

**WEEKLY PROGRESS UPDATE
FOR AUGUST 27– AUGUST 31, 2001**

**EPA REGION I ADMINISTRATIVE ORDERS SDWA 1-97-1019 & 1-2000-0014
MASSACHUSETTS MILITARY RESERVATION
TRAINING RANGE AND IMPACT AREA**

The following summary of progress is for the period from August 27 to August 31, 2001.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of August 31 is summarized in Table 1.

Table 1. Drilling progress as of August 31, 2001				
Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-177	Central Impact Area Well (CIAP-7)	390	203	
MW-178	Central Impact Area Well (CIAP-3)	315	176	
MW-179	Central Impact Area Well (CIAP-1)	160	20	
MW-180	Central Impact Area Well (CIAP-6)	350	194	
MW-181	J-3 Range Well at wastewater holding tank	43	9	32-42
Bgs = below ground surface Bwt = below water table				

Completed well installation of MW-181. Completed drilling of MW-177 (CIAP-7), continued drilling of MW-178 (CIAP-3), and commenced drilling of MW-179 (CIAP-1) and MW-180 (CIAP-6).

Samples collected during the reporting period are summarized in Table 2. Groundwater profile samples were collected from MW-177 (CIAP-7), MW-178 (CIAP-3), MW-179 (CIAP-1) and MW-180 (CIAP-6). Groundwater samples were collected as part of the August Long Term Groundwater Monitoring round. Water samples were collected from drive points and surface monitoring locations at Snake Pond. Soil samples were collected from grids at the Interberm Area on J-1 Range and from Disposal Area 1 on J-2 Range. Post-detonation BIP samples were collected at J-1 Range and J-2 Ranges.

The Guard, EPA, and MADEP had a meeting on August 30 to discuss technical issues, including the following:

Attendees

Ben Gregson (IAGWSPO)	CPT Bill Meyer (IAGWSPO)	Karen Wilson (IAGWSPO)
Bill Gallagher (IAGWSPO)	Tina Dolen (IAGWSPO)	Mike Jasinski (EPA-phone)
Jane Dolan (EPA)	Todd Borci (EPA)	Millie Garcia-Surette (MADEP)
Len Pinaud (MADEP)	Mark Panni (MADEP)	COL Albert Bleakley (JPO)
Darrell Deleppo (ACE)	Heather Sullivan (ACE)	Gina Tyo (ACE)
John MacPherson (ACE)	Ellen Iorio (ACE)	Scott Veenstra (AMEC-phone)
Marc Grant (AMEC)	John Rice (AMEC)	Herb Colby (AMEC-phone)
Jay Clausen (AMEC-phone)	Larry Hudgins (Tetra Tech)	Leo Montroy (Tt-phone)
Susan Stewart (Tetra Tech)	Dave Williams (MDPH)	Don Walter (USGS-phone)

Adam Balogh (TRC-phone)
Melissa Koehler (Army Audit Agency)

LuAnn Schaefer (Army Audit Agency)
Tamonie Denegall (Army Audit Agency)

CS-19 Update

Todd Borci (EPA) provided a handout from IRP. The table shows solvents detected in groundwater profile samples collected from the recent boring downgradient of CS-19. EPA will discuss with IRP the need for sampling Volatile Organic Compounds at downgradient wells, with Bill Gallagher to attend for IAGWSPO.

AirMag Update

Ellen Iorio (ACE) provided an update on work completed to date.

- ACE is on schedule for a presentation 9/12 at 0800hrs on the Air Mag results and proposed additional work.
- In other MSP work, Ms. Iorio reported that the Former K Range had 3 of 4 grids cut for the EM-61 survey but the vegetation was very heavy in the 4th grid. ACE proposed changing the survey from EM-61 to a hand-held magnetometer for this grid; EPA agreed.
- Ms. Iorio reported that the survey in Former A Range had located buried practice rockets. Fifty-seven 3.5-inch practice rockets were removed from this location. After surveying ACE will attempt to correlate this find with the Air Mag results. There have been technical difficulties on the Former A Range survey due to the amount of metallic debris; ACE may try a new magnetometer configuration here.
- Larry Hudgins (Tetra Tech) handed out a pick list as requested by EPA.

Snake Pond Diffusion Samplers

Jane Dolan (EPA) had discussions with Denis LeBlanc (USGS) regarding the sampler size. If a larger size is available that will allow collection of perchlorate (as well as explosive) samples, EPA requests that this be used.

J Range Response Plan

- Herb Colby (AMEC) explained that the response plan has been implemented with the exception of the sample that could not be collected from 90PZ0208 (still working on access). Results will be provided in the draft J Range report due 9/5/01.
- Jane Dolan (EPA) indicated that the Memorandum of Resolution for the Additional Delineation Workplan #1 indicated which perchlorate detections would be delineated, it was not clear that the final workplan (also due next week) adequately described how this would happen. There was some discussion of how this would mesh with the Workplan #2 to be provided in December. Guard, EPA, and MADEP agreed that this would be discussed in a breakout session following the 9/13/01 technical meeting, which is when the initial map of plumes will be provided.
- Jane Dolan (EPA) requested Guard to also consider how to delineate perchlorate in soil. Todd Borci (EPA) to provide info to Heather Sullivan (ACE) on a soil analytical method.

University of Texas Fate/Transport Measurements Update

- Jay Clausen (AMEC) explained he has received draft results but has yet to review the data in detail. He expects a final report from University of Texas next month. There is an issue with interpreting how the RDX dissolution results, which are for a constant saturated column, might apply to the intermittent saturation that really occurs due to precipitation.
- Mike Jasinski (EPA) asked that these results be considered in the Demo 1 soil report; they are not explicitly called out in the proposed schedule provided to EPA.

Water Supply Project Update

Todd Borci (EPA) asked that MADEP consider which chemical parameters are monitored for WS-1, which is in the area near detects of TCE and RDX at MW-18. Len Pinaud (MADEP) indicated that MADEP would make appropriate recommendations.

Drilling Schedule

John Rice (AMEC) explained that last week's suggestion to complete P-30 rather than CIAP-4 prior to 9/28/01 would not be feasible because the latter was scheduled for drilling by the Sonic rig and the former (being inside the Impact Area) could not be drilled by the Sonic rig. It was agreed to keep CIAP-4 in the schedule and substitute P-30 for CIAP-2.

Rapid Response Actions

- Heather Sullivan (ACE) asked to schedule comment resolution for the 2nd round of comments on the Completion of Work Report for Round 1; it was agreed to meet on this in 2 weeks.
- There was a discussion of process water treatment; Jane Dolan (EPA) asked that the water be treated prior to disposal.
- Scott Veenstra (AMEC) asked whether post-excavation sampling results might be more appropriate to include in the Completion of Work Report (Round 2) rather than the Supplemental Delineation Report. Jane Dolan (EPA) asked that the results be included in the latter report. Also, that the Completion of Work Report (Round 2) include results for BIPs conducted prior to delineation sampling.

IART Agenda and Action Items

Tina Dolen (IAGWSPO) provided a draft agenda for September, and draft action items for the August meeting. Ms. Dolen suggested that the Demo 1 Groundwater FS be added to the September agenda considering that with the timing of this report (9/25/01) comments will be needed from IART prior to the October meeting. This issue, and the draft action items, will be discussed in the PM/CI meeting to occur later today.

Other Issues

- Heather Sullivan (ACE) mentioned that Guard is preparing a list of EPA comments on TM 01-14 that require clarification or discussion prior to the RCL.
- Todd Borci (EPA) and Millie Garcia-Surette (MADEP) discussed the need for scoping meetings to ensure Guard is aware of agency expectations for reports.
- It was agreed to complete the DU report comment resolution on 9/13/01.
- EPA asked for a schedule for database changes for trace level perchlorate in CIA wells.
- EPA asked that corrections be made to the IART detect tables for unvalidated SVOC.
- EPA asked that the Guard change the "standard" for perchlorate in the IART detect tables and maps from 18ppb to 1.5ppb in accordance with their recent letter.
- EPA asked the Guard to consider when a revised Combined Schedule could be produced and any outstanding scheduling issues to be decided before then.
- EPA asked the Guard to consider shifting the Inset A frame in the weekly progress report maps, to better show all of the J Ranges.

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-177 had detections of 1,3-dinitrobenzene (9 intervals), 2,4-DNT (1 interval), 2A-DNT (2 intervals), 4A-DNT (3 intervals), nitrobenzene (3 intervals), nitroglycerin (8 intervals), picric acid (6 intervals), 3-nitrotoluene (7 intervals), 4-nitrotoluene (7 intervals), PENT (1 interval), TNT (1 interval), and HMX (1 interval). One nitrobenzene detection, two 4A-DNT detections, one 2A-DNT detections and the TNT and 2,4-DNT detection were verified by PDA spectra.

3. DELIVERABLES SUBMITTED

SAR Addendum to Phase IIb Report (Tech Memo 01-15a)	8/30/01
Revised Profile Sampling Method and Turbidity Evaluation (Addendum to Tech Memo 99-6)	8/31/01

4. SCHEDULED ACTIONS

Scheduled actions for the week of September 3 include well installation MW-177 (CIAP-7), MW-178 (CIAP-3), and MW-180 (CIAP-6), continue drilling MW-179 (CIAP-1); commence drilling and install well at the J-3 Melt/Pour building waste water holding tank (MW-181); commence drilling of P-30 and CIAP-4; continue August LTM round; and remove vegetation from drill pad CIAP-9.

5. SUMMARY OF ACTIVITIES FOR DEMO 1

An additional downgradient well location (D1P-8) on Pew Road will be drilled in the coming weeks. Analysis of first, second, and third round groundwater samples from newly installed wells is ongoing. Analysis of soil samples for TOC and other analytes is ongoing. The groundwater Feasibility Study is being prepared.

TABLE 2
 SAMPLING PROGRESS
 8/25/2001-8/31/2001

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
58MW0007E	58MW0007E	08/30/2001	58MW0007E	134.00	139.00	0.00	5.00
58MW0009E	58MW0009E	08/29/2001	58MW0009E	133.00	138.00	6.50	11.50
58MW0011E	58MW0011E	08/29/2001	58MW0011E	145.00	150.00	15.70	20.70
HCA08230101AA	A08220101	08/31/2001	CRATER GRAB	0.00	0.25		
HDA08220101AA	A08220101	08/31/2001	CRATER GRAB	0.00	0.25		
HDA08230101AA	A08220101	08/31/2001	CRATER GRAB	0.00	0.25		
HDJ1.A.2.00128SS7	J1A200128S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ1200182RSS1	J1200182RS	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ1200182RSS1D	J1200182RS	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ1200182RSS2	J1200182RS	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ1200182RSS3	J1200182RS	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ1200182RSS4	J1200182RS	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ1200182RSS5	J1200182RS	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ1200182RSS6	J1200182RS	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ1200182RSS7	J1200182RS	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ1200182RSS8	J1200182RS	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2.A.2.00590SS2	J2A200590S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2.A.2.00590SS3	J2A200590S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2.A.2.00590SS4	J2A200590S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2.A.2.00590SS5	J2A200590S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2.A.2.00590SS6	J2A200590S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2.A.2.00590SS7	J2A200590S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2.A.2.00590SS8	J2A200590S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2.A.2.00590SS8D	J2A200590S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200590SS1	J2A200590S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200595SS1	J2A200595S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200595SS2	J2A200595S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200595SS3	J2A200595S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200595SS4	J2A200595S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200595SS5	J2A200595S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200595SS6	J2A200595S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200595SS7	J2A200595S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200595SS8	J2A200595S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200595SS8D	J2A200595S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200600SS1	J2A200600S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200600SS2	J2A200600S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200600SS3	J2A200600S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200600SS4	J2A200600S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200600SS5	J2A200600S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200600SS6	J2A200600S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200600SS7	J2A200600S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200600SS8	J2A200600S	08/27/2001	CRATER GRAB	0.00	0.25		
HDJ2A200600SS8D	J2A200600S	08/27/2001	CRATER GRAB	0.00	0.25		

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
8/25/2001-8/31/2001

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
58MW0003-E	FIELDQC	08/30/2001	FIELDQC	0.00	0.00		
58MW0006E-E	FIELDQC	08/29/2001	FIELDQC	0.00	0.00		
58MW0015B-E	FIELDQC	08/28/2001	FIELDQC	0.00	0.00		
58MW0016A-E	FIELDQC	08/31/2001	FIELDQC	0.00	0.00		
G177DKE	FIELDQC	08/27/2001	FIELDQC	0.00	0.00		
G177DME	FIELDQC	08/28/2001	FIELDQC	0.00	0.00		
G177DSE	FIELDQC	08/29/2001	FIELDQC	0.00	0.00		
G178DJE	FIELDQC	08/27/2001	FIELDQC	0.00	0.00		
G178DLE	FIELDQC	08/28/2001	FIELDQC	0.00	0.00		
G178DOE	FIELDQC	08/29/2001	FIELDQC	0.00	0.00		
G178DOE	FIELDQC	08/30/2001	FIELDQC	0.00	0.00		
G178DRE	FIELDQC	08/31/2001	FIELDQC	0.00	0.00		
G180DAE	FIELDQC	08/29/2001	FIELDQC	0.00	0.00		
G180DIE	FIELDQC	08/31/2001	FIELDQC	0.00	0.00		
G18DFE	FIELDQC	08/30/2001	FIELDQC	0.00	0.00		
HC05CD1CAE	FIELDQC	08/29/2001	FIELDQC	0.00	0.00		
HC05CD1CAT	FIELDQC	08/30/2001	FIELDQC	0.00	0.00		
HC05CG1CAE	FIELDQC	08/28/2001	FIELDQC	0.00	0.00		
HC05CG1CAT	FIELDQC	08/28/2001	FIELDQC	0.00	0.00		
HC05CK1AAE	FIELDQC	08/30/2001	FIELDQC	0.00	0.00		
HC05CK1AAT	FIELDQC	08/31/2001	FIELDQC	0.00	0.00		
HDA08220101AE	FIELDQC	08/31/2001	FIELDQC	0.00	0.00		
HDJ2.A.2.00590SS1E	FIELDQC	08/27/2001	FIELDQC	0.00	0.00		
W71M1T	FIELDQC	08/29/2001	FIELDQC	0.00	0.00		
W83DDT	FIELDQC	08/28/2001	FIELDQC	0.00	0.00		
W84SST	FIELDQC	08/27/2001	FIELDQC	0.00	0.00		
58MW0001	58MW0001	08/29/2001	GROUNDWATER	122.00	127.00	4.78	9.78
58MW0001-D	58MW0001	08/29/2001	GROUNDWATER	122.00	127.00	4.78	9.78
58MW0003	58MW0003	08/30/2001	GROUNDWATER	119.00	124.00	1.30	6.30
58MW0006E	58MW0006E	08/29/2001	GROUNDWATER	110.00	115.00	0.00	5.00
58MW0007B	58MW0007B	08/31/2001	GROUNDWATER	188.00	193.00	50.10	55.10
58MW0007C	58MW0007C	08/30/2001	GROUNDWATER	153.00	158.00	15.10	20.10
58MW0007C	58MW0007C	08/31/2001	GROUNDWATER	153.00	158.00	28.16	33.16
58MW0009C	58MW0009C	08/31/2001	GROUNDWATER	168.00	173.00	41.57	46.57
58MW0015B	58MW0015B	08/28/2001	GROUNDWATER	130.00	140.00	8.89	18.89
58MW0016A	58MW0016A	08/31/2001	GROUNDWATER	176.00	185.00	54.22	63.22
58MW0016B	58MW0016B	08/30/2001	GROUNDWATER	151.00	161.00	29.50	39.50
58MW0016C	58MW0016C	08/30/2001	GROUNDWATER	116.00	126.00	0.00	10.00
90SNP0001	90SNP0001	08/30/2001	GROUNDWATER				
90SNP0002	90SNP0002	08/30/2001	GROUNDWATER				
W141M1A	MW-141	08/27/2001	GROUNDWATER	190.00	200.00	60.64	70.64
W141M2A	MW-141	08/27/2001	GROUNDWATER	162.00	172.00	32.65	42.65
W63DDA	MW-63	08/28/2001	GROUNDWATER	221.00	226.00	64.30	69.30
W71M1A	MW-71	08/28/2001	GROUNDWATER	180.00	190.00	17.90	27.90

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
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 8/25/2001-8/31/2001

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
W71M1D	MW-71	08/28/2001	GROUNDWATER	180.00	190.00	17.90	27.90
W71SSA	MW-71	08/28/2001	GROUNDWATER	158.00	168.00	0.00	10.00
W83DDA	MW-38	08/28/2001	GROUNDWATER	105.00	115.00	69.25	79.25
W83M2A	MW-38	08/27/2001	GROUNDWATER	85.00	95.00	46.06	56.06
W83M3A	MW-38	08/27/2001	GROUNDWATER	60.00	70.00	23.80	33.80
W84M2A	MW-84	08/27/2001	GROUNDWATER	104.00	114.00	64.50	74.50
W84M3A	MW-84	08/27/2001	GROUNDWATER	79.00	89.00	39.60	49.60
W84SSA	MW-84	08/27/2001	GROUNDWATER	54.00	65.00	14.30	24.30
G177DDA	MW-177	08/27/2001	PROFILE	220.00	220.00	32.50	32.50
G177DEA	MW-177	08/27/2001	PROFILE	230.00	230.00	42.50	42.50
G177DFA	MW-177	08/27/2001	PROFILE	240.00	240.00	52.50	52.50
G177DFD	MW-177	08/27/2001	PROFILE	240.00	240.00	52.50	52.50
G177DGA	MW-177	08/27/2001	PROFILE	250.00	250.00	62.50	62.50
G177DHA	MW-177	08/27/2001	PROFILE	260.00	260.00	72.50	72.50
G177DIA	MW-177	08/27/2001	PROFILE	270.00	270.00	82.50	82.50
G177DJA	MW-177	08/27/2001	PROFILE	280.00	280.00	92.50	92.50
G177DKA	MW-177	08/27/2001	PROFILE	290.00	290.00	102.50	102.50
G177DLA	MW-177	08/27/2001	PROFILE	300.00	300.00	112.50	112.50
G177DMA	MW-177	08/28/2001	PROFILE	310.00	310.00	122.50	122.50
G177DNA	MW-177	08/28/2001	PROFILE	320.00	320.00	132.50	132.50
G177DOA	MW-177	08/28/2001	PROFILE	330.00	330.00	142.50	142.50
G177DPA	MW-177	08/28/2001	PROFILE	340.00	340.00	152.50	152.50
G177DRA	MW-177	08/28/2001	PROFILE	360.00	360.00	172.50	172.50
G177DRD	MW-177	08/28/2001	PROFILE	360.00	360.00	172.50	172.50
G177DSA	MW-177	08/29/2001	PROFILE	370.00	370.00	182.50	182.50
G177DTA	MW-177	08/29/2001	PROFILE	380.00	380.00	192.50	192.50
G177DUA	MW-177	08/29/2001	PROFILE	390.00	390.00	202.50	202.50
G178DGA	MW-178	08/27/2001	PROFILE	205.00	205.00	65.60	65.60
G178DHA	MW-178	08/27/2001	PROFILE	215.00	215.00	75.60	75.60
G178DIA	MW-178	08/27/2001	PROFILE	225.00	225.00	85.60	85.60
G178DJA	MW-178	08/27/2001	PROFILE	235.00	235.00	95.60	95.60
G178DKA	MW-178	08/27/2001	PROFILE	245.00	245.00	105.60	105.60
G178DLA	MW-178	08/28/2001	PROFILE	255.00	255.00	115.60	115.60
G178DMA	MW-178	08/28/2001	PROFILE	265.00	265.00	125.60	125.60
G178DNA	MW-178	08/28/2001	PROFILE	275.00	275.00	135.60	135.60
G178DOA	MW-178	08/29/2001	PROFILE	285.00	285.00	145.60	145.60
G178DPA	MW-178	08/29/2001	PROFILE	295.00	295.00	155.60	155.60
G178DQA	MW-178	08/30/2001	PROFILE	305.00	305.00	165.60	165.60
G178DQD	MW-178	08/30/2001	PROFILE	305.00	305.00	165.60	165.60
G178DRA	MW-178	08/31/2001	PROFILE	310.00	315.00	175.60	180.60
G179DAA	MW-179	08/31/2001	PROFILE	150.00	150.00	9.60	9.60
G179DBA	MW-179	08/31/2001	PROFILE	160.00	160.00	19.60	19.60
G180DAA	MW-180	08/29/2001	PROFILE	170.00	170.00	14.00	14.00
G180DBA	MW-180	08/29/2001	PROFILE	180.00	180.00	24.00	24.00

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

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BWTS = Depth below water table, start depth, measured in feet

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TABLE 2
 SAMPLING PROGRESS
 8/25/2001-8/31/2001

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
G180DCA	MW-180	08/29/2001	PROFILE	190.00	190.00	34.00	34.00
G180DDA	MW-180	08/29/2001	PROFILE	200.00	200.00	44.00	44.00
G180DDD	MW-180	08/29/2001	PROFILE	200.00	200.00	44.00	44.00
G180DEA	MW-180	08/29/2001	PROFILE	210.00	210.00	54.00	54.00
G180DFA	MW-180	08/30/2001	PROFILE	220.00	220.00	64.00	64.00
G180DGA	MW-180	08/30/2001	PROFILE	230.00	230.00	74.00	74.00
G180DGD	MW-180	08/30/2001	PROFILE	230.00	230.00	74.00	74.00
G180DHA	MW-180	08/30/2001	PROFILE	240.00	240.00	84.00	84.00
G180DIA	MW-180	08/30/2001	PROFILE	250.00	250.00	94.00	94.00
G180DJA	MW-180	08/30/2001	PROFILE	260.00	260.00	104.00	104.00
G180DKA	MW-180	08/30/2001	PROFILE	270.00	270.00	114.00	114.00
G180DLA	MW-180	08/30/2001	PROFILE	280.00	280.00	124.00	124.00
G180DNA	MW-180	08/31/2001	PROFILE	300.00	300.00	144.00	144.00
G180DOA	MW-180	08/31/2001	PROFILE	310.00	310.00	154.00	154.00
G180DPA	MW-180	08/31/2001	PROFILE	320.00	320.00	164.00	164.00
G180DQA	MW-180	08/31/2001	PROFILE	330.00	330.00	174.00	174.00
G180DRA	MW-180	08/31/2001	PROFILE	340.00	340.00	184.00	184.00
HC05CD1AAA	05CD	08/29/2001	SOIL GRID	0.00	0.25		
HC05CD1BAA	05CD	08/29/2001	SOIL GRID	0.25	0.50		
HC05CD1CAA	05CD	08/29/2001	SOIL GRID	0.50	1.00		
HC05CE1AAA	05CE	08/29/2001	SOIL GRID	0.00	0.25		
HC05CE1BAA	05CE	08/29/2001	SOIL GRID	0.25	0.50		
HC05CE1CAA	05CE	08/29/2001	SOIL GRID	0.50	1.00		
HC05CF1AAA	05CF	08/28/2001	SOIL GRID	0.00	0.25		
HC05CF1AAD	05CF	08/28/2001	SOIL GRID	0.00	0.25		
HC05CF1BAA	05CF	08/28/2001	SOIL GRID	0.25	0.50		
HC05CF1CAA	05CF	08/28/2001	SOIL GRID	0.50	1.00		
HC05CG1AAA	05CG	08/28/2001	SOIL GRID	0.00	0.25		
HC05CG1BAA	05CG	08/28/2001	SOIL GRID	0.25	0.50		
HC05CG1CAA	05CG	08/28/2001	SOIL GRID	0.50	1.00		
HC05CH1AAA	05CH	08/28/2001	SOIL GRID	0.00	0.25		
HC05CH1BAA	05CH	08/28/2001	SOIL GRID	0.25	0.50		
HC05CH1CAA	05CH	08/28/2001	SOIL GRID	0.50	1.00		
HC05CI1AAA	05CI	08/29/2001	SOIL GRID	0.00	0.25		
HC05CI1BAA	05CI	08/29/2001	SOIL GRID	0.25	0.50		
HC05CI1CAA	05CI	08/29/2001	SOIL GRID	0.50	1.00		
HC05CJ1AAA	05CJ	08/30/2001	SOIL GRID	0.00	0.25		
HC05CJ1BAA	05CJ	08/30/2001	SOIL GRID	0.25	0.50		
HC05CJ1CAA	05CJ	08/30/2001	SOIL GRID	0.50	1.00		
HC05CK1AAA	05CK	08/30/2001	SOIL GRID	0.00	0.25		
HC05CK1BAA	05CK	08/30/2001	SOIL GRID	0.25	0.50		
HC05CK1CAA	05CK	08/30/2001	SOIL GRID	0.50	1.00		
HC05CL1AAA	05CL	08/30/2001	SOIL GRID	0.00	0.25		
HC05CL1BAA	05CL	08/30/2001	SOIL GRID	0.25	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
 8/25/2001-8/31/2001

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HC05CL1CAA	05CL	08/30/2001	SOIL GRID	0.50	1.00		
HD05C1AAA	05C	08/30/2001	SOIL GRID	0.00	0.25		
LKSNK0004AAA	LKSNK0004	08/29/2001	SURFACE WATER	0.00	1.00		
LKSNK0005AAA	LKSNK0005	08/29/2001	SURFACE WATER	0.00	1.00		

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 8/11/01-8/31/01

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G177DKA	MW-177	08/27/2001	PROFILE	290.00	290.00	102.50	102.50	8330N	1,3-DINITROBENZENE	NO
G177DKA	MW-177	08/27/2001	PROFILE	290.00	290.00	102.50	102.50	8330N	3-NITROTOLUENE	NO
G177DKA	MW-177	08/27/2001	PROFILE	290.00	290.00	102.50	102.50	8330N	4-NITROTOLUENE	NO
G177DKA	MW-177	08/27/2001	PROFILE	290.00	290.00	102.50	102.50	8330N	NITROBENZENE	NO
G177DKA	MW-177	08/27/2001	PROFILE	290.00	290.00	102.50	102.50	8330N	NITROGLYCERIN	NO
G177DKA	MW-177	08/27/2001	PROFILE	290.00	290.00	102.50	102.50	8330N	PICRIC ACID	NO
G177DLA	MW-177	08/27/2001	PROFILE	300.00	300.00	112.50	112.50	8330N	1,3-DINITROBENZENE	NO
G177DLA	MW-177	08/27/2001	PROFILE	300.00	300.00	112.50	112.50	8330N	NITROGLYCERIN	NO
G177DMA	MW-177	08/28/2001	PROFILE	310.00	310.00	122.50	122.50	8330N	1,3-DINITROBENZENE	NO
G177DMA	MW-177	08/28/2001	PROFILE	310.00	310.00	122.50	122.50	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G177DMA	MW-177	08/28/2001	PROFILE	310.00	310.00	122.50	122.50	8330N	3-NITROTOLUENE	NO
G177DMA	MW-177	08/28/2001	PROFILE	310.00	310.00	122.50	122.50	8330N	PENTAERYTHRITOL TETRANITR	NO
G177DNA	MW-177	08/28/2001	PROFILE	320.00	320.00	132.50	132.50	8330N	1,3-DINITROBENZENE	NO
G177DNA	MW-177	08/28/2001	PROFILE	320.00	320.00	132.50	132.50	8330N	2-AMINO-4,6-DINITROTOLUENE	YES
G177DNA	MW-177	08/28/2001	PROFILE	320.00	320.00	132.50	132.50	8330N	3-NITROTOLUENE	NO
G177DNA	MW-177	08/28/2001	PROFILE	320.00	320.00	132.50	132.50	8330N	4-NITROTOLUENE	NO
G177DNA	MW-177	08/28/2001	PROFILE	320.00	320.00	132.50	132.50	8330N	NITROGLYCERIN	NO
G177DNA	MW-177	08/28/2001	PROFILE	320.00	320.00	132.50	132.50	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	NO
G177DOA	MW-177	08/28/2001	PROFILE	330.00	330.00	142.50	142.50	8330N	1,3-DINITROBENZENE	NO
G177DOA	MW-177	08/28/2001	PROFILE	330.00	330.00	142.50	142.50	8330N	3-NITROTOLUENE	NO
G177DOA	MW-177	08/28/2001	PROFILE	330.00	330.00	142.50	142.50	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
G177DOA	MW-177	08/28/2001	PROFILE	330.00	330.00	142.50	142.50	8330N	4-NITROTOLUENE	NO
G177DOA	MW-177	08/28/2001	PROFILE	330.00	330.00	142.50	142.50	8330N	NITROGLYCERIN	NO
G177DOA	MW-177	08/28/2001	PROFILE	330.00	330.00	142.50	142.50	8330N	PICRIC ACID	NO
G177DPA	MW-177	08/28/2001	PROFILE	340.00	340.00	152.50	152.50	8330N	1,3-DINITROBENZENE	NO
G177DPA	MW-177	08/28/2001	PROFILE	340.00	340.00	152.50	152.50	8330N	3-NITROTOLUENE	NO
G177DPA	MW-177	08/28/2001	PROFILE	340.00	340.00	152.50	152.50	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
G177DPA	MW-177	08/28/2001	PROFILE	340.00	340.00	152.50	152.50	8330N	4-NITROTOLUENE	NO
G177DPA	MW-177	08/28/2001	PROFILE	340.00	340.00	152.50	152.50	8330N	NITROBENZENE	YES
G177DPA	MW-177	08/28/2001	PROFILE	340.00	340.00	152.50	152.50	8330N	NITROGLYCERIN	NO
G177DPA	MW-177	08/28/2001	PROFILE	340.00	340.00	152.50	152.50	8330N	PICRIC ACID	NO
G177DRD	MW-177	08/28/2001	PROFILE	360.00	360.00	172.50	172.50	8330N	1,3-DINITROBENZENE	NO
G177DRD	MW-177	08/28/2001	PROFILE	360.00	360.00	172.50	172.50	8330N	4-NITROTOLUENE	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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 8/11/01-8/31/01

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G177DRD	MW-177	08/28/2001	PROFILE	360.00	360.00	172.50	172.50	8330N	PICRIC ACID	NO
G177DSA	MW-177	08/29/2001	PROFILE	370.00	370.00	182.50	182.50	8330N	1,3-DINITROBENZENE	NO
G177DSA	MW-177	08/29/2001	PROFILE	370.00	370.00	182.50	182.50	8330N	3-NITROTOLUENE	NO
G177DSA	MW-177	08/29/2001	PROFILE	370.00	370.00	182.50	182.50	8330N	4-NITROTOLUENE	NO
G177DSA	MW-177	08/29/2001	PROFILE	370.00	370.00	182.50	182.50	8330N	NITROGLYCERIN	NO
G177DSA	MW-177	08/29/2001	PROFILE	370.00	370.00	182.50	182.50	8330N	PICRIC ACID	NO
G177DTA	MW-177	08/29/2001	PROFILE	380.00	380.00	192.50	192.50	8330N	1,3-DINITROBENZENE	NO
G177DTA	MW-177	08/29/2001	PROFILE	380.00	380.00	192.50	192.50	8330N	2,4,6-TRINITROTOLUENE	YES
G177DTA	MW-177	08/29/2001	PROFILE	380.00	380.00	192.50	192.50	8330N	2,4-DINITROTOLUENE	YES
G177DTA	MW-177	08/29/2001	PROFILE	380.00	380.00	192.50	192.50	8330N	3-NITROTOLUENE	NO
G177DTA	MW-177	08/29/2001	PROFILE	380.00	380.00	192.50	192.50	8330N	4-AMINO-2,6-DINITROTOLUENE	NO
G177DTA	MW-177	08/29/2001	PROFILE	380.00	380.00	192.50	192.50	8330N	4-NITROTOLUENE	NO
G177DTA	MW-177	08/29/2001	PROFILE	380.00	380.00	192.50	192.50	8330N	NITROBENZENE	NO
G177DTA	MW-177	08/29/2001	PROFILE	380.00	380.00	192.50	192.50	8330N	NITROGLYCERIN	NO
G177DTA	MW-177	08/29/2001	PROFILE	380.00	380.00	192.50	192.50	8330N	PICRIC ACID	NO
G177DUA	MW-177	08/29/2001	PROFILE	390.00	390.00	202.50	202.50	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

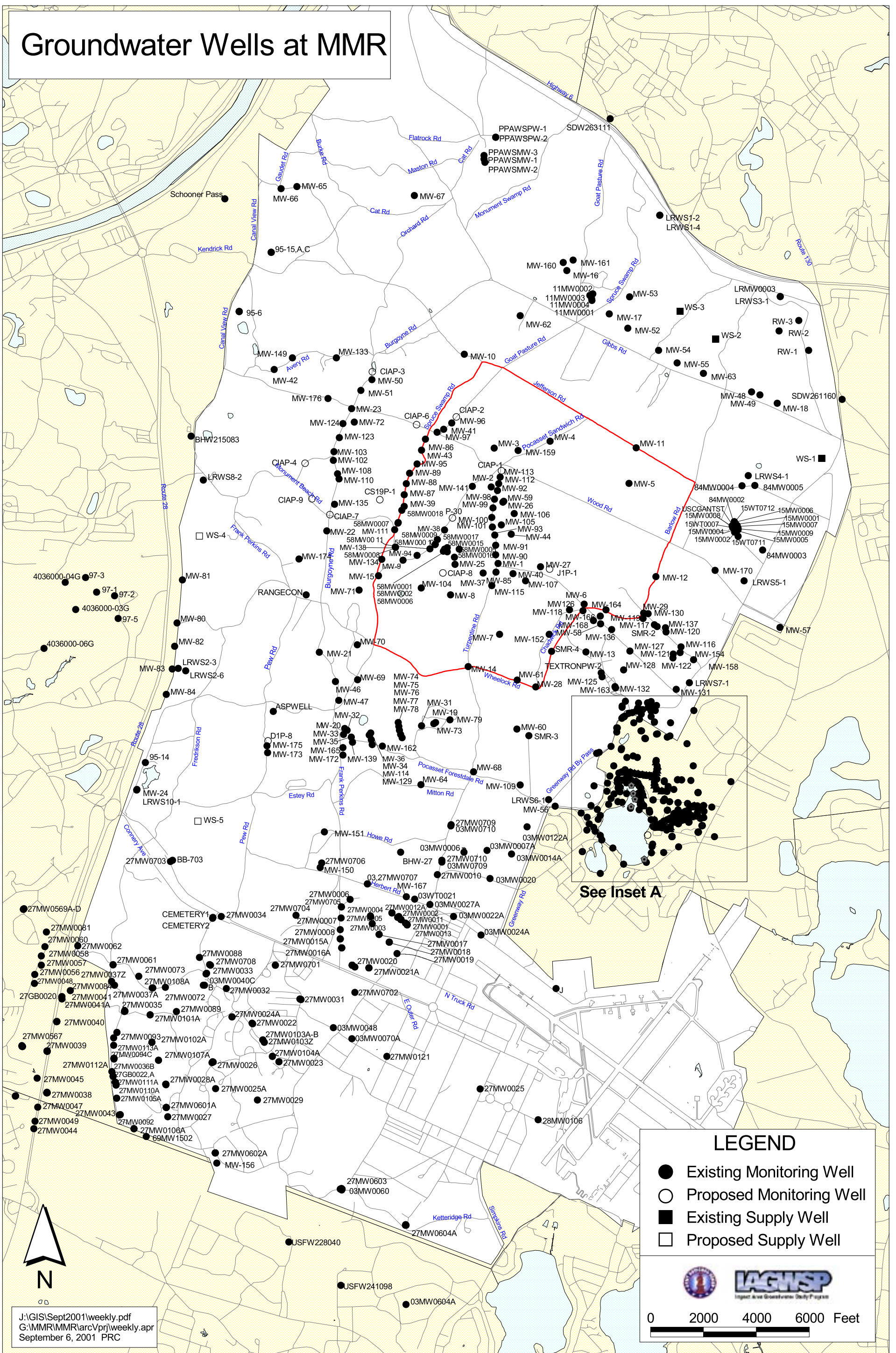
BWTS = DEPTH BELOW WATER TABLE, START DEPTH, MEASURED IN FEET

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

Groundwater Wells at MMR

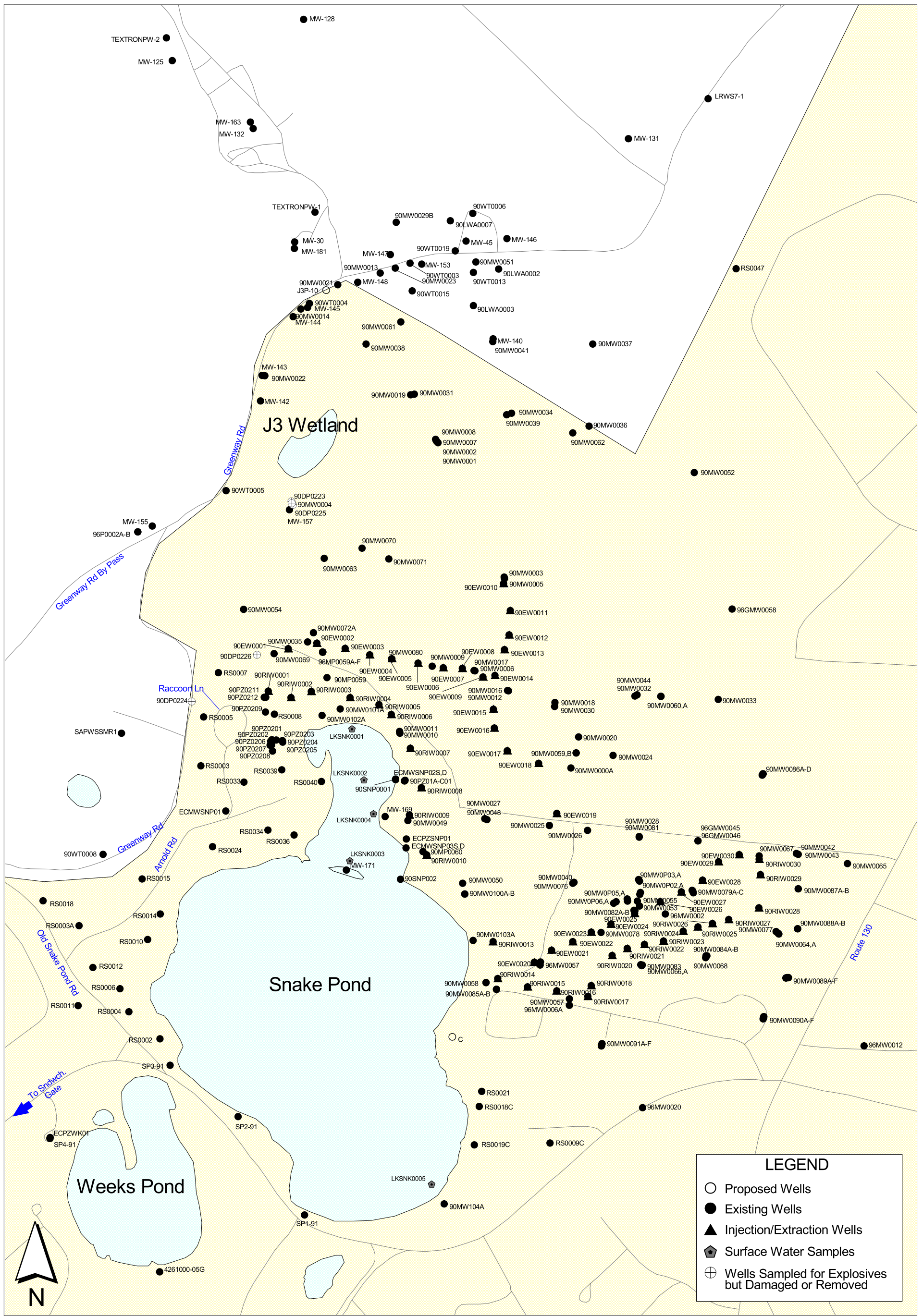


LEGEND

- Existing Monitoring Well
- Proposed Monitoring Well
- Existing Supply Well
- Proposed Supply Well



0 2000 4000 6000 Feet



LEGEND

- Proposed Wells
- Existing Wells
- ▲ Injection/Extraction Wells
- ⬜ Surface Water Samples
- ⊕ Wells Sampled for Explosives but Damaged or Removed

Inset A

0 600 1200 Feet