312 (D2P-6) at 220 ft bgs. Well development was completed at MW-299 (NWP-12) and continues for MW-309 (NWP-9).
- Well pad construction continues at CBP-9.
- Groundwater sampling at Bourne, LTM and new wells continues.
- Preliminary design and construction of the Demo 1 Frank Perkins RD ETR continued.
- The ITE study at the Demo 1 Pew Road location continues.
- As part of ECC's investigation, well installation of MW-305 (J2P-33) and MW-306 (J1P-22) was completed and commenced at MW-307 (J2P-28). Drilling of MW-313 (J2P-34) and MW-315 (J1P-27) was completed. Drilling continues at MW-318 (J2P-35) and MW-319 (J2P-21).
- UXO clearance was completed at J2P-35. Well pad construction was completed at J2P-21 and J2P-35.
- Well development was completed at MW-300 (J2P-31) and continued at MW-302 (J2P-32).

- Vegetation clearance was completed and UXO surface clearance continued for the J-3 Range RRA. BIPs to be scheduled include a 3.5-inch rocket found in the target wall and another munition found in the ground. A 2.3-inch rocket warhead, also discovered on the range, would be moved to the SHA.
- Sorting of scrap from J-2 Range Disposal Area 2 continued.
- At the J-1 Range, 24 of 28 J-1 Range Draft Supplemental Soil Workplan locations have been sampled, 4 locations requiring VOC analysis remain.
- At the J-2 Range, 23 of 38 J-2 Range Draft Supplemental Soil Workplan locations have been sampled, 15 locations requiring metals analysis remain.
- The CDC has been in operation since Tuesday, 2/24. 870 20MM munitions were destroyed. 2368 items remain. Per the contract, the departure date for the CDC is 3/26. However, a contract extension is possible if needed.

### **Demo 1 Update**

Frank Fedele (ACE) provided an update on the Demo 1 fieldwork, distributing a figure showing details of the progress of the soil excavation as of 2/25.

- Approximately 4500 yards of soil had been excavated to 1 ft bgs around the depression. Excavation of soil from 3 or 4 grids remains. 1600 yards of soil has already been screened and sent to the H Range feed preparation area for the Thermal Treatment. So far only a detonator has been found in the screening process.
- Excavation of lead contaminated soil (2 grids) was started today. The excavated soil has been placed in rolloffs.
- Samples from 3 grids in the southwestern portion of the excavation area had detects of RDX above 120 ppb with discoloration to the soil noted in one of the quads. Additional investigation of this area will be completed and further evaluation will be conducted to determine if the soil is indicative of a burn pit or just natural coloration, and whether it should be sent for off-site disposal.
- Three of five suspected burns pits identified in prior field efforts were investigated and nothing was found in those areas.
- A discussion of the progress of the setup of the Thermal Treatment Unit followed with Mr. Fedele discussing photographs of the Thermal Treatment Unit, which were projected on a screen. As requested, Paul Nixon (IAGWSP) will provide copies of the photographs to Meghan Cassidy (EPA).
- As of 3:30 pm on Wednesday 2/25, the Thermal Treatment Unit had begun processing lightly contaminated soil. Through 6:00 am this morning, 235 tons of soil had been processed at an approximate rate of 20 tons per hour, taking into consideration down time. Grab samples are being collected for every 25 yards of soil processing. The sample results will be available 3 days following collection.
- The treatment unit will be operated 24 hours/day, Monday through Friday, and possibly on Saturday. Alternatively, Saturday will be utilized as a maintenance day. Full operation status is expected in 2 to 3 weeks.
- Paul Nixon indicated the Pop Test RCL will be sent out late today or tomorrow.

### **ROA Status and Drilling Schedule**

Darrin Smith (ACE) reviewed the ROA status and drilling schedule, distributing an ROA status table and drilling schedule.

- The AMEC Barber rig will be mobilizing to CBP-3 following installation at D2P-5. This rig will then be moving to D2P-6 to install wells. The rig currently at D2P-6 is being demobbed. The Sonic rig has been demobbed, but will return on 3/08 to begin drilling at NWP-15.
- ECC Barber rigs are drilling at J2P-21 and J2P-35. The Cable-Tool rig is setting up on J2P-28 to complete well installation.

- Data for J2P-24 is expected today; a screen setting call is scheduled today for J1P-27.
- ROA status changes since the last meeting effect several proposed drilling locations and investigation areas. The ROA for J1P-24 was submitted to SHPO/NHESP last week. SHPO/NHESP approval was received for J2P-35, J2P-36, LP-10, NWP-15, the J-3 Range Soil RRA, and the temporary CDC at Five Corners. NHESP approval was received for LP-13, but the SHPO approval is still pending.
- Dave Margolis to provide Jane Dolan (EPA) the ROA map of the area for the J-2 Range Soil RRA.
- Todd Borci (EPA) expressed concern that drill rigs had been demobilized, stating that if the EPA had known, they could have approved additional drilling locations to provide a sufficient backlog of wells to keep all the drill rigs utilized. Mr. Margolis indicated the Army Corps was concerned about juggling wells to prevent stand-by. The Army Corps plans to utilize two Barber Rigs to drill and profile wells in the J Ranges through March and April and then reassess drilling needs. Mr. Borci requested that in the future, the Army Corps and IAGWSP keep the agencies informed of these decisions.

### **J-2 Range Groundwater Investigation**

Dave Hill (IAGWSP), with the assistance of Mike Goydas (Jacobs), led a discussion on the ongoing investigation of the J-2 Range perchlorate plume. Four figures were distributed to the agencies showing plan views of the RDX and perchlorate plumes and cross sections of the perchlorate plume.

- The current plan for the investigation was to evaluate the data from the three locations currently being drilled to determine upgradient and downgradient drilling locations. Profiling data from J2P-35 is pending; J2P-36 will be drilled next. This information will be combined with the profiling data from J2P-34, which was just completed, prior to proposing any additional locations, including locations on the western shoulder of the plume.
- Dave Margolis (ACE) will provide answers to questions regarding the modeling posed in Jane Dolan's recent email.
- Jane Dolan (EPA) indicated it was her understanding that Dave Rich (Water Co-op) had been sent an email stating the protocol for sampling of the sentry wells. Ms. Dolan had not been allowed to review the protocol before it had been sent and indicated the part of the protocol which stated that samples should be collected from the bottom 10 foot of the deepest screen at the request of EPA, had not been specified by EPA. Ms. Dolan asked the IAGWSP to make sure this is how they wanted the sampling to be conducted.
- Ms. Dolan requested the sentry wells be placed on Jacobs' investigation figure.
- Ms. Dolan inquired if the IAGWSP would be proposing wells downgradient of the J-2 Range Disposal Area 1. Mr. Hill indicated wells at locations J2P-24 and J2P-28 would be installed first and evaluated prior to proposing any additional locations.
- Ms. Dolan questioned why an RDX detection was indicated on the IART figure for MW-296 when none had been confirmed in the profile data.
- Ms. Dolan asked if the J-2 Range soil piles/waste streams from Polygons 1 & 16 had been sampled for perchlorate. Dave Margolis to check.
- Todd Borci (EPA) requested the IAGWSP provide more information on the J-2 Range data at the next Tech meeting.
- Mr. Borci noted that while a forward particle track for MW-310 had been provided in email last week, there had been no explanation of the relationship of the depths of perchlorate detections in this well and MW-307. Mr. Hill indicated there had been an internal discussion regarding the probable sources of this detection; this information could be discussed further with the agencies at the next Tech meeting.

**Northwest Corner Update**

Bill Gallagher (IAGWSP) provided an update on the Northwest Corner investigation.

- The screen setting call for MW-314 (NWP-14) was held earlier in the week. Perchlorate was detected in samples from 5 to 25 ft bgs, all at concentrations less than 1 ppb. The IAGWSP viewed this well as adequate to define the northwest corner of the perchlorate plume.
- As stated earlier, approval of NWP-15 ROA had been received. UXO clearance and well pad construction would be completed next week, with drilling to begin when the Sonic Rig returns around 3/08.
- Per EPA's request, monthly monitoring of the eight well screens associated with the Canal View Road wells was completed last week, with the exception of MW-278S which only had 1 foot of water. Based on documentation of well installation and well development, it is apparent the shallow well screen at MW-278 was set at the depth requested in relationship to the static water level measurement made prior to well installation. However, because of a 4-foot change in depth of the water level from well installation to well development, it appears that the water level measured in the well borehole did not reflect static conditions. As a consequence the well screen was set too high within the aquifer.
- The turn around time for analysis for all wells was requested to be 5 days for the first sampling rounds. However, for subsequent months, the IAGWSP's intent to submit only the three shallow well screens for rush analysis will be accepted or modified by the agencies based on a review of the data.
- As EPA requested, HW-2 and HW-3 were sampled last week.
- Unvalidated results were received for MW-298 (NWP-11). There was a perchlorate detection (0.57 ppb) in the shallow screen, but no detections in the M2 or M1 screens. There had been a detection of 0.74 ppb in the profile sample collected at the depth of the M2 screen that was not confirmed in the groundwater sample. Explosives were not detected in any of the wells.
- The monthly monitoring of the residential wells was also completed last week, with the exception of RSNW06, which was sampled Tuesday, 2/24 at the property owner's request.
- The subregional groundwater model for the Northwest Corner has been cut out from the regional model and is being refined to more accurately reflect the interface with the canal and the vertical hydraulic gradients. Survey data for the newest Northwest Corner wells will be available shortly. Mr. Gallagher to provide Desiree Moyer (EPA) with a schedule for completion of the subregional model and date when particle tracks, as requested at the last meeting, will be available.
- Ms. Moyer inquired about the IAGWSP progress in identifying additional upgradient wells per her request at the last Tech meeting. Mr. Gallagher indicated the IAGWSP preferred to wait for the subregional model before proposing any additional wells. Todd Borci stated that the EPA didn't feel the model was necessary to select every additional well location, as there are obvious remaining data gaps in the Northwest Corner.

**Miscellaneous**

- Todd Borci responded to Ben Gregson's (IAGWSP) request at the last Tech meeting that in light of the new bi-weekly tech-meeting schedule, the agencies reconsidered the weekly reporting schedule. EPA offered the Guard the ability to submit biweekly reports only. The current requirement is for the Guard to submit a report for each week, and a separate monthly report which compiles the weekly reports into one document and includes validated data not included in the weekly reports. EPA believes a biweekly submittal would offer a balance of reduced work load to the Guard and continue to keep the public and other users of the reports informed on a timely basis. EPA requested the Guard determine whether the validated data and any other components of the monthly reports could be transitioned into a biweekly format. EPA awaits this determination from the Guard before this change is approved.

- The topic of Documents and Schedules was discussed. The IAGWSP wants to encourage the individual project managers to track deliverables with the agencies and to discuss specific issues at the bi-weekly Tech meetings rather than having a detailed discussion at the Tech meetings. Todd Borci requested the IAGWSP discuss these issues with the agencies prior to making decisions on what should be done. Meghan Cassidy (EPA) emphasized that while EPA agreed the discussion of dates for documents could be abbreviated, it was still important for Documents/Schedule to be included as a topic on the Tech meeting agenda. EPA stated more coordination is needed between the Guard's project managers and its contractors
- regarding the scheduling of meetings. EPA discouraged any type of decentralized approach using less internal coordination. EPA encouraged any effort meant to affect a higher level of internal coordination amongst the Guard, its project managers, and its contractors.

## 2. SUMMARY OF DATA RECEIVED

Rush data are summarized in Table 3. These data are for analyses that are performed on a fast turn around time, typically 1-5 days. Perchlorate and explosive analyses for monitoring wells, and perchlorate, explosive and volatile organic compound (VOC) analyses for groundwater profile samples, are conducted in this timeframe, as well as any analyses pursuant to a special request. 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 explosive 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 or perchlorate. Most explosive detections verified by PDA are confirmed to be present upon completion of validation. Table 3 includes the following detections:

Table 3 includes detections from the following areas:

### Northwest Corner

- Groundwater samples from 4036009DC; MW-277M1 and S; MW-278M1 and M2; and MW-279M1, M2 and S had detections of perchlorate. The results were similar to previous sampling rounds.
- Groundwater samples from RSNW06 and duplicate had detections of RDX and perchlorate. The detection of RDX was confirmed by PDA spectra. The results were similar to previous sampling rounds.
- A groundwater sample from MW-298S had a detection of perchlorate. This is the first sampling event for this well. The result was consistent with the profile results. Perchlorate was not detected in the M1 screen, but was detected in the profile sample from this interval.
- Groundwater samples from HW-2 and HW-3 had detections of perchlorate. This is the first sampling event for these wells.

Western Boundary

- Groundwater samples from 02-09M1 and M2; and MW-80M1 and M2 had detections of perchlorate. The results were similar to previous sampling rounds.

Demo Area 2

- Profile samples from MW-312 (D2P-6) had detections of explosives. Of the explosive compounds, only RDX was confirmed by PDA spectra, but with interference, in one interval at 27 feet below the water table. A well screen will be set at the depth (24 to 34 ft bwt) corresponding to the RDX detection.

Southeast Ranges

- Profile samples from MW-313 (J2P-34) had detections of explosives and perchlorate. Perchlorate was detected in three intervals from 88 to 108 feet below the water table. Of the explosive compounds, only RDX was confirmed by PDA spectra, but with interference, in one interval at 78 feet below the water table. Well screens will be set at the depth (72 to 82 ft bwt) corresponding to the RDX detection, at the depth (93 to 103 ft bwt) corresponding to the maximum perchlorate detection, and at the depth (133 to 143 ft bwt) corresponding to the depth projected forward from upgradient perchlorate detections.
- Profile samples from MW-315 (J1P-27) had detections of explosives and VOCs. Of the explosive compounds, only RDX was confirmed by PDA spectra, but with interference at 75 feet below the water table. Well screens will be set at the depth (70 to 80 ft bwt) corresponding to the RDX detection, and at the depth (120 to 130 ft bwt) corresponding to the depth of perchlorate detections in MW-265.

**3. DELIVERABLES SUBMITTED**

Draft Summary Report October – December 2002 UXO Detonations	02/27/2004
Draft Summary Report January – March 2003 UXO Detonations	02/27/2004
Weekly Progress Update for February 16, 2004 – February 20, 2004	02/27/2004

**4. SCHEDULED ACTIONS**

Scheduled actions for the week of March 1 include commence well installation at MW-310 (J2P-22) and MW-312 (D2P-6); continue drilling at MW-318 (J2P-35) and MW-319 (J2P-21); and commence drilling at MW-316 (BP-6). Groundwater sampling of Bourne water supply and monitoring wells and as part of the December round of the Draft 2003 Long-Term Groundwater Monitoring Plan will continue. Soil sampling will commence as part of the Central Impact Area Focused Investigation.

**5. SUMMARY OF ACTIVITIES FOR DEMO AREA 1**

Installation and development of extraction and injection wells for the Groundwater RRA is ongoing. Installation of subsurface piping and well vaults for the Frank Perkins Road Extraction, Treatment and Recharge System will be completed in March 2004. Installation of subsurface piping and electrical supply for the Pew Road Extraction, Treatment and Recharge System will commence in March 2004.

As part of the Soil RRA, excavation of contaminated soil within the Demo 1 depression continues. A total of 5,532 cubic yards of soil has been excavated to date. Functional testing of the Thermal Treatment Unit components was completed last week. Preliminary soil treatment activities commenced this week resulting in the processing of 1,350 tons of contaminated soil.

**TABLE 2  
SAMPLING PROGRESS  
02/22/2004 - 02/28/2004**

SAMPLE_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
4036000-01G-A	4036000-01G	02/23/2004	GROUNDWATER	38	69.8	6	12
4036000-03G-A	4036000-03G	02/23/2004	GROUNDWATER	50	60	6	12
4036000-04G-A	4036000-04G	02/23/2004	GROUNDWATER	54.6	64.6	6	12
4036000-06G-A	4036000-06G	02/23/2004	GROUNDWATER	108	128	6	12
58MW0001-A	58MW0001	02/26/2004	GROUNDWATER	121.8	126.8	0	5
97-2D-A	97-2D	02/25/2004	GROUNDWATER	115.4	115.4	82.9	82.9
MW-290M2-	MW-290M2	02/28/2004	GROUNDWATER	214.98	224.97	119.98	209.98
MW-290M3-	MW-290M3	02/28/2004	GROUNDWATER	144.47	155.13	49.47	59.47
MW-290S-	MW-290S	02/28/2004	GROUNDWATER	100.1	110.15	5.1	10.1
MW-293M1-	MW-293M1	02/26/2004	GROUNDWATER	296.26	306.27	190.26	200.27
MW-293M2-	MW-293M2	02/26/2004	GROUNDWATER	196.42	206.42	90.42	100.42
MW-293M2-FD	MW-293M2	02/26/2004	GROUNDWATER	196.42	206.42	90.42	100.42
MW-293S-	MW-293S	02/26/2004	GROUNDWATER	110.1	120.12	4.1	14.12
RSNW06-A	RSNW06	02/24/2004	GROUNDWATER	0	0		
RSNW06-D	RSNW06	02/24/2004	GROUNDWATER	0	0		
TW1-88B-A	1-88	02/23/2004	GROUNDWATER	105.5	105.5	69.6	69.6
W01M2A	MW-1	02/25/2004	GROUNDWATER	160	165	44	49
W01M2A	MW-01	02/25/2004	GROUNDWATER	160	165	44	49
W01SSA	MW-01	02/25/2004	GROUNDWATER	114	124	0	10
W02-10M1A	02-10	02/25/2004	GROUNDWATER	135	145	94	104
W02-10M2A	02-10	02/25/2004	GROUNDWATER	110	120	68.61	78.61
W02-10M3A	02-10	02/25/2004	GROUNDWATER	85	95	43.65	53.65
W02-12M1A	02-12	02/23/2004	GROUNDWATER	109	119	58.35	68.35
W02-12M2A	02-12	02/24/2004	GROUNDWATER	94	104	43.21	53.21
W02-12M3A	02-12	02/24/2004	GROUNDWATER	79	89	28.22	38.22
W02-13M1A	02-13	02/23/2004	GROUNDWATER	98	108	58.33	68.33
W02-13M2A	02-13	02/23/2004	GROUNDWATER	83	93	44.2	54.2
W02-13M3A	02-13	02/23/2004	GROUNDWATER	68	78	28.3	38.3
W02M1A	MW-02	02/26/2004	GROUNDWATER	212	217	75	80
W02M2A	MW-02	02/27/2004	GROUNDWATER	170	175	33	38
W100M1A	MW-100	02/26/2004	GROUNDWATER	179	189	45	55
W100M2A	MW-100	02/26/2004	GROUNDWATER	164	174	30	40
W101M1A	MW-101	02/26/2004	GROUNDWATER	158	168	27	37
W101M1D	MW-101	02/26/2004	GROUNDWATER	158	168	27	37
W101SSA	MW-101	02/26/2004	GROUNDWATER	131	141	0	10

Profiling methods may include: Volatiles, Explosives, and Perchlorate  
Groundwater methods include: Volatiles, Semivolatiles, Explosives,  
Pesticides, Herbicides, Metals, Perchlorate 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  
02/22/2004 - 02/28/2004**

SAMPLE_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
W133M1A	MW-133	02/25/2004	GROUNDWATER	352	362	136	146
W133M2A	MW-133	02/25/2004	GROUNDWATER	321	331	105	115
W139M1A	MW-139	02/27/2004	GROUNDWATER	194	204	110	120
W139M1A	MW-139	02/27/2004	GROUNDWATER	194	204		
W139M2A	MW-139	02/27/2004	GROUNDWATER	154	164	70	80
W139M3A	MW-139	02/27/2004	GROUNDWATER	119	129	35	45
W156SSA	MW-156	02/27/2004	GROUNDWATER	77	87	7	17
W203M2A	MW-203	02/26/2004	GROUNDWATER	166	176	17.5	27.5
W205M1A	MW-205	02/25/2004	GROUNDWATER	167	177	67.6	77.6
W212M1A	MW-212	02/24/2004	GROUNDWATER	333	343	125.6	135.6
W212M1D	MW-212	02/24/2004	GROUNDWATER	333	343	125.6	135.6
W213M1A	MW-213	02/24/2004	GROUNDWATER	133	143	85.01	95.01
W213M2A	MW-213	02/24/2004	GROUNDWATER	89	99	41.15	51.15
W213M3A	MW-213	02/24/2004	GROUNDWATER	77	82	29.38	34.38
W213M3D	MW-213	02/24/2004	GROUNDWATER	77	82	29.38	34.38
W219M1A	MW-219	02/23/2004	GROUNDWATER	357	367	178	188
W27SSA	MW-27	02/27/2004	GROUNDWATER	117	127	0	10
W282M1A	MW-282	02/24/2004	GROUNDWATER	310	320	122.88	132.88
W282M2A	MW-282	02/23/2004	GROUNDWATER	206	216	18.84	28.84
W294M1A	MW-294	02/25/2004	GROUNDWATER	127	137	65.25	75.25
W299M1A	MW-299	02/25/2004	GROUNDWATER	150	160	52.84	62.84
W299SSA	MW-299	02/25/2004	GROUNDWATER	96	106	0	10
W301M1A	MW-301	02/25/2004	GROUNDWATER	220	230	121.75	131.75
W301M1D	MW-301	02/25/2004	GROUNDWATER	220	230	121.75	131.75
W301SSA	MW-301	02/25/2004	GROUNDWATER	97	107	1.32	11.32
W38M2A	MW-38	02/26/2004	GROUNDWATER	187	197	69	79
W38M3A	MW-38	02/26/2004	GROUNDWATER	170	180	52	62
W38M4A	MW-38	02/26/2004	GROUNDWATER	132	142	14	24
W39M1A	MW-39	02/26/2004	GROUNDWATER	220	230	84	94
W39M2A	MW-39	02/26/2004	GROUNDWATER	175	185	39	49
W44M2A	MW-44	02/27/2004	GROUNDWATER	142	152	13	23
W44M2D	MW-44	02/27/2004	GROUNDWATER	142	152	13	23
W44SSA	MW-44	02/27/2004	GROUNDWATER	123	133	0	10
W66M2A	MW-66	02/23/2004	GROUNDWATER	140.8	150.8	22	32
W66M2D	MW-66	02/23/2004	GROUNDWATER	140.8	150.8	22	32

Profiling methods may include: Volatiles, Explosives, and Perchlorate  
Groundwater methods include: Volatiles, Semivolatiles, Explosives,  
Pesticides, Herbicides, Metals, Perchlorate 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  
02/22/2004 - 02/28/2004**

SAMPLE_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
W66SSA	MW-66	02/23/2004	GROUNDWATER	125.7	135.7	7	17
W75M1A	MW-75	02/25/2004	GROUNDWATER	140	150	59	69
W75M2A	MW-75	02/25/2004	GROUNDWATER	115	125	34	44
W75M2D	MW-75	02/25/2004	GROUNDWATER	115	125	34	44
W75SSA	MW-75	02/25/2004	GROUNDWATER	81	91	0	10
W76M1A	MW-76	02/24/2004	GROUNDWATER	125	135	58	68
W76M2A	MW-76	02/24/2004	GROUNDWATER	105	115	38	48
W76SSA	MW-76	02/24/2004	GROUNDWATER	85	95	18	28
W78M1A	MW-78	02/23/2004	GROUNDWATER	135	145	58	68
W78M2A	MW-78	02/24/2004	GROUNDWATER	115	125	38	48
W78M2D	MW-78	02/24/2004	GROUNDWATER	115	125		
W78M2D	MW-78	02/24/2004	GROUNDWATER	115	125	38	48
W78M3A	MW-78	02/23/2004	GROUNDWATER	85	95	8	18
W92M1A	MW-92	02/24/2004	GROUNDWATER	165	175	25	35
W92SSA	MW-92	02/24/2004	GROUNDWATER	139	149	0	10
W92SSD	MW-92	02/24/2004	GROUNDWATER	139	149	0	10
W95SSA	MW-95	02/23/2004	GROUNDWATER	125.2	135.2	1	11
W98M1A	MW-98	02/23/2004	GROUNDWATER	164	174	26	36
W99M1A	MW-99	02/23/2004	GROUNDWATER	195	205	60	70
W99SSA	MW-99	02/23/2004	GROUNDWATER	133	143	0	10
XXM971-A	97-1	02/24/2004	GROUNDWATER	83	93	62	72
XXM972-A	97-2	02/24/2004	GROUNDWATER	75	85	53	63
XXM973-A	97-3	02/24/2004	GROUNDWATER	75	85	36	46
XXM975-A	97-5	02/25/2004	GROUNDWATER	84	94	76	86
G312DAA	MW-312	02/23/2004	PROFILE	165	165	12	12
G312DBA	MW-312	02/23/2004	PROFILE	170	170	17	17
G312DCA	MW-312	02/24/2004	PROFILE	180	180	27	27
G312DDA	MW-312	02/24/2004	PROFILE	190	190	37	37
G312DEA	MW-312	02/24/2004	PROFILE	200	200	47	47
G312DFA	MW-312	02/24/2004	PROFILE	210	210	57	57
G312DGA	MW-312	02/24/2004	PROFILE	220	220	67	67
MW-313-25	MW-313	02/23/2004	PROFILE	336	336	214	214
MW-313-25FD	MW-313	02/23/2004	PROFILE	336	336	214	214
MW-319-01	MW-319	02/25/2004	PROFILE	100	100	7	7
MW-319-02	MW-319	02/25/2004	PROFILE	110	110	17	17

Profiling methods may include: Volatiles, Explosives, and Perchlorate  
Groundwater methods include: Volatiles, Semivolatiles, Explosives,  
Pesticides, Herbicides, Metals, Perchlorate 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  
02/22/2004 - 02/28/2004**

<b>SAMPLE_ID</b>	<b>GIS_LOCID</b>	<b>LOGDATE</b>	<b>SAMP_TYPE</b>	<b>SBD</b>	<b>SED</b>	<b>BWTS</b>	<b>BWTE</b>
MW-319-03	MW-319	02/26/2004	PROFILE	120	120	27	27
MW-319-03FD	MW-319	02/26/2004	PROFILE	120	120	27	27
MW-319-04	MW-319	02/26/2004	PROFILE	130	130	37	37
MW-319-05	MW-319	02/26/2004	PROFILE	140	140	47	47
MW-319-06	MW-319	02/26/2004	PROFILE	150	150	57	57
MW-319-07	MW-319	02/26/2004	PROFILE	160	160	67	67
MW-319-08	MW-319	02/26/2004	PROFILE	170	170	77	77
MW-319-09	MW-319	02/27/2004	PROFILE	180	180	87	87
MW-319-10	MW-319	02/27/2004	PROFILE	190	190	97	97
A5-NE-1	A5-NE-1	02/25/2004	SOIL_GRID	0	0.5		
A5-SE01	A5-SE01	02/25/2004	SOIL_GRID	0	0.5		
A6-NE01	A6-NE01	02/23/2004	SOIL_GRID	0	0.5		
A6-NW01	A6-NW01	02/23/2004	SOIL_GRID	0	0.5		
A6-SE01	A6-SE01	02/24/2004	SOIL_GRID	0	0.5		
A6-SE01	A6-SE01	02/23/2004	SOIL_GRID	0	0.5		
A6-SE01 FD	A6-SE01	02/23/2004	SOIL_GRID	0	0.5		
A6-SW01	A6-SW01	02/24/2004	SOIL_GRID	0	0.5		
A7-NW01	A7-NW01	02/24/2004	SOIL_GRID	0	0.5		
A7-SW01	A7-SW01	02/24/2004	SOIL_GRID	0	0.5		
B5-SE01	B5-SE01	02/25/2004	SOIL_GRID	0	0.5		
B6-SW01	B6-SW01	02/25/2004	SOIL_GRID	0	0.5		
B7-SW01	B7-SW01	02/24/2004	SOIL_GRID	0	0.5		
C8-NE01	C8-NE01	02/26/2004	SOIL_GRID	0	0.5		
C8-NE01 FD	C8-NE01	02/26/2004	SOIL_GRID	0	0.5		
D6-NE01	D6-NE01	02/27/2004	SOIL_GRID	0	0.5		
D8-NE01	D8-NE01	02/23/2004	SOIL_GRID	0	0.5		
D8-SE01	D8-SE01	02/25/2004	SOIL_GRID	0	0.5		
E6-SE01	E6-SE01	02/27/2004	SOIL_GRID	0	0.5		

---

**Profiling methods may include: Volatiles, Explosives, and Perchlorate**  
**Groundwater methods include: Volatiles, Semivolatiles, Explosives,**  
**Pesticides, Herbicides, Metals, Perchlorate 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 01/30/04 - 02/28/04**

SAMPLE ID	LOCID OR WELL	SAMPLED	SAMP TYPE	SBD	SED	BWTS	BWTE	METHOD	ANALYTE	PDA
4036009DC-A	4036009DC	02/17/2004	GROUNDWATER	0	0			E314.0	PERCHLORATE	
HW-2-A	HW-2	02/19/2004	GROUNDWATER	21	31	0	10	E314.0	PERCHLORATE	
HW-3-A	HW-3	02/19/2004	GROUNDWATER	20	30	0	10	E314.0	PERCHLORATE	
RSNW06-A	RSNW06	02/24/2004	GROUNDWATER	0	0			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
RSNW06-A	RSNW06	02/24/2004	GROUNDWATER	0	0			E314.0	PERCHLORATE	
RSNW06-D	RSNW06	02/24/2004	GROUNDWATER	0	0			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
RSNW06-D	RSNW06	02/24/2004	GROUNDWATER	0	0			E314.0	PERCHLORATE	
W02-09M1A	02-09	02/17/2004	GROUNDWATER	74	84	65.26	75.26	E314.0	PERCHLORATE	
W02-09M2A	02-09	02/17/2004	GROUNDWATER	59	69	50.3	60.3	E314.0	PERCHLORATE	
W277M1A	MW-277	02/17/2004	GROUNDWATER	130	140	26.3	36.3	E314.0	PERCHLORATE	
W277SSA	MW-277	02/18/2004	GROUNDWATER	102	112	0	10	E314.0	PERCHLORATE	
W278M1A	MW-278	02/18/2004	GROUNDWATER	113	123	25.76	35.76	E314.0	PERCHLORATE	
W278M2A	MW-278	02/19/2004	GROUNDWATER	97	102	9.79	14.79	E314.0	PERCHLORATE	
W279M1A	MW-279	02/18/2004	GROUNDWATER	96	106	37.4	47.4	E314.0	PERCHLORATE	
W279M2A	MW-279	02/19/2004	GROUNDWATER	83	88	26.8	31.8	E314.0	PERCHLORATE	
W279SSA	MW-279	02/19/2004	GROUNDWATER	66	76	10	20	E314.0	PERCHLORATE	
W298SSA	MW-298	02/11/2004	GROUNDWATER	83	93			E314.0	PERCHLORATE	
W80M1A	MW-80	02/12/2004	GROUNDWATER	130	140	86	96	E314.0	PERCHLORATE	
W80M2A	MW-80	02/12/2004	GROUNDWATER	100	110	56	66	E314.0	PERCHLORATE	
G312DAA	MW-312	02/23/2004	PROFILE	165	165	12	12	8330N	NITROGLYCERIN	NO
G312DAA	MW-312	02/23/2004	PROFILE	165	165	12	12	8330N	PENTAERYTHRITOL TETRANITRATE	NO
G312DAA	MW-312	02/23/2004	PROFILE	165	165	12	12	8330N	2,6-DINITROTOLUENE	NO
G312DCA	MW-312	02/24/2004	PROFILE	180	180	27	27	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES*
MW-313-01	MW-313	02/12/2004	PROFILE	130	130	8	8	8330N	NITROGLYCERIN	NO
MW-313-01	MW-313	02/12/2004	PROFILE	130	130	8	8	8330N	PICRIC ACID	NO
MW-313-01	MW-313	02/12/2004	PROFILE	130	130	8	8	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO
MW-313-02	MW-313	02/12/2004	PROFILE	140	140	18	18	8330N	PICRIC ACID	NO
MW-313-02	MW-313	02/12/2004	PROFILE	140	140	18	18	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO

DATA REPORTED REFLECT CURRENT DATABASE FOR SAMPLES COLLECTED IN SPECIFIED TIMEFRAME. NOT ALL RESULTS ARE COMPLETE.

SBD = SAMPLE COLLECTION BEGIN DEPTH IN FEET BELOW GROUND SURFACE

SED = SAMPLE COLLECTION END DEPTH IN FEET BELOW GROUND SURFACE

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

\* = Interference in sample

+ = PDAs are not good matches

**TABLE 3  
DETECTED COMPOUNDS-UNVALIDATED  
SAMPLES COLLECTED 01/30/04 - 02/28/04**

SAMPLE ID	LOCID OR WELL	SAMPLED	SAMP TYPE	SBD	SED	BWTS	BWTE	METHOD	ANALYTE	PDA
MW-313-03	MW-313	02/12/2004	PROFILE	150	150	28	28	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO
MW-313-03FD	MW-313	02/12/2004	PROFILE	150	150	28	28	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO
MW-313-04	MW-313	02/13/2004	PROFILE	160	160	38	38	8330N	NITROGLYCERIN	NO
MW-313-09	MW-313	02/17/2004	PROFILE	200	200	78	78	8330N	PICRIC ACID	NO
MW-313-09	MW-313	02/17/2004	PROFILE	200	200	78	78	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES+
MW-313-10	MW-313	02/17/2004	PROFILE	210	210	88	88	E314.0	PERCHLORATE	
MW-313-11	MW-313	02/17/2004	PROFILE	220	220	98	98	E314.0	PERCHLORATE	
MW-313-12	MW-313	02/17/2004	PROFILE	230	230	108	108	E314.0	PERCHLORATE	
MW-313-14	MW-313	02/17/2004	PROFILE	250	250	128	128	8330N	PICRIC ACID	NO
MW-313-19	MW-313	02/19/2004	PROFILE	290	290	168	168	8330N	PICRIC ACID	NO
MW-313-21	MW-313	02/19/2004	PROFILE	310	310	188	188	8330N	PICRIC ACID	NO
MW-315-01	MW-315	02/17/2004	PROFILE	130	130	5	5	8260B	CARBON DISULFIDE	
MW-315-01	MW-315	02/17/2004	PROFILE	130	130	5	5	8260B	CHLOROFORM	
MW-315-01	MW-315	02/17/2004	PROFILE	130	130	5	5	8330N	NITROGLYCERIN	NO
MW-315-01	MW-315	02/17/2004	PROFILE	130	130	5	5	8330N	PICRIC ACID	NO
MW-315-02	MW-315	02/18/2004	PROFILE	140	140	15	15	8260B	METHYL T-BUTYL ETHER	
MW-315-02	MW-315	02/18/2004	PROFILE	140	140	15	15	8260B	METHYL ETHYL KETONE (2-BUTANONE)	
MW-315-02	MW-315	02/18/2004	PROFILE	140	140	15	15	8260B	CHLOROFORM	
MW-315-02	MW-315	02/18/2004	PROFILE	140	140	15	15	8330N	NITROGLYCERIN	NO
MW-315-02	MW-315	02/18/2004	PROFILE	140	140	15	15	8330N	PICRIC ACID	NO
MW-315-03	MW-315	02/18/2004	PROFILE	150	150	25	25	8260B	CHLOROFORM	
MW-315-03FD	MW-315	02/18/2004	PROFILE	150	150	25	25	8260B	METHYL ETHYL KETONE (2-BUTANONE)	
MW-315-03FD	MW-315	02/18/2004	PROFILE	150	150	25	25	8260B	CHLOROFORM	
MW-315-04	MW-315	02/18/2004	PROFILE	160	160	35	35	8260B	METHYL ETHYL KETONE (2-BUTANONE)	
MW-315-04	MW-315	02/18/2004	PROFILE	160	160	35	35	8260B	CHLOROFORM	
MW-315-04	MW-315	02/18/2004	PROFILE	160	160	35	35	8330N	PICRIC ACID	NO
MW-315-05	MW-315	02/18/2004	PROFILE	170	170	45	45	8260B	METHYL ETHYL KETONE (2-BUTANONE)	
MW-315-05	MW-315	02/18/2004	PROFILE	170	170	45	45	8260B	CHLOROFORM	

DATA REPORTED REFLECT CURRENT DATABASE FOR SAMPLES COLLECTED IN SPECIFIED TIMEFRAME. NOT ALL RESULTS ARE COMPLETE.

SBD = SAMPLE COLLECTION BEGIN DEPTH IN FEET BELOW GROUND SURFACE

SED = SAMPLE COLLECTION END DEPTH IN FEET BELOW GROUND SURFACE

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

\* = Interference in sample

+ = PDAs are not good matches

**TABLE 3  
DETECTED COMPOUNDS-UNVALIDATED  
SAMPLES COLLECTED 01/30/04 - 02/28/04**

SAMPLE ID	LOCID OR WELL	SAMPLED	SAMP TYPE	SBD	SED	BWTS	BWTE	METHOD	ANALYTE	PDA
MW-315-07	MW-315	02/19/2004	PROFILE	180	180	55	55	8260B	METHYL ETHYL KETONE (2-BUTANONE)	
MW-315-07	MW-315	02/19/2004	PROFILE	180	180	55	55	8260B	CHLOROFORM	
MW-315-08	MW-315	02/19/2004	PROFILE	190	190	65	65	8260B	METHYL T-BUTYL ETHER	
MW-315-09	MW-315	02/19/2004	PROFILE	200	200	75	75	8260B	METHYL T-BUTYL ETHER	
MW-315-09	MW-315	02/19/2004	PROFILE	200	200	75	75	8260B	CHLOROFORM	
MW-315-09	MW-315	02/19/2004	PROFILE	200	200	75	75	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES+
MW-315-10	MW-315	02/19/2004	PROFILE	210	210	85	85	8260B	METHYL ETHYL KETONE (2-BUTANONE)	
MW-315-10	MW-315	02/19/2004	PROFILE	210	210	85	85	8260B	CHLOROFORM	
MW-315-10	MW-315	02/19/2004	PROFILE	210	210	85	85	8260B	METHYL T-BUTYL ETHER	
MW-315-11	MW-315	02/19/2004	PROFILE	220	220	95	95	8260B	METHYL T-BUTYL ETHER	
MW-315-13	MW-315	02/19/2004	PROFILE	240	240	115	115	8260B	CHLOROFORM	
MW-315-14	MW-315	02/19/2004	PROFILE	250	250	125	125	8260B	CHLOROFORM	
MW-315-15	MW-315	02/19/2004	PROFILE	260	260	135	135	8260B	CHLOROFORM	
MW-315-16	MW-315	02/20/2004	PROFILE	270	270	145	145	8260B	METHYL ETHYL KETONE (2-BUTANONE)	
MW-315-16	MW-315	02/20/2004	PROFILE	270	270	145	145	8260B	CHLOROFORM	
MW-315-17	MW-315	02/20/2004	PROFILE	280	280	155	155	8260B	CHLOROFORM	
MW-315-18	MW-315	02/20/2004	PROFILE	290	290	165	165	8260B	CHLOROFORM	
MW-315-19	MW-315	02/20/2004	PROFILE	300	300	175	175	8260B	METHYL ETHYL KETONE (2-BUTANONE)	
MW-315-19	MW-315	02/20/2004	PROFILE	300	300	175	175	8260B	CHLOROFORM	
MW-315-20	MW-315	02/20/2004	PROFILE	310	310	185	185	8260B	CHLOROFORM	
MW-315-21	MW-315	02/20/2004	PROFILE	318	318	193	193	8260B	CHLOROFORM	

DATA REPORTED REFLECT CURRENT DATABASE FOR SAMPLES COLLECTED IN SPECIFIED TIMEFRAME. NOT ALL RESULTS ARE COMPLETE.

SBD = SAMPLE COLLECTION BEGIN DEPTH IN FEET BELOW GROUND SURFACE

SED = SAMPLE COLLECTION END DEPTH IN FEET BELOW GROUND SURFACE

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

\* = Interference in sample

+ = PDAs are not good matches