WEEKLY PROGRESS UPDATE FOR AUGUST 6 – AUGUST 10, 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 6 to August 10, 2001.

1. SUMMARY OF ACTIONS TAKEN

There was no drilling progress between August 6 and August 10.

Samples collected during the reporting period are summarized in Table 2. Groundwater samples were collected as part of the August Long Term Groundwater Monitoring round. Soil samples were collected from grids at the J-1 and J-2 Ranges, from borings at Demo 1 (B-26, B-27, B-28), and at BIP craters at Target 9 and J-2 Range. As part of the HUTA investigation, pre- and post-detonation soil samples were collected in the staging area. Soil samples were also collected in the Test Pit 5 area.

The Guard, EPA, and MADEP had a meeting on August 9 to discuss technical issues, including the following:

Attendees

COL Richard Murphy (NGB) MAJ Brian Rogers (NGB) Dave Hill (IAGWSPO) CPT Bill Meyer (IAGWSPO) Bill Gallagher (IAGWSPO) Tina Dolen (IAGWSPO) Mike Jasinski (EPA) Jane Dolan (EPA) Todd Borci (EPA) Len Pinaud (MADEP) Mark Panni (MADEP) Heather Sullivan (ACE) John MacPherson (ACE) Ed Wise (ACE) Ellen Iorio (ACE - phone) Gina Tyo (ACE) Marc Grant (AMEC) Scott Veenstra (AMEC-phone) John Rice (AMEC) Kim Harriz (AMEC) Jay Clausen (AMEC-phone) Larry Hudgins (Tetra Tech) Doug Lam (Tetra Tech) Raye Lahti (Tetra Tech-phone) Leo Montroy (Tt-phone) Dave Williams (MDPH) Denis LeBlanc (USGS-phone) Jason Dalrymple (Jacobs)

CS-19

- Jason Dalrymple (Jacobs) reported that in drilling and profiling 50MW0020, RDX (0.31, 0.33 ug/L) had been detected at 199 205 bgs. A well screen was currently being set at this location.
 3-Nitrotoluene (0.37 ug/L) was detected at 20 to 25 ft bwt. A well would also be set at this location.
- Mike Jasinski (EPA) requested that a conference call be set up between the agencies and AFCEE/Jacobs to discuss possible drilling of a second well, further downgradient, even though he understood that EPA had agreed not to drill a second well if profiling results of this first well were below Health Advisories. Mr. Jasinski also requested that a discussion on this matter be added to the IRP Tech meeting agenda.

AIRMAG Data and Validation Locations

- Doug Lam (Tetra Tech) relayed that as of 0900 the HUTA Investigation was completed.
- Mr. Lam indicated that signal strength and laser altimeter height had been added to the AirMag validation tables. Verification of all 64 secondary anomaly picks was also completed. Of the 64 picks, 10 were accounted for as hot rocks, 14 did not have discernable surface material or subsurface anomaly, 12 were single/multiple subsurface hits

- on the Schoenstedt with no surface debris, 28 had surface features. Of the picks that had been validated by hand excavation, investigation of Anomaly 4-3137 would be investigated further, below 6 ft bgs.
- Tetra Tech/ACE had selected 5 additional picks to investigate based on EPA's request at the 8/2 Tech meeting and the ACE's directive to choose anomalies from a range of signal strengths/altimeter heights in an attempt to calibrate these factors relative to discoveries, as follows:
 - Anomaly 3-2497 on J-1 Range, 600m uprange.
 - Anomaly 4-1730 off Frank Perkins Road.
 - Anomaly 5-1269 small 2000m berm at J-1 Range.
 - Anomaly 5-2860 on Wood Rd on east side of Impact Area
 - Anomaly 5-4648 400m east on Jefferson Road, top of Impact Area, possible burn area.
- Todd Borci (EPA) stated that EPA had selected 9 anomalies to investigate based on the fact the ACE had apparently budgeted for validation of 10, but had not received EPA's concurrence to proceed with the five anomalies that had been intrusively investigated last week. Two of EPA's selections matched the ACE's selections on the first list that had already been validated (4-3137, 3-2760) and 3 selections matched those on the second list (5-2860, 5-1269, 5-4648). Mr. Borci also saw the merits of validating 4-1730. Four additional anomalies that the EPA would like validated (bringing the total to 10 EPAapproved anomalies) were:
 - Anomaly 3-2143 linear anomaly west of L Range
 - Anomaly 3-3335 west of 1000m Berm on J-1 Range
 - Anomaly 4-1586 borrow pit, large anomaly nothing on surface
 - Anomaly 5-4424 valley NW of 5 Point Intersection. Middle target of 3 targets near monitoring well. Mr. Lam indicated that this would have been their 6th pick.
- Leo Montroy (Tetra Tech) explained that MSP Report due on 8/31 would have a chapter on AirMag that would mostly discuss how the AirMag data compared to the ground geophysical data. The AirMag Validation Report due 10/9 would address verification/validation of anomalies.
- A lengthy discussion ensued among Mr. Borci, COL Murphy (NGB), CPT Meyer (IAGWSPO), Raye Lahti (Tetra Tech), and ACE on the use of the AirMag data in the groundwater study, the Guard's versus EPA's confidence in the AirMag findings, what steps should be taken as a follow-up to the MSP Report and the AirMag Validation Report (given the acreage and number of AirMag anomalies), and if the Munitions Survey Report should be delayed until all intrusive investigation of anomalies was completed.
- Mr. Borci stated that his expectation was that the 8 newly selected anomalies would be
 intrusively investigated, as much of this information as possible would be incorporated into
 the report due at the end of the month, the remainder of the findings could be updated in the
 Final Report.
- Gina Tyo (ACE) suggested that a meeting be scheduled for the middle of September to
 further discuss results and future activities. Mike Jasinski (EPA) indicated that AMEC should
 be involved to coordinate verification activities based on areas of concern that were being
 addressed in the Groundwater Study.
- Mr. Borci indicated that he wanted additional verification of anomalies prior to the winter months, asking how soon additional fieldwork could be completed. Ellen Iorio (ACE) indicated that Tetra Tech was funded through the end of the fiscal year (10/01) with other tasks.

RRA Mortar Target 9 Update

- Scott Veenstra (AMEC) reported that containment pad water was contained in a 400-gallon polyethylene tank and 9 drums. The water represented a mixture of rainwater and decon water. The drums contained the first "batch" of the decon water from the pad, whereas the tank was filled subsequent to the drums. Analytical results of a water sample collected from the tank had been provided to EPA and showed no detections. It was suggested that this water be run through the GAC system.
- Jane Dolan (EPA) indicated that the GACed water should be held pending analysis of the GAC effluent. However, in any case the work plan should be followed. What were the work plan requirements?
- Ms. Dolan further requested that 3 water samples be collected/analyzed from 3 separate drums; one from the top of the drum, one from the middle of another drum, and one from the bottom of a third drum. Dave Hill (IAGWSPO) indicated that he could identify the first drums filled, if they had not been moved. Mr. Hill to coordinate with Harvey McKenzie (AMEC).
- The Additional Delineation Sampling Report had been received by the agencies on 8/2. Mike Jasinski (EPA) indicated that the Guard could expect comments in 2 weeks (8/23).
- Excavation at MT9 commenced on Monday 8/6, the first foot of soil was excavated. A
 change in the procedure required that the excavation be cleared to 35 ft radius after each
 foot of soil was removed. As part of this clearance 15 items were identified and will be
 BIPed today (2 were added with EPA's approval during the meeting). Eight to ten units were
 found 2 feet or greater below the existing surface (after 1 foot removed).
- Larry Hudgins (Tetra Tech) reported that in soil from the first foot a 60mm target round, 37mm projectile and a 40mm grenade were found at the screening pad that resulted in the change in clearance procedure. Ms. Dolan (EPA) inquired as to why so much had been missed in the clearance. Mr. Hudgins/Mr. Veenstra indicated that the reasons included that some rounds were aluminum, because of preponderance of magnetic hits, and due to the limit of the technology.
- Dave Hill (IAGWSPO) reported that additional UXO clearance would be conducted for site
 restoration, because of the additional excavation required for planting trees and shrubs. This
 would be addressed in a pre-restoration clearance work plan addendum.
- Analytical data is expected early the week of 8/20. Removal is ahead of approved schedule to be completed by 8/14. Both heat and density of UXO-related material have been a limiting factor in the work schedule.

RRA FUDS Schedule

- Schedule for RRA H Range site was discussed among Len Pinaud (MADEP), Mike Jasinski (EPA), Jane Dolan (EPA), Heather Sullivan (ACE), and Ellen Iorio (ACE).
- Ultimately, based on the State requirements of approval of work within 21 days of receiving transmittal forms and the schedule to begin soil removal 1½ weeks from 8/13, Len Pinaud (MADEP) decided that following receipt of transmittal forms from the ACE, MADEP would issue a conditional approval letter. The removal can then be implemented as long as the conditions are followed.
- Ellen Iorio (ACE) stated that responses to comments would be submitted Monday 8/13. Mr. Pinaud and Mr. Jasinski indicated that if comments were received Monday, a site walk Wednesday 8/15 could be used to resolve issues.
- Former H Range site walk scheduled for 1100 on 8/15, participants to meet at Corps trailer.
 Central Impact Area 5 new wells
- Bill Gallagher (IAGWSPO) indicated that Hanni Dinkeloo (NHESP) had approved all well locations except CIAP-8. Ms. Dinkeloo would like to speak with Mr. Borci directly about this location. Record of Action to be provided to Ms. Dinkeloo so that she can discuss location with Mr. Borci and Mr. Pinaud.

- Heather Sullivan (ACE) relayed the Guard's concerns that a lengthy RAC approval process
 would prevent CIAP-8 from being installed by 10/01, therefore an alternate location (CIAP-9)
 was being proposed. Mr. Gallagher presented Mr. Borci with a map of the next proposed
 location that was downgradient of MW-135 northwest of the CIAP-7 location on Monument
 Beach Road. Mr. Borci indicated that the location was acceptable. Mike Jasinski (EPA)
 requested time to review the location relative to the CS-19 particle tracks, prior to AMEC
 completing the RAC.
- Borci/Jasinski requested that Karen Wilson (IAGWSPO) be consulted earlier on in the well location selection process to minimize the amount of refinement required once the agencies were presented with proposed locations.
- Later in the meeting, Mr. Borci inquired about the installation of P-31, a well that had been on hold because of its location within the exclusion zone of the HUTA. Now that the HUTA was completed, EPA would like to have this well drilled and installed as soon as possible. Mr. Borci indicated that this location could be substituted for one of the 8 to be installed by 10/1. John Rice (AMEC) relayed that scrub oak had rehabitated the drill pad and a new RAC would likely be needed for this location, mostly because the RAC process had changed significantly from when this location was originally approved.

Central Impact Area Aquifer Pump Test

- Jay Clausen (AMEC) indicated that the Guard/AMEC agreed that a pump test needed to be conducted for the Central Impact Area as part of the groundwater remedial system design process. The portion of the aquifer in the Central Impact Area may have a higher transmissivity and hydraulic conductivity relative to other areas of the base and therefore previous pump test data generated in other areas of the base may not be representative of conditions in the Central Impact Area.
- Following a brief discussion, Bill Gallagher (IAGWSPO) indicated that, as the agencies were suggesting, the Guard was considering performing the pump test in a portion of the Central Impact Area plume, so that wells installed for the pump test could be potentially utilized for the treatment system, once the pump test was completed.
- Mike Jasinski (EPA) inquired about the schedule for getting a work plan and completing the pump test. Marc Grant (AMEC) stated that pump test work plan would be included with the PSI Work Plan. Based on a 8/23 MOR for the Central Impact Area Groundwater FSSR the Draft PSI Work Plan would be submitted on 10/2. A Final Work Plan would be submitted following a 3-month review process. Jasinski/Borci expressed the EPA's desire to compress the schedule so that drilling of monitor wells to complete the test could be completed before the winter months and to generally expedite the process. Heather Sullivan (ACE) indicated that the Guard/ACE/AMEC would review the schedule and other tasks requiring completion and evaluate how the PSI Work Plan schedule could be compressed.

ITE Recommendations Update

 Scott Veenstra (AMEC) stated that the soil technologies revised summary report would be submitted at the end of the week. The groundwater technologies report would be submitted at the end of the month.

Munitions Survey Project and Soil/Groundwater Investigation Integrated Schedule

Marc Grant (AMEC) distributed a one-page handout outlining the background and issues related to integrating the MSP and Soil/Groundwater Investigations for five areas: Demo 1 Soil OU, CIA Soil OU; CIA GW OU; J Ranges; and Phase IIb sites.

<u>Phase IIb Sites</u> – Draft MSP reports for three areas (Former A, Former K, Demo 2) will be completed by 11/21. These results should be evaluated relative to soil and groundwater characterization activities that will be discussed in the draft RI that will be submitted 8/20. Todd

Borci (EPA) indicated that he did not want to delay the entire Phase IIb effort for the three sites, proposing that the EPA would delay comments on Phase IIb Report for these three sites. These sites could then be set aside as a separate report. In response to Mr. Grant's inquiry, Mr. Borci stated that EPA would accept holding these sites back from the draft Phase IIb Report, if it wasn't already too late. Mr. Grant to let Mr. Borci know if this is the way the Guard would prefer to proceed.

<u>J Ranges</u> – Schedule for the J-1/J-3/L Ranges ADWP #2 needed to be set. Mr. Grant recommended that this WP be started after the RCL on the Draft Report due in September. Relative to setting a begin date for ADWP #1, Mr. Borci considered this as having already started, based on the sampling being completed in the interberm area of the J-1 Range. No extension request was needed, though a letter from the Guard confirming the schedule of subsequent deliverables might be appropriate.

Central Impact Area Soil OU - Changes are needed in the schedule to allow the additional soil data that is being collected to be evaluated. The schedule for HUTA 2 is still being developed and data from this investigation is important for evaluating remedial options for the Central Impact Area. Mr. Borci stated that while EPA agrees that the schedule needs to be adjusted, they did not agree that the HUTA 2 investigation was in the critical path for the remediation of the Central Impact Area. Mr. Grant pointed out that transect data that will be collected in the HUTA 2 showing the distribution of contaminants out from the targets and the drop off rates of UXO was important in understanding the source/transfer mechanism of contaminants to groundwater. Current data are inconclusive as to whether the larger particulate matter or the finer residue are the principal source of contamination to groundwater. Selection of applicable technologies was contingent on understanding this process, since the primary goal of the soil remediation is to protect the aquifer. How could more detailed FS Screening Reports be developed, as EPA has requested, without a more complete understanding of the nature, distribution and transfer of soil contaminants to groundwater? Mr. Borci expressed that this evaluation could be completed as part of the post-screening process, whereas remediation of the area in the vicinity of the targets could be addressed immediately. Futhermore, Mr. Borci indicated that the Guard and EPA obviously saw the process differently. Mr. Borci requested that the Guard put these points in writing for future discussion.

<u>Demo 1 Area Groundwater OU</u> – A list of detailed options that had been emailed previously, was distributed to the agencies. These remedial options were those that were proposed to be evaluated in more detail in the FS. Mr. Borci indicated that these options would require further discussion.

<u>Demo 1 Area Soil OU –</u> A detailed schedule for Demo 1 Soil was distributed. Mr. Borci relayed here that it was critical that the remedy include anomaly excavation. Since the area is an OB/OD site, UXO is a potential source of contamination. Remediation in this area should not just be considered just a removal action of soil in the kettle hole. Mr. Grant inquired what threshold number of UXO created a groundwater impact? Dave Hill (IAGWSPO) pointed out that not all of the anomalies represented UXO. Mr. Borci concurred with the schedule in general, that the data from the soil borings being completed this week and test pits already excavated be rolled into the Final Soil Report. The PSI Work Plan would then be developed and this should include further validation of anomalies (test pitting, sampling) in the Demo 1 area; the UXO FS should also be tied into this work plan. Mr. Borci would like to discuss the schedule again in two weeks and look at deadlines to formally set for this schedule.

Next Tech Meeting Agenda

Mortar Target 9 Update Central Impact Area Proposed Wells, next well set for FY02. Snake Pond Update J-1 Range Vehicle Excavation Update HUTA 2 Scope

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:

- Groundwater samples collected from MW-23M1 (Central Impact Area Response well), MW-34M1 (Demo 1) and duplicate sample; and MW-34M2 (Demo 1) had detections of RDX that were confirmed by PDA. RDX was detected in these wells in similar concentrations in previous sampling round. However, this was the lowest recorded concentration of RDX in MW-34M2 since the well was installed.
- Groundwater samples collected from MW-31M1 (Demo 1) had a detection of 2A-DNT that
 was confirmed by PDA. 2A-DNT has been detected in this well in a similar concentration as
 the previous sampling round. However, 4A-DNT, RDX and HMX are usually also detected.

3. DELIVERABLES SUBMITTED

Weekly Progress Update, July 30 – August 3, 2001 July 2001 Monthly Progress Report 8/09/01 8/09/01

4. SCHEDULED ACTIONS

Scheduled actions for the week of August 13 include commence drilling CIAP-5, continue August Long Term groundwater monitoring, continue soil sampling at J-2 Range and collect soil samples from the J-1 Range in association with the tank removal being conducted as part of the Munitions Survey Project.

5. SUMMARY OF ACTIVITIES FOR DEMO 1

Three soil boring B-26, B-27 and B-28 were sampled in the Demo 1 area. 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.

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HDA08070101AA	A08070101	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08070102AA	A08070102	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08070103AA	A08070103	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08070103AD	A08070103	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08070104AA	A08070104	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08070105AA	A08070105	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08070106AA	A08070106	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08070107AA	A08070107	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08070108AA	A08070108	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08070109AA	A08070109	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08080101AA	A08080101	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08080102AA	A08080102	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08080103AA	A08080103	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08080104AA	A08080104	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08080105AA	A08080105	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08080106AA	A08080106	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08090101AA	A08090101	08/09/2001	CRATER GRAB	0.00	0.25		
HDA08090102AA	A08090102	08/09/2001	CRATER GRAB	0.00	0.25		
7.A.1.01046.1.0	SP.A.1.01046.R	08/09/2001	CRATER GRID	0.25	0.50		
7.A.1.01046.10.0	SP.A.1.01046.R	08/09/2001	CRATER GRID	0.25	0.50		
7.A.1.01046.2.0	SP.A.1.01046.R	08/09/2001	CRATER GRID	0.25	0.50		
7.A.1.01046.3.0	SP.A.1.01046.R	08/09/2001	CRATER GRID	0.25	0.50		
7.A.1.01046.4.0	SP.A.1.01046.R	08/09/2001	CRATER GRID	0.25	0.50		
7.A.1.01046.5.0	SP.A.1.01046.R	08/09/2001	CRATER GRID	0.25	0.50		
7.A.1.01046.6.0	SP.A.1.01046.R	08/09/2001	CRATER GRID	0.25	0.50		
7.A.1.01046.7.0	SP.A.1.01046.R	08/09/2001	CRATER GRID	0.25	0.50		
7.A.1.01046.8.0	SP.A.1.01046.R	08/09/2001	CRATER GRID	0.25	0.50		
7.A.1.01046.9.0	SP.A.1.01046.R	08/09/2001	CRATER GRID	0.25	0.50		
0.G.0.00114.0.T	TRIP BLANK 114	08/08/2001	FIELDQC	0.00	0.00		
0.G.0.00115.0.T	TRIP BLANK 115	08/09/2001	FIELDQC	0.00	0.00		
0.G.0.00116.0.T	TRIP BLANK 116	08/09/2001	FIELDQC	0.00	0.00		
ABB0027AAE	FIELDQC	08/08/2001	FIELDQC	0.00	0.00		
ABB0027DAE	FIELDQC	08/09/2001	FIELDQC	0.00	0.00		
ABB0027GAE	FIELDQC	08/10/2001	FIELDQC	0.00	0.00		
HC05BD1AAE	FIELDQC	08/08/2001	FIELDQC	0.00	0.00		
HC05BD1AAF	FIELDQC	08/08/2001	FIELDQC	0.00	0.00		
HC05BD1AAT	FIELDQC	08/08/2001	FIELDQC	0.00	0.00		
HC101EG1AAE	FIELDQC	08/07/2001	FIELDQC	0.00	0.00		
HC101NK1BAE	FIELDQC	08/08/2001	FIELDQC	0.00	0.00		
HC101NK1BAT	FIELDQC	08/08/2001	FIELDQC	0.00	0.00		
HC101PG1AAE	FIELDQC	08/06/2001	FIELDQC	0.00	0.00		
HC101TB1AAE	FIELDQC	08/09/2001	FIELDQC	0.00	0.00		
HC101TB1AAT	FIELDQC	08/09/2001	FIELDQC	0.00	0.00		

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

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HC101UA1AAT	FIELDQC	08/10/2001	FIELDQC	0.00	0.00		
HC101UC1AAF	FIELDQC	08/09/2001	FIELDQC	0.00	0.00		
HC101UD1AAE	FIELDQC	08/10/2001	FIELDQC	0.00	0.00		
HDA07310102AE	FIELDQC	08/06/2001	FIELDQC	0.00	0.00		
HDA07310102AT	FIELDQC	08/07/2001	FIELDQC	0.00	0.00		
HDA08070101AE	FIELDQC	08/09/2001	FIELDQC	0.00	0.00		
W50M3T	FIELDQC	08/06/2001	FIELDQC	0.00	0.00		
W134SSA	MW-134	08/06/2001	GROUNDWATER	133.00	143.00	0.00	10.00
W29SSA	MW-29	08/08/2001	GROUNDWATER	98.50	105.50		10.00
W29SSA	MW-29	08/08/2001	GROUNDWATER	98.50	108.50	0.00	10.00
W42M1A	MW-42	08/06/2001	GROUNDWATER	206.00	216.00	135.00	145.00
W42M2A	MW-42	08/06/2001	GROUNDWATER	186.00	196.00	115.54	125.54
W42M3A	MW-42	08/07/2001	GROUNDWATER		176.00	95.46	105.46
W43M1A	MW-43	08/07/2001	GROUNDWATER	223.00	233.00	86.12	96.12
W43M2A	MW-43	08/07/2001	GROUNDWATER	166.00	176.00	95.46	105.46
W43M2A	MW-43	08/07/2001	GROUNDWATER	200.00			73.30
W46DDA	MW-46	08/06/2001	GROUNDWATER	295.00	305.00	133.20	143.20
W46M1A	MW-46	08/07/2001	GROUNDWATER	262.00	272.00	99.70	109.70
W46M2A	MW-46	08/07/2001	GROUNDWATER	215.00	225.50	52.80	63.30
W46M3A	MW-46	08/07/2001	GROUNDWATER	182.00	192.00	19.30	29.30
W46M3D	MW-46	08/07/2001	GROUNDWATER	182.00	192.00	19.30	29.30
W47M2A	MW-47	08/06/2001	GROUNDWATER	131.50	141.50	31.20	41.20
W47M3A	MW-47	08/06/2001	GROUNDWATER	115.00			19.80
W50DDA	MW-50	08/06/2001	GROUNDWATER	237.00			126.08
W50DDD	MW-50	08/06/2001	GROUNDWATER	237.00	247.00	116.08	126.08
W50M3A	MW-50	08/06/2001	GROUNDWATER	147.00	157.00	25.98	35.98
W57DDA	MW-57	08/07/2001	GROUNDWATER	213.00	223.00	142.30	152.30
W57M1A	MW-57	08/08/2001	GROUNDWATER	188.00	198.00	99.04	109.04
W57M1A	MW-57	08/08/2001	GROUNDWATER	188.00	198.00	99.04	109.04
W57M2A	MW-57	08/08/2001	GROUNDWATER	148.00	158.00	59.36	69.36
W57M3A	MW-57	08/08/2001	GROUNDWATER	117.00	127.00	28.80	38.80
W57M3A	MW-57	08/08/2001	GROUNDWATER	117.00	127.00	28.80	38.80
W57SSA	MW-57	08/08/2001	GROUNDWATER	85.00	95.00	0.00	10.00
W63M1A	MW-63	08/09/2001	GROUNDWATER	244.00	254.00	86.80	96.80
W63M1D	MW-63	08/09/2001	GROUNDWATER	244.00	254.00	86.80	96.80
W63M2A	MW-63	08/09/2001	GROUNDWATER	214.00	224.00	55.97	66.97
W63M2A	MW-63	08/09/2001	GROUNDWATER	214.00	224.00	56.97	66.97
W64M1A	MW-64	08/08/2001	GROUNDWATER	129.00	139.00	34.70	44.70
W64M2A	MW-64	08/08/2001	GROUNDWATER	100.00	105.00	5.70	10.70
W64M2D	MW-64	08/08/2001	GROUNDWATER	100.00	105.00	5.70	10.70
W67M1A	MW-67	08/09/2001	GROUNDWATER	243.00	253.00	83.00	93.00
W67SSA	MW-67	08/09/2001	GROUNDWATER	161.00	171.00	3.00	13.00
W72SSA	MW-72	08/09/2001	GROUNDWATER	106.00	116.00	0.00	10.00
W74M2A	MW-74	08/10/2001	GROUNDWATER	125.00	135.00	28.00	38.00

Profiling methods include: Volatiles and Explosives

Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, and Wet Chemistry Other Sample Types methods are variable

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SED = Sample End Depth, measured in feet bgs

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

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
W75M1A	MW-75	08/09/2001	GROUNDWATER	140.00	150.00	55.83	65.83
W75M2A	MW-75	08/09/2001	GROUNDWATER	115.00	125.00	30.79	40.79
W75SSA	MW-75	08/10/2001	GROUNDWATER	81.00	91.00	0.00	10.00
W76SSA	MW-76	08/10/2001	GROUNDWATER	85.00	95.00	14.74	24.74
W77M2A	MW-77	08/10/2001	GROUNDWATER	120.00	130.00	34.21	44.21
ABB0026AAA	B-26	08/08/2001	SOIL BORING	1.00	2.00		
ABB0026BAA	B-26	08/08/2001	SOIL BORING	2.00	4.00		
ABB0026CAA	B-26	08/08/2001	SOIL BORING	6.00	8.00		
ABB0026DAA	B-26	08/08/2001	SOIL BORING	10.00	12.00		
ABB0027AAA	B-27	08/09/2001	SOIL BORING	1.00	2.00		
ABB0027BAA	B-27	08/09/2001	SOIL BORING	2.00	4.00		
ABB0027CAA	B-27	08/09/2001	SOIL BORING	6.00	8.00		
ABB0027DAA	B-27	08/09/2001	SOIL BORING	10.00	12.00		
ABB0027EAA	B-27	08/09/2001	SOIL BORING	14.00	16.00		
ABB0027FAA	B-27	08/09/2001	SOIL BORING	18.00	20.00		
ABB0027GAA	B-27	08/10/2001	SOIL BORING	22.00	24.00		
ABB0027HAA	B-27	08/10/2001	SOIL BORING	26.00	28.00		
ABB0027IAA	B-27	08/10/2001	SOIL BORING	30.00	32.00		
ABB0027JAA	B-27	08/10/2001	SOIL BORING	34.00	36.00		
ABB0027KAA	B-27	08/10/2001	SOIL BORING	38.00	40.00		
ABB0028AAA	B-28	08/08/2001	SOIL BORING	1.00	2.00		
ABB0028BAA	B-28	08/08/2001	SOIL BORING	2.00	4.00		
ABB0028CAA	B-28	08/08/2001	SOIL BORING	6.00	8.00		
ABB0028DAA	B-28	08/08/2001	SOIL BORING	10.00	12.00		
ABB0028DAD	B-28	08/08/2001	SOIL BORING	10.00	12.00		
5.F.0.00001.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		
5.F.0.00001.4.0	Test Plot 5 Lift 4 Grid	08/09/2001	SOIL GRID	9.00	12.00		
5.F.0.00002.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		
5.F.0.00002.4.0	Test Plot 5 Lift 4 Grid	08/09/2001	SOIL GRID	9.00	12.00		
5.F.0.00003.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		
5.F.0.00003.4.0	Test Plot 5 Lift 4 Grid	08/09/2001	SOIL GRID	9.00	12.00		
5.F.0.00004.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		
5.F.0.00004.4.0	Test Plot 5 Lift 4 Grid	08/09/2001	SOIL GRID	9.00	12.00		
5.F.0.00005.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		
5.F.0.00005.4.0	Test Plot 5 Lift 4 Grid	08/09/2001	SOIL GRID	9.00	12.00		
5.F.0.00006.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		
5.F.0.00006.4.0	Test Plot 5 Lift 4 Grid	08/09/2001	SOIL GRID	9.00	12.00		
5.F.0.00007.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		
5.F.0.00007.4.0	Test Plot 5 Lift 4 Grid	08/09/2001	SOIL GRID	9.00	12.00		
5.F.0.00008.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		
5.F.0.00008.4.0	Test Plot 5 Lift 4 Grid	08/09/2001	SOIL GRID	9.00			
5.F.0.00009.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		
5.F.0.00009.4.0	Test Plot 5 Lift 4 Grid	08/09/2001	SOIL GRID	9.00	12.00		
5.F.0.00010.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		

Profiling methods include: Volatiles and Explosives

Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, and Wet Chemistry Other Sample Types methods are variable

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

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
5.F.0.00010.4.0	Test Plot 5 Lift 4 Grid	08/09/2001	SOIL GRID	9.00	12.00		
5.F.0.00011.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		
5.F.0.00012.3.0	Test Plot 5 Lift 3 Grid	08/07/2001	SOIL GRID	6.00	9.00		
HC05BA1AAA	05BA	08/08/2001	SOIL GRID	0.00	0.25		
HC05BA1BAA	05BA	08/08/2001	SOIL GRID	0.25	0.50		
HC05BA1CAA	05BA	08/08/2001	SOIL GRID	0.50	1.00		
HC05BD1AAA	05BD	08/08/2001	SOIL GRID	0.00	0.25		
HC05BD1AAD	05BD	08/08/2001	SOIL GRID	0.00	0.25		
HC05BD1BAA	05BD	08/08/2001	SOIL GRID	0.25	0.50		
HC05BD1CAA	05BD	08/08/2001	SOIL GRID	0.50	1.00		
HC05CB1AAA	05CB	08/08/2001	SOIL GRID	0.00	0.25		
HC05CB1AAD	05CB	08/08/2001	SOIL GRID	0.00	0.25		
HC05CB1BAA	05CB	08/08/2001	SOIL GRID	0.25	0.50		
HC05CB1CAA	05CB	08/08/2001	SOIL GRID	0.50	1.00		
HC05CC1AAA	05CC	08/08/2001	SOIL GRID	0.00	0.25		
HC05CC1BAA	05CC	08/08/2001	SOIL GRID	0.25	0.50		
HC05CC1CAA	05CC	08/08/2001	SOIL GRID	0.50	1.00		
HC101EG1AAA	101EG	08/07/2001	SOIL GRID	0.00	0.25		
HC101EG1AAD	101EG	08/07/2001	SOIL GRID	0.00	0.25		
HC101EG1BAA	101EG	08/07/2001	SOIL GRID	0.25	0.50		
HC101EG1CAA	101EG	08/07/2001	SOIL GRID	0.50	1.00		
HC101GJ1AAA	101GJ	08/06/2001	SOIL GRID	0.00	0.25		
HC101GJ1BAA	101GJ	08/06/2001	SOIL GRID	0.25	0.50		
HC101GJ1CAA	101GJ	08/06/2001	SOIL GRID	0.50	1.00		
HC101GK1AAA	101GK	08/06/2001	SOIL GRID	0.00	0.25		
HC101GK1AAD	101GK	08/06/2001	SOIL GRID	0.00	0.25		
HC101GK1BAA	101GK	08/06/2001	SOIL GRID	0.25	0.50		
HC101GK1CAA	101GK	08/06/2001	SOIL GRID	0.50	1.00		
HC101HA1AAA	101HA	08/06/2001	SOIL GRID	0.00	0.25		
HC101HA1AAD	101HA	08/06/2001	SOIL GRID	0.00	0.25		
HC101HA1BAA	101HA	08/06/2001	SOIL GRID	0.25	0.50		
HC101HA1CAA	101HA	08/06/2001	SOIL GRID	0.50	1.00		
HC101NC1BAA	101NC	08/07/2001	SOIL GRID	1.50	2.00		
HC101NC1BAD	101NC	08/07/2001	SOIL GRID	1.50	2.00		
HC101NF1AAA	101NF	08/07/2001	SOIL GRID	0.00	0.25		
HC101NF1AAD	101NF	08/07/2001	SOIL GRID	0.00	0.25		
HC101NF1BAA	101NF	08/07/2001	SOIL GRID	0.25	0.50		
HC101NF1CAA	101NF	08/07/2001	SOIL GRID	0.50	1.00		
HC101NG1AAA	101NG	08/07/2001	SOIL GRID	0.00	0.25		
HC101NG1BAA	101NG	08/07/2001	SOIL GRID	0.25	0.50		
HC101NG1CAA	101NG	08/07/2001	SOIL GRID	0.50	1.00		
HC101NI1AAA	101NI	08/07/2001	SOIL GRID	0.00	0.25		
HC101NI1BAA	101NI	08/07/2001	SOIL GRID	0.25	0.50		
HC101NI1CAA	101NI	08/07/2001	SOIL GRID	0.50	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

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OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HC101NK1AAA	101NK	08/07/2001	SOIL GRID	0.00	0.25		
HC101NK1BAA	101NK	08/07/2001	SOIL GRID	0.25	0.50		
HC101NK1CAA	101NK	08/07/2001	SOIL GRID	0.50	1.00		
HC101OD1AAA	101OD	08/09/2001	SOIL GRID	0.00	0.25		
HC101OD1BAA	101OD	08/09/2001	SOIL GRID	0.25	0.50		
HC101OD1CAA	101OD	08/09/2001	SOIL GRID	0.50	1.00		
HC101OE1AAA	101OE	08/09/2001	SOIL GRID	0.00	0.25		
HC101OE1BAA	101OE	08/09/2001	SOIL GRID	0.25	0.50		
HC101OE1CAA	101OE	08/09/2001	SOIL GRID	0.50	1.00		
HC101OF1AAA	101OF	08/10/2001	SOIL GRID	0.00	0.25		
HC101OF1AAD	101OF	08/10/2001	SOIL GRID	0.00	0.25		
HC101OF1BAA	101OF	08/10/2001	SOIL GRID	0.25	0.50		
HC101OF1CAA	101OF	08/10/2001	SOIL GRID	0.50	1.00		
HC101OG1AAA	101OG	08/10/2001	SOIL GRID	0.00	0.25		
HC101OG1BAA	101OG	08/10/2001	SOIL GRID	0.25	0.50		
HC101OG1CAA	101OG	08/10/2001	SOIL GRID	0.50	1.00		
HC101OH1AAA	101OH	08/07/2001	SOIL GRID	0.00	0.25		
HC101OH1AAD	101OH	08/07/2001	SOIL GRID	0.00	0.25		
HC101OH1BAA	101OH	08/07/2001	SOIL GRID	0.25	0.50		
HC101OH1CAA	101OH	08/07/2001	SOIL GRID	0.50	1.00		
HC101OI1AAA	101OI	08/10/2001	SOIL GRID	0.00	0.25		
HC101OI1BAA	101OI	08/10/2001	SOIL GRID	0.25	0.50		
HC101OI1CAA	101OI	08/10/2001	SOIL GRID	0.50	1.00		
HC101OJ1AAA	101OJ	08/07/2001	SOIL GRID	0.00	0.25		
HC101OJ1BAA	101OJ	08/07/2001	SOIL GRID	0.25	0.50		
HC101OJ1CAA	101OJ	08/07/2001	SOIL GRID	0.50	1.00		
HC101OK1AAA	101OK	08/07/2001	SOIL GRID	0.00	0.25		
HC101OK1BAA	101OK	08/07/2001	SOIL GRID	0.25	0.50		
HC101OK1CAA	101OK	08/07/2001	SOIL GRID	0.50	1.00		
HC101OL1AAA	101OL	08/08/2001	SOIL GRID	0.00	0.25		
HC101OL1BAA	101OL	08/08/2001	SOIL GRID	0.25	0.50		
HC101OL1CAA	101OL	08/08/2001	SOIL GRID	0.50	1.00		
HC101OL1CAD	101OL	08/08/2001	SOIL GRID	0.50	1.00		
HC101OM1AAA	101OM	08/09/2001	SOIL GRID	0.00	0.25		
HC101OM1BAA	101OM	08/09/2001	SOIL GRID	0.25	0.50		
HC101OM1CAA	101OM	08/09/2001	SOIL GRID	0.50	1.00		
HC101PE1AAA	101PE	08/06/2001	SOIL GRID	0.00	0.25		
HC101PE1AAD	101PE	08/06/2001	SOIL GRID	0.00	0.25		
HC101PE1BAA	101PE	08/06/2001	SOIL GRID	0.25	0.50		
HC101PE1CAA	101PE	08/06/2001	SOIL GRID	0.50	1.00		
HC101PF1AAA	101PF	08/06/2001	SOIL GRID	0.00	0.25		
HC101PF1BAA	101PF	08/06/2001	SOIL GRID	0.25	0.50		
HC101PF1CAA	101PF	08/06/2001	SOIL GRID	0.50	1.00		
HC101PG1AAA	101PG	08/06/2001	SOIL GRID	0.00	0.25		

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OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HC101PG1BAA	101PG	08/06/2001	SOIL GRID	0.25	0.50		
HC101PG1CAA	101PG	08/06/2001	SOIL GRID	0.50	1.00		
HC101PH1AAA	101PH	08/07/2001	SOIL GRID	0.00	0.25		
HC101PH1AAD	101PH	08/07/2001	SOIL GRID	0.00	0.25		
HC101PH1BAA	101PH	08/07/2001	SOIL GRID	0.25	0.50		
HC101PH1CAA	101PH	08/07/2001	SOIL GRID	0.50	1.00		
HC101PI1AAA	101PI	08/07/2001	SOIL GRID	0.00	0.25		
HC101PI1BAA	101PI	08/07/2001	SOIL GRID	0.25	0.50		
HC101PI1CAA	101PI	08/07/2001	SOIL GRID	0.50	1.00		
HC101PJ1AAA	101PJ	08/07/2001	SOIL GRID	0.00	0.25		
HC101PJ1BAA	101PJ	08/07/2001	SOIL GRID	0.25	0.50		
HC101PJ1CAA	101PJ	08/07/2001	SOIL GRID	0.50	1.00		
HC101TB1AAA	101TB	08/09/2001	SOIL GRID	0.00	0.25		
HC101TB1BAA	101TB	08/09/2001	SOIL GRID	0.25	0.50		
HC101TB1CAA	101TB	08/09/2001	SOIL GRID	0.50	1.00		
HC101TC1AAA	101TC	08/09/2001	SOIL GRID	0.00	0.25		
HC101TC1BAA	101TC	08/09/2001	SOIL GRID	0.25	0.50		
HC101TC1CAA	101TC	08/09/2001	SOIL GRID	0.50	1.00		
HC101TD1AAA	101TD	08/09/2001	SOIL GRID	0.00	0.25		
HC101TD1BAA	101TD	08/09/2001	SOIL GRID	0.25	0.50		
HC101TD1CAA	101TD	08/09/2001	SOIL GRID	0.50	1.00		
HC101UA1AAA	101UA	08/09/2001	SOIL GRID	0.00	0.25		
HC101UA1BAA	101UA	08/09/2001	SOIL GRID	0.25	0.50		
HC101UA1CAA	101UA	08/09/2001	SOIL GRID	0.50	1.00		
HC101UB1AAA	101UB	08/09/2001	SOIL GRID	0.00	0.25		
HC101UB1BAA	101UB	08/09/2001	SOIL GRID	0.25	0.50		
HC101UB1CAA	101UB	08/09/2001	SOIL GRID	0.50	1.00		
HC101UC1AAA	101UC	08/10/2001	SOIL GRID	0.00	0.25		
HC101UC1BAA	101UC	08/10/2001	SOIL GRID	0.25	0.50		
HC101UC1CAA	101UC	08/10/2001	SOIL GRID	0.50	1.00		
HC101UD1AAA	101UD	08/10/2001	SOIL GRID	0.00	0.25		
HC101UD1BAA	101UD	08/10/2001	SOIL GRID	0.25	0.50		
HC101UD1CAA	101UD	08/10/2001	SOIL GRID	0.50	1.00		
HD1010E3CAA	101OE	08/09/2001	SOIL GRID	0.50	1.00		
HD1010I4BAA	101OI	08/10/2001	SOIL GRID	0.25	0.50		
HDA07300101AA	A07300101	08/06/2001	SOIL GRID	0.00	0.25		
HDA07310102AA	A07300102	08/06/2001	SOIL GRID	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

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TABLE 3 DETECTED COMPOUNDS-UNVALIDATED SAMPLES COLLECTED 7/21/01-8/10/01

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W23M1A	MW-23	07/30/2001	GROUNDWATER	225.00	235.00	95.60	105.60	8330NX	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
W31MMA	MW-31	08/02/2001	GROUNDWATER	113.00	123.00	23.20	33.20	8330NX	2-AMINO-4,6-DINITROTOLUENE	YES
W34M1A	MW-34	07/31/2001	GROUNDWATER	151.00	161.00	70.80	80.80	8330NX	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W34M1D	MW-34	07/31/2001	GROUNDWATER	151.00	161.00	70.80	80.80	8330NX	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W34M2A	MW-34	07/30/2001	GROUNDWATER	131.00	141.00	50.55	60.55	8330NX	HEXAHYDRO-1,3,5-TRINITRO-1,	YES

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

SBD = SAMPLE COLLECTION BEGIN DEPTH IN FEET BGS

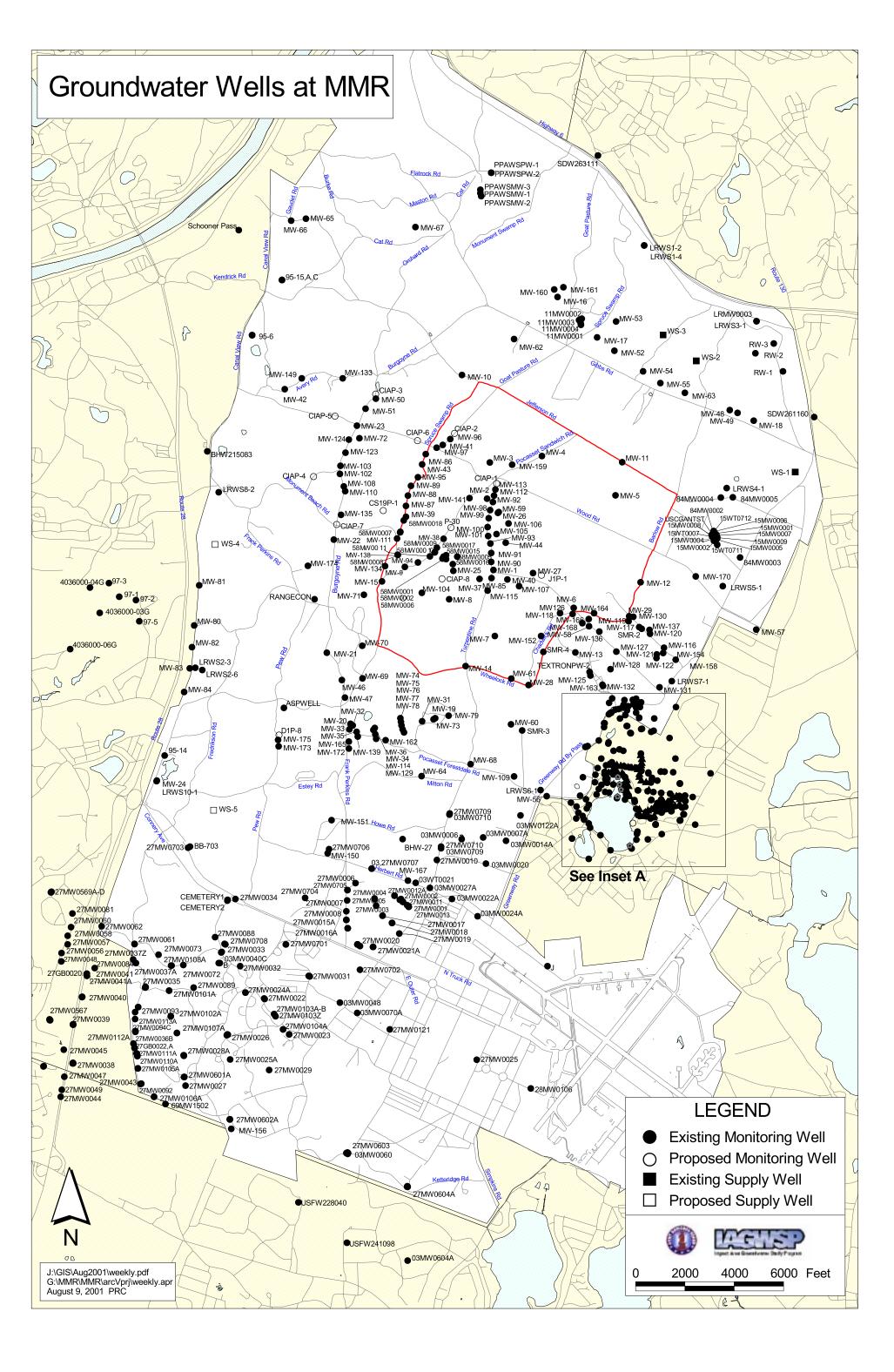
SED = SAMPLE COLLECTION END DEPTH IN FEET BGS

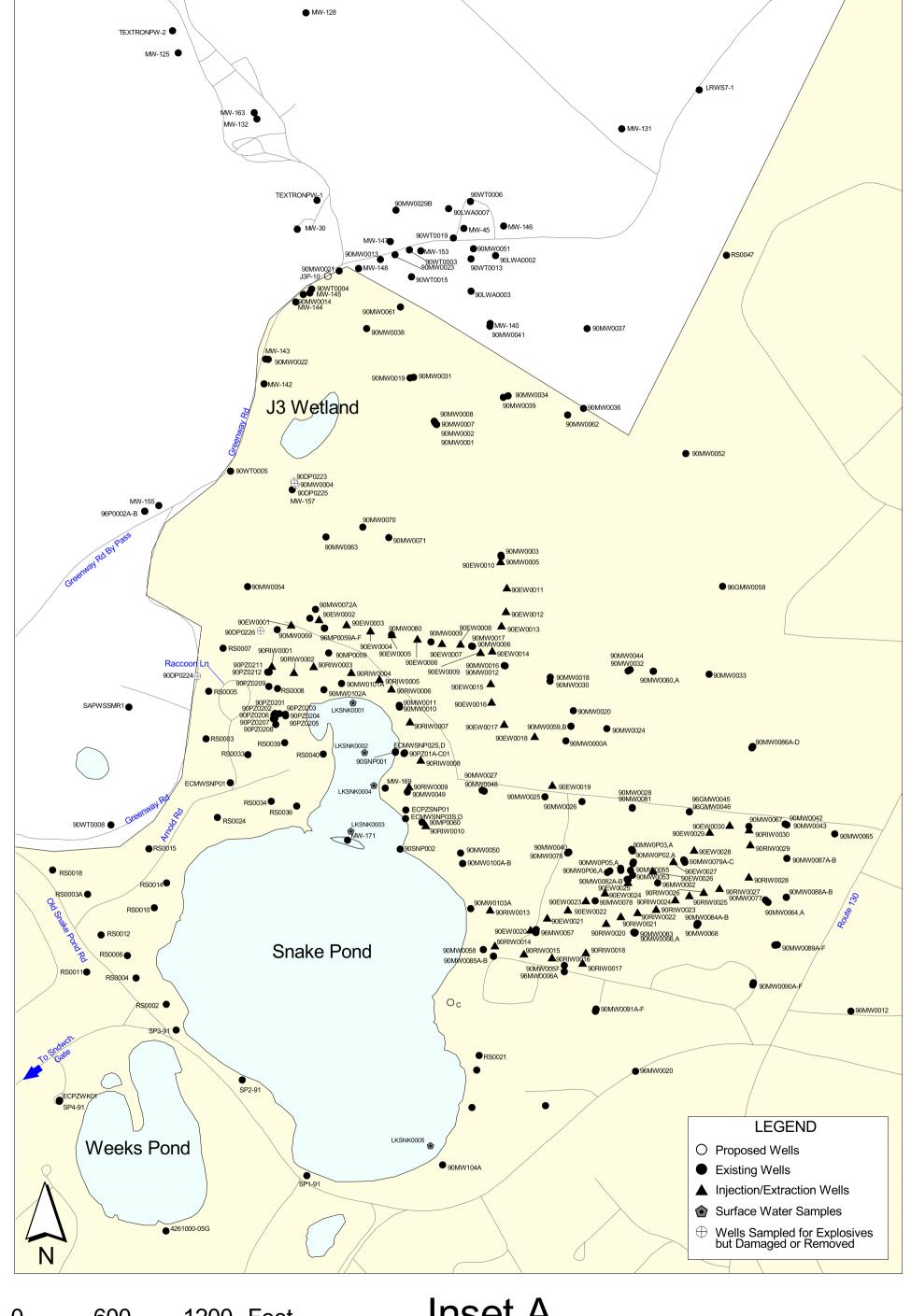
BWTS = DEPTH BELOW WATER TABLE, START DEPTH, MEASURED IN FEET

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





600 1200 Feet 0

Inset A





