WEEKLY PROGRESS UPDATE FOR MAY 7 – MAY 11, 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 May 7 to May 11, 2001.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of May 11 is summarized in Table 1.

Table 1. Drilling progress as of May 11, 2001								
Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)				
MW-168	J-1 Range well (J1P-6)	288	202	100-113 198-208 256-266				
MW-169	Snake Pond well (SP-1)	159	156					
MW-170	Former K Range well (KP-1)	0	0					
Bgs = belo	w ground surface	_						

Bwt = below water table

Completed well installation of MW-168 (J1P-6). Commenced drilling MW-169 (SP-1). Set up drill rig at MW-170 (KP-1). Continued development of newly installed wells. Continued UXO avoidance of the Phase IIb soil grids.

Samples collected during the reporting period are summarized in Table 2. Groundwater profile samples were collected for MW-169. Groundwater samples were collected for 2001 Long Term Monitoring, the third round of Central Impact Area Supplemental Response wells and first round of newly installed wells. Water samples were collected from the GAC system. Soil samples were collected at soil grids on the former Cleared Area 7 and the J-3 Range. Pre- and postdetonation soil samples were collected in Test Pit 6 as part of the HUTA investigation.

The Guard, EPA, and MADEP had a meeting on May 10 to discuss technical issues, including the following:

ASR Update

Eli Kangas (ACE) was introduced and provided an update on the ASR; a five page handout was distributed.

Significant Accomplishments

- Draft Report of interview findings completed and distributed to team for comment on 3/1.
- Picatinny Arsenal trip reports distributed to team 4/24.
- Firing fan plotting is complete and under in-house review. Consensus was reached on acquiring stereo aerial photographs for years 1947, 1958, 1962, and 1972. Rock Island District Corps will be responsible for acquisition. Chris Churney (ACE) has indicated that photos will likely be available in July (6-8 weeks from request).
- Draft report of military history research forwarded to CENAE and NGB on 5/3.

Upcoming Actions

- If no additional comments on draft ASR interviews report by 5/11, the final report will be distributed to team.
- If no additional comments on draft AFCEE interviews report by 5/11, the final report will be distributed to team. Jane Dolan (EPA) commented that the interviewee names needed to be deleted. Ken Gaynor (Jacobs) inquired if ACE had received comments from AFCEE on interviews, suggesting that ACE contact Mike Minior (AFCEE).
- If no additional comments on draft BOMARC records summary memorandum by 5/11, the final report will be distributed to team.
- Pending NGB approval (to NGB on 5/3), the draft military historical research report will be distributed to team. Todd Borci (EPA) asked to see the report before it went "final".
- If no additional comments are received on the Real Property Documents obtained from MAANG files memorandum by 5/11, the document will be finalized and distributed to team.
- If no additional comments are received on 25 January 2001 memorandum regarding the use of DU by 5/3, the document will be finalized and distributed to team. Ms. Dolan indicated that she had corrections to Ben Gregson's (IAGWSPO) memo.
- If no additional comments on the March 2001 final communication plan by 5/11, the document will be distributed to team.
- GIS efforts are on hold until Tetra Tech is provided with final revised ASR.
- Rock Island District will provide a timeline/funding requirements for aerial photos and distribute the firing fan to the ASR team.
- Rock Island District has tentatively scheduled a visit to MMR on 5/14; their effort to compile and review ammo supply records and revise ASR continues.

Major Milestone Schedule

- Final report on interview findings 4/30
- Final report of military historical research findings 6/15
- Draft/final report on contracts research 5/30 7/30
- Draft, revised ASR 7/31
- Final, revised ASR 9/30
- Draft ASR / Integrated GIS 11/30
- Final ASR / Integrated GIS 1/31/02

Munitions Survey Update

Doug Lam (Tetra Tech) presented the update on the Munitions Survey. A one-page handout was distributed.

- Since last week, additional work was completed at HUTA Test Pit #3 and Test Pit #6. In Test
 Pit #3, the surface soil chemistry sampling and surface geophysics is completed. Hand
 excavation of anomalies has commenced. In Test Pit #6 Lift 1D was excavated. The
 geophysics has been completed on Lift 2 and are currently hand excavating anomalies.
- Although work is completed at Test Pit #4, Tetra Tech is awaiting analytical results prior to backfilling.
- Schedule for presentation of J-1 and J-3 Range ground geophysical data likely to be set tomorrow, 5/11. Review of J-2 data was presented later in the meeting. Four maps showing anomalies (marked by X's) on the four sections of J-2 Range were distributed. Maps also showed target picks denoted by brown or rust-colored outlined areas. The areas encircled by the brown/rust lines indicated either single sizeable anomalies or a cluster of sizeable anomalies. These areas are interpretive and were hand drawn (not contoured by a software program). Mr. Lam indicated that differential data (difference in signature between top and bottom coils of EM cart) would not be utilized since they considered the top coil data to be good for additional info but not reliable for "hard core evidence". Outside the brown/rust areas are background data or individual hits.

- As part of the Air Mag survey, a list of selected targets and maps were provided to ACE and EPA. Mr. Lam requested that EPA provide a copy of these maps to DEP. Approximately 130 targets have been selected for the initial ground truthing. There were three general criteria used to make picks. 1) anomalies indicative of a large mass (500 lb minimum) 2) anomalies observed on both aircraft passes. 3) anomalies close to historic or existing roads. Current plan is to have one team ground truth for 2 weeks or two teams ground truth for 1 week. Todd Borci (EPA) indicated that EPA has some additional picks (approximately 50) to add to list. Mr. Borci further indicated that he feels that the ground truthing effort should continue uninterrupted (or relatively soon) past the initial one week effort; the EPA was not interested in a lengthy technical memo summarizing initial findings and refined approach that would take substantial time to prepare. He further asked that a secondary target list be prepared as the primary target list was being ground truthed so that this effort could be expedited. He also suggested that threshold for anomalies be lowered to 200 lbs and anomalies not near roads be considered so that the agencies could see how many targets these criteria produced.
- A draft Tech Memo summarizing the DU data will be presented to ACE in late May. Tina
 Dolen (IAGWSPO) is preparing a press release summarizing the findings; this will be
 coordinated with EPA and DEP. EPA expressed some concern about preparing the press
 release prior to receipt of the report.

CS-18 and CS-19 Updates

Ken Gaynor (Jacobs) presented an update on CS-18 and CS-19, distributing a one-page handout

- At CS-18, monitoring well development was completed. Groundwater sampling of the seven site wells will be completed next week. A particle backtrack from well 16MW0005 will be completed following survey of the new wells.
- At CS-19, EPA/DEP concurrence was received on trench location at 5/9 IRP tech meeting.
 Soil testing and management plan details were also presented at the meeting. Mr. Gaynor to email plans to Todd Borci (EPA) and Dave Hill (IAGWSPO).
- Proposed downgradient well locations were presented at 5/3 IRP tech meeting. Particle tracks used by AFCEE to select locations were distributed via email to IAGWSP team prior to Tech meeting. Mike Jasinski (EPA) will forward comments prepared by AMEC on particle track map and proposed well locations to Mr. Gaynor. Currently Jacobs will prepare backward particle tracks from MW-135 and MW-108 to adjust well locations. This information will be presented at next week's tech meeting.
- CS-19 trench excavation is scheduled to begin with the small trench on 5/21.
- Partial analytical results for sediment sampling of puddle were received. VOC data and surface water data are not yet available. This data will be distributed when available.

Water Supply Study Update

- Todd Borci (EPA) reiterated his request for the exact location of the .50 cal bullets and 37mm round (point on a map) found during the pipeline excavation and the final disposition of the items.
- Hap Gonser and LTC Bleakley (JPO) indicated that State had not approved ZOCs, but that
 approval was expected "soon", perhaps "imminently". Once approval is received, JPO and
 State will meet to discuss other issues that are required to complete project. ZOCs will
 determine where monitoring wells will be placed. Projected schedule for completion of well
 installation is July. WS-3 to be installed first followed by WS-2 and WS-1.

Rapid Response Action Update

Scott Veenstra (AMEC) presented an update of the RRA. A one-page handout was distributed.

- Water management at the RRA containment pad continues pending a rain event so that one more confirmation sample can be collected of pad runoff.
- Comments on Work Report for RRA Group 1 are requested from agencies by 5/21.
- Comments on RRA Mortar Target 9 and Former H Range Draft Soil Contamination Delineation Report were received 5/4.
- Conceptual approach for supplemental delineation sampling was presented at the meeting. A two-page handout showing proposed "quarter ring sampling grid" and area calculations was distributed. Proposed sampling grid configuration for next 10 ft radius (45 ft) out from Mortar Target 9, consisted of 5 nodes distributed evenly along one quarter of the arc of the ring grid. Nodes to be centered (40 ft from target center) within this area. Additional delineation grids, if required, would be another 10 ft out with 4 nodes centered within one eight of the arc of the ring grid. For both grid configurations discrete samples would be collected at each node, as well as a composite for the entire grid. Two depths would be sampled; 0-6 inches and 18-24 inches consistent with the first phase of delineation sampling. Agencies approved of the proposed sampling approached; Todd Borci (EPA) requested that a letter summarizing the approach with sketch attached be drafted as an amendment to the existing Field Sampling Plan
- Schedule for RRA 2 Mortar Target 9 soil removal includes UXO clearance, soil removal and site restoration pending completion of contracting and subcontracting. Because of additional delineation requirements it is likely that clearance and excavation of delineated soil can be completed by 6/1 deadline, but analytical results would not be back. Mr. Borci indicated that the Guard can ask for an extension, but explanations of why the schedule has dropped behind need to be made. Ben Gregson and Dave Hill (IAGWPSO) indicated that the contract is currently lump sum and does not allow for much flexibility, however, for the future work the contracting process can probably be adjusted to facilitate additional delineation and removal when needed.
- Grain Size Analysis for the Soil Washing Process Confirmation/Optimization summary for Mortar Target 9 was submitted to agencies on 5/7. The summary concluded that the soil washing process is best utilized in its current configuration.
- Rewashing of 485 yards of retained soil and next phase of excavated soil will probably commence in early June; the schedule is dependent on a 4-5 week contracting process.

Groundwater Study

John Rice (AMEC) presented an update of the groundwater study. A one page summary was distributed.

- Installation of monitor well MW-168 (J1P-6) was completed this week. Drilling of MW-169 (SP-1) and Former K Range well (pending REC approval) commenced this week. Next week, will complete well installation of MW-169 and continue drilling Former K Range well.
- Snake Pond spit well (SP-2) can be drilled next as geese eggs have been destroyed.
 Circumstantial evidence points to crow(s) as the perpetrator(s).
- No additional profile samples were collected from AFCEE Snake Pond well "D", 90MW104A. Mike Jasinski (EPA) reported that the borehole was profiled from 20 170 ft. Two well screens were set at 85-90 ft and 140-145 ft. Jacobs offset the first borehole to drill to 250 ft. At 190 ft running sands were encountered and no additional profile samples were collected. Set a well screen from 115-120 in the offset borehole. No information was available on why the screen was set at this interval. Plan is to drill @ "C" location next.

- May LTM groundwater sampling round and sampling of newly installed J Range and Demo 1 wells continued this week. Sampling of LTM round and newly installed J Range wells will continue next week.
- Former owners of property on which 90PZ211 and 90PZ208 are located indicate that the property was sold. ACE to research and contact new owner(s).
- Soil sampling and UXO avoidance was/would be conducted at the Cleared Area 7 and J-3
 Range grids this week. Should complete soil sampling this week. Bill Gallagher (AMEC) to
 meet Mr. Borci to select locations at Cleared Area 7 (small circular knoll with drum
 carcasses) at 1530 today, 5/10.
- Vegetation removal was conducted for Former K Range drill pad (2125 sq ft) this week;
 none is scheduled for next week.
- Data tables were distributed including 1) New Detects Unvalidated. 2) Unvalidated
 Results for 3.5 inch rocket BIP on K Range and 155mm round found cracked adjacent to
 Turpentine Rd. 3) J-1 Range trench excavation unvalidated results. 4) Anti –Tank Gravity
 Range Unvalidated Results.
- New Detects table showed explosive detections in samples collected from wells108M4, 111M3, 135M2, 16S, 23M1 and 23M2. These detections were similar in type and concentration to the detections in previous rounds.
- Data for BIP grid of 3.5 inch rocket showed no explosive detections. Explosives were
 detected in soil beneath cracked 155mm round that was removed from Turpentine Rd,
 although final disposition is unknown. Marc Grant (AMEC) indicated that he would verify
 that soil in the sample area was covered with plastic. Mr. Rice to provide location of 155mm
 discovery on map.
- J-1 Trench data was emailed Monday (5/7) or Tuesday (5/8). Post excavation soil samples (A1-A5) had some semi-volatile detections. Samples from "dirty" soil pile had detections of semi-volatiles, BTEX and chlorinated VOCs. Samples from "clean" pile had trace concentration of PCE and toluene in the duplicate sample only. Trench was approximately 100 ft long by 4-5 ft deep. Additional excavation of soil was proposed with additional confirmatory samples. "Dirty" soil pile was to be disposed off-site. Trench would be backfilled with clean fill and clean soil pile (top soil) on top. Mr. Borci and Ed Wise (ACE) recommended that the Guard try to minimize the addition of fill material, that the trench be flattened into existing topography by leveling the trench sides. Clean Harbors is providing a proposal for additional work, which will be completed in a week or two. It was not known where Clean Harbors had disposed of drummed materials. The Guard will provide manifest or Bill of Lading information for the wastes.
- Map of Anti-Tank Gravity Range soil grid locations was distributed with data. Data was complete except for V grab sample. Six of the 22 grids where samples were collected had detections of explosives. The explosive detections included TNT and TNT breakdown products, one HMX detection, and no RDX detections.
- Ben Gregson (IAGWSPO) indicated that it was the Guard's intent to split surface water samples with Town of Sandwich, next week. Samples to be collected from two beach locations and analyzed for explosives. Jane Dolan (EPA) also recommended that they be sampled for perchlorate.
- Mr. Grant indicated that the Perchlorate update was emailed on 5/7. PZ204 was sampled for perchlorate on 4/2, results are expected next week. Tritium results were anticipated tomorrow, 5/11.
- Particle tracks from USGS for the SE corner of the J Ranges were distributed during the
 punchlist discussion. Particle tracks were shown when the FS-12 extraction system was on
 and off. In the off scenario, groundwater from 0-120 ft bgs discharges to Snake Pond.
 Deeper groundwater (only one particle track) flows under the pond. Dave Williams (MDPH)
 suggested that surface water samples should be collected at northend of pond, an area that

Sandwich was not sampling. Mr. Gregson felt that data from spit well (SP-2) should be reviewed prior to consider additional sampling needs.

Document /Schedule Status Update

Marc Grant (AMEC) provided the update on document and schedule status, distributing a one page table, 3-month Lookahead schedule, and a table outlining the scheduling issues. Highlights of the document/schedule status were reviewed as follows:

- Documents Having Comments. Guard was looking for approvals on MORs for J-2
 Additional Delineation Work Plan and TM 01-8 J-2 Range Interim Data Report that were
 sent out 5/9. Jane Dolan (EPA) indicated that MOR for TM 01-8 was approved and that a
 response to the Additional Delineation Workplan would be forwarded ASAP. DEP
 comments on the Interim Data Report were received this week and would be addressed
 shortly. Demo 1 COC MOR was sent out today 5/10.
- Documents Needing Comments. Agencies indicated that they would be providing comment on Supplemental Background Workplan.
- Documents to be Submitted. HUTA 1 Interim Data Report would be submitted next week.
- Todd Borci (EPA) indicated that draft Post-Screening Investigation Workplan for Demo 1 groundwater could be dropped in accordance with the Guard's 5/8 letter and replaced with ITE studies ongoing (7/31). However, given that the Guard is aware of the agencies preference/opinions on various technologies does the FS Report for groundwater due date need to be as late as 9/25, a date established based on the completion of the ITE studies?
- Len Pinaud (MADEP) indicated that the RRA Delineation Sampling Report should be on the document list to track.

May IART

Discussion was led by Todd Borci (EPA). Draft agenda for May IART was reviewed.

- For the Munitions Update, a slide should be provided on the ASR process and other important items such as Picatinny arsenal records found and reviewed, aerial photographs ordered. Aerial Mag update should include map of targets, pointing out some of the larger targets, discuss approach to ground truthing targets and how the Mag data has already been used, such as to adjust monitoring wells locations to be downgradient of large anomalies.
- The groundwater study update should include discussion of Demo 1 plume and new proposed wells, recent explosive detections, Phase IIb update.
- RRA update should include status of Group 1 and Group 2.
- Action items were reviewed as follows:
 - 1) **Update on legal issues regarding Textron.** Army is negotiating with Textron for cost reimbursement. No comment on anything else due to litigation.
 - 2) Assessment of ecological impacts. Groundwater study addresses the Order. The Order focuses on impacts and prevention of impact to groundwater. As part of the MCP, an ecological screening assessment will be done for the final cleanup. Mike Hutchinson (MADEP) to be consulted regarding language in MCP.
 - EPA risk assessors review of revised calculations for small arms ranges report. Risk assessors have reviewed report and the calculations are correct.

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-168 had detections of acetone (7 intervals), MEK (7 intervals), chloroform (7 intervals), toluene (2 interval), chloromethane (1 interval), PENT (1 interval), nitrobenzene (3 intervals), picric acid (2 intervals), trinitrobenzene (1 interval), 3-nitrotoluene (1 interval), 4-nitrotoluene (1 interval), 2,4-DNT (3 intervals), and RDX (18 intervals). The 2,4-DNT detections and two RDX detections were verified by PDA spectra.

3. DELIVERABLES SUBMITTED

RRA Round 2 Grain Sizing Report	5/07/01
Weekly Progress Update, April 23 – April 27, 2001	5/07/01
April 2001 Monthly Progress Report	5/09/01

4. SCHEDULED ACTIONS

Scheduled actions for the week of May 14 include well installation of MW-169 (SP-1), commence drilling of MW-170 (KP-1) and SP-2 well, continue development and sampling of newly installed wells, and continue sampling Long Term Groundwater Monitoring 2001 and third round sampling of Central Impact Area Supplemental Response wells.

5. SUMMARY OF ACTIVITIES FOR DEMO 1

The Draft Soil Report is being prepared. Two additional downgradient well locations, D1P-5 and D1P-6, have been proposed and approved. Analysis of second round groundwater samples from newly installed wells is ongoing.

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
G169DAE	FIELDQC	05/09/2001	FIELDQC	0.00	0.00		
HC102IC1AAE	FIELDQC	05/09/2001	FIELDQC	0.00	0.00		
HC102IC1AAT	FIELDQC	05/09/2001	FIELDQC	0.00	0.00		
HD102C1AAE	FIELDQC	05/07/2001	FIELDQC	0.00	0.00		
HD102C1AAT	FIELDQC	05/07/2001	FIELDQC	0.00	0.00		
HD102FB1AAE	FIELDQC	05/08/2001	FIELDQC	0.00	0.00		
HD102FB1AAT	FIELDQC	05/08/2001	FIELDQC	0.00	0.00		
HD144A1AAE	FIELDQC	05/11/2001	FIELDQC	0.00	0.00		
HD144A1AAT	FIELDQC	05/11/2001	FIELDQC	0.00	0.00		
W165M2F	FIELDQC	05/09/2001	FIELDQC	0.00	0.00		
W51M1T	FIELDQC	05/10/2001	FIELDQC	0.00	0.00		
W15M1A	MW-15	05/11/2001	GROUNDWATER	163.00	173.00	50.60	60.60
W15M2A	MW-15	05/11/2001	GROUNDWATER	114.00	154.00	1.70	11.70
W15M3A	MW-15	05/11/2001	GROUNDWATER	124.00	134.00	11.70	21.70
W162M2A	MW-162	05/05/2001	GROUNDWATER	125.00	135.00	49.20	59.20
W162M3A	MW-162	05/05/2001	GROUNDWATER	85.00	95.00	9.10	19.10
W165M1A	MW-165	05/07/2001	GROUNDWATER	184.00	194.00	107.30	117.30
W165M2A	MW-165	05/08/2001	GROUNDWATER	124.00	134.00	44.20	54.20
W165M2A	MW-165	05/08/2001	GROUNDWATER	124.00	134.00	44.20	54.20
W165M3A	MW-165	05/09/2001	GROUNDWATER	94.00	104.00	14.20	24.20
W165M3D	MW-165	05/09/2001	GROUNDWATER	94.00	104.00	14.20	24.20
W21M3A	MW-21	05/07/2001	GROUNDWATER	196.00	206.00	16.05	26.05
W23M1A	MW-23	05/11/2001	GROUNDWATER	225.00	235.00	95.00	105.00
W33DDA	MW-33	05/07/2001	GROUNDWATER	181.50	186.50	78.40	83.40
W33MMA	MW-33	05/07/2001	GROUNDWATER	161.50	171.50	57.70	67.70
W33MMD	MW-33	05/07/2001	GROUNDWATER	161.50	171.50	57.70	67.70
W34M1A	MW-34	05/05/2001	GROUNDWATER	151.00	161.00	70.20	80.20
W34M1A	MW-34	05/05/2001	GROUNDWATER	151.00	161.00	70.20	80.20
W35M2A	MW-35	05/07/2001	GROUNDWATER	100.00	110.00	16.40	26.40
W38M2A	MW-38	05/08/2001	GROUNDWATER	187.00	197.00	64.10	74.10
W38M3A	MW-38	05/08/2001	GROUNDWATER	170.00	180.00	47.30	57.30
W38M4A	MW-38	05/08/2001	GROUNDWATER	132.00	142.00	9.20	19.20
W39M2A	MW-39	05/10/2001	GROUNDWATER	175.00	185.00	35.42	45.42
W4036000-03GA	4036000-03	05/09/2001	GROUNDWATER				
W4036000-04GA	4036000-04	05/09/2001	GROUNDWATER				
W4036000-06GA	4036000-06	05/09/2001	GROUNDWATER				
W41M1A	MW-41	05/09/2001	GROUNDWATER	235.00	245.00	103.50	113.50
W4261000-02GA	4261000-02	05/08/2001	GROUNDWATER				
W4261000-03GA	4261000-03	05/08/2001	GROUNDWATER				
W4261000-04GA	4261000-04	05/08/2001	GROUNDWATER				
W4261000-06GA	4261000-06	05/08/2001	GROUNDWATER				
W4261000-07GA	4261000-07	05/08/2001	GROUNDWATER				
W4261000-08GA	4261000-08	05/08/2001	GROUNDWATER				

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
W4261000-09GA	4261000-09	05/08/2001	GROUNDWATER				
W4261000-10GA	4261000-10	05/08/2001	GROUNDWATER				
W4261000-11GA	4261000-11	05/08/2001	GROUNDWATER				
W42M1A	MW-42	05/09/2001	GROUNDWATER	206.00	216.00	135.30	145.30
W42M2A	MW-42	05/10/2001	GROUNDWATER	186.00	196.00	115.35	125.35
W42M2D	MW-42	05/10/2001	GROUNDWATER	186.00	196.00	115.35	125.35
W44M1A	MW-44	05/08/2001	GROUNDWATER	182.00	192.00	51.00	61.00
W49M1A	MW-49	05/09/2001	GROUNDWATER	160.00	170.00	86.40	96.40
W51M1A	MW-51	05/10/2001	GROUNDWATER	234.00	244.00	84.68	94.68
W53DDA	MW-53	05/09/2001	GROUNDWATER	283.00	293.00	152.10	162.10
W55M1A	MW-55	05/08/2001	GROUNDWATER	225.00	235.00	85.20	95.20
W57DDA	MW-57	05/08/2001	GROUNDWATER	213.00	223.00	124.40	134.40
W57M3A	MW-57	05/07/2001	GROUNDWATER	117.00	127.00	27.50	37.50
W57SSA	MW-57	05/07/2001	GROUNDWATER	85.00	95.00	4.60	14.60
W68SSA	MW-68	05/10/2001	GROUNDWATER	84.00	94.00	6.53	16.53
W74M1A	MW-74	05/08/2001	GROUNDWATER	170.00	180.00	72.40	82.40
W74M3A	MW-74	05/10/2001	GROUNDWATER	100.00	110.00	2.32	12.32
W75M1A	MW-75	05/09/2001	GROUNDWATER	140.00	150.00	55.20	65.20
W75M2A	MW-75	05/09/2001	GROUNDWATER	115.00	125.00	30.20	40.20
W75M2D	MW-75	05/09/2001	GROUNDWATER	115.00	125.00	30.20	40.20
W75SSA	MW-75	05/09/2001	GROUNDWATER	81.00	91.00	0.00	10.00
W76M1A	MW-76	05/07/2001	GROUNDWATER	125.00	135.00	54.20	64.20
W76M2A	MW-76	05/07/2001	GROUNDWATER	105.00	115.00	34.10	44.10
W76SSA	MW-76	05/07/2001	GROUNDWATER	85.00	95.00	14.20	24.20
W77M1A	MW-77	05/11/2001	GROUNDWATER	180.00	190.00	93.60	103.60
W77M2A	MW-77	05/10/2001	GROUNDWATER	120.00	130.00	33.61	43.61
W77SSA	MW-77	05/10/2001	GROUNDWATER	83.00	93.00	0.00	10.00
W77SSD	MW-77	05/10/2001	GROUNDWATER	83.00	93.00	0.00	10.00
W78M1A	MW-78	05/10/2001	GROUNDWATER	135.00	145.00	53.69	63.69
W78M2A	MW-78	05/10/2001	GROUNDWATER	115.00	125.00	33.77	43.77
W78M3A	MW-78	05/11/2001	GROUNDWATER	85.00	95.00	3.70	13.70
DW051001	GAC WATER	05/10/2001	IDW				
G169DAA	MW-169	05/09/2001	PROFILE	4.00	9.00	1.40	6.40
G169DBA	MW-169	05/09/2001	PROFILE	14.00	19.00	11.40	16.40
G169DCA	MW-169	05/09/2001	PROFILE	24.00	29.00	21.40	26.40
G169DCD	MW-169	05/09/2001	PROFILE	24.00	29.00	21.40	26.40
G169DDA	MW-169	05/09/2001	PROFILE	34.00	39.00	31.40	36.40
G169DEA	MW-169	05/09/2001	PROFILE	44.00	49.00	41.40	46.40
G169DFA	MW-169	05/09/2001	PROFILE	54.00	59.00	51.40	56.40
G169DFD	MW-169	05/09/2001	PROFILE	54.00	59.00	51.40	56.40
G169DGA	MW-169	05/09/2001	PROFILE	64.00	69.00	61.40	66.40
G169DHA	MW-169	05/09/2001	PROFILE	74.00			76.40
G169DIA	MW-169	05/09/2001	PROFILE	84.00			86.40
G169DJA	MW-169	05/10/2001	PROFILE	94.00			96.40

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
G169DKA	MW-169	05/10/2001	PROFILE	104.00	109.00	101.40	106.40
G169DLA	MW-169	05/10/2001	PROFILE	114.00	119.00	111.40	116.40
G169DMA	MW-169	05/10/2001	PROFILE	124.00	129.00	121.40	126.40
G169DNA	MW-169	05/10/2001	PROFILE	134.00	139.00	131.40	136.40
G169DOA	MW-169	05/10/2001	PROFILE	144.00	149.00	141.40	146.40
HC102IC1AAA	102IC	05/09/2001	SOIL GRID	0.00	0.25		
HC102IC1BAA	102IC	05/09/2001	SOIL GRID	0.25	0.50		
HC102IC1CAA	102IC	05/09/2001	SOIL GRID	0.50	1.00		
HC102IC1CAD	102IC	05/09/2001	SOIL GRID	0.50	1.00		
HC144A1AAA	144A	05/11/2001	SOIL GRID	0.00	0.25		
HC144A1BAA	144A	05/11/2001	SOIL GRID	0.25	0.50		
HC144A1CAA	144A	05/11/2001	SOIL GRID	0.50	1.00		
HC144A1CAD	144A	05/11/2001	SOIL GRID	0.50	1.00		
HC144B1AAA	144B	05/11/2001	SOIL GRID	0.00	0.25		
HC144B1BAA	144B	05/11/2001	SOIL GRID	0.25	0.50		
HC144B1CAA	144B	05/11/2001	SOIL GRID	0.50	1.00		
HC144C1AAA	144C	05/11/2001	SOIL GRID	0.00	0.25		
HC144C1BAA	144C	05/11/2001	SOIL GRID	0.25	0.50		
HC144C1CAA	144C	05/11/2001	SOIL GRID	0.50	1.00		
HC144C1CAD	144C	05/11/2001	SOIL GRID	0.50	1.00		
HC144D1AAA	144D	05/11/2001	SOIL GRID	0.00	0.25		
HC144D1BAA	144D	05/11/2001	SOIL GRID	0.25	0.50		
HC144D1CAA	144D	05/11/2001	SOIL GRID	0.50	1.00		
HD102C1AAA	102C	05/07/2001	SOIL GRID	0.00	0.50		
HD102C2AAA	102C	05/07/2001	SOIL GRID	0.00	0.50		
HD102FA1AAA	102FA	05/07/2001	SOIL GRID	0.00	0.25		
HD102FA1BAA	102FA	05/07/2001	SOIL GRID	0.25	0.50		
HD102FA1CAA	102FA	05/07/2001	SOIL GRID	0.50	1.00		
HD102FA2AAA	102FA	05/07/2001	SOIL GRID	0.00	0.25		
HD102FA2BAA	102FA	05/07/2001	SOIL GRID	0.25	0.50		
HD102FA2CAA	102FA	05/07/2001	SOIL GRID	0.50	1.00		
HD102FA3AAA	102FA	05/07/2001	SOIL GRID	0.00	0.25		
HD102FA3BAA	102FA	05/07/2001	SOIL GRID	0.25	0.50		
HD102FA3CAA	102FA	05/07/2001	SOIL GRID	0.50	1.00		
HD102FA4AAA	102FA	05/07/2001	SOIL GRID	0.00	0.25		
HD102FA4BAA	102FA	05/07/2001	SOIL GRID	0.25	0.50		
HD102FA4CAA	102FA	05/07/2001	SOIL GRID	0.50	1.00		
HD102FA5AAA	102FA	05/07/2001	SOIL GRID	0.00	0.25		
HD102FA5BAA	102FA	05/07/2001	SOIL GRID	0.25	0.50		
HD102FA5BAD	102FA	05/07/2001	SOIL GRID	0.25			
HD102FA5CAA	102FA	05/07/2001	SOIL GRID	0.50	1.00		
HD102FB1AAA	102FB	05/08/2001	SOIL GRID	0.00	0.25		
HD102FB1BAA	102FB	05/08/2001	SOIL GRID	0.25	0.50		
HD102FB1CAA	102FB	05/08/2001	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
HD102FB2AAA	102FB	05/08/2001	SOIL GRID	0.00	0.25		
HD102FB2BAA	102FB	05/08/2001	SOIL GRID	0.25	0.50		
HD102FB2CAA	102FB	05/08/2001	SOIL GRID	0.50	1.00		
HD102FB3AAA	102FB	05/08/2001	SOIL GRID	0.00	0.25		
HD102FB3BAA	102FB	05/08/2001	SOIL GRID	0.25	0.50		
HD102FB3CAA	102FB	05/08/2001	SOIL GRID	0.50	1.00		
HD102FB4AAA	102FB	05/08/2001	SOIL GRID	0.00	0.25		
HD102FB4BAA	102FB	05/08/2001	SOIL GRID	0.25	0.50		
HD102FB4CAA	102FB	05/08/2001	SOIL GRID	0.50	1.00		
HD102FB5AAA	102FB	05/08/2001	SOIL GRID	0.00	0.25		
HD102FB5BAA	102FB	05/08/2001	SOIL GRID	0.25	0.50		
HD102FB5BAD	102FB	05/08/2001	SOIL GRID	0.25	0.50		
HD102FB5CAA	102FB	05/08/2001	SOIL GRID	0.50	1.00		
HD102FC1AAA	102FC	05/08/2001	SOIL GRID	0.00	0.25		
HD102FC1BAA	102FC	05/08/2001	SOIL GRID	0.25	0.50		
HD102FC1CAA	102FC	05/08/2001	SOIL GRID	0.50	1.00		
HD102FC2AAA	102FC	05/08/2001	SOIL GRID	0.00	0.25		
HD102FC2BAA	102FC	05/08/2001	SOIL GRID	0.25	0.50		
HD102FC2CAA	102FC	05/08/2001	SOIL GRID	0.50	1.00		
HD102FC3AAA	102FC	05/08/2001	SOIL GRID	0.00	0.25		
HD102FC3BAA	102FC	05/08/2001	SOIL GRID	0.25	0.50		
HD102FC3CAA	102FC	05/08/2001	SOIL GRID	0.50	1.00		
HD102FC4AAA	102FC	05/08/2001	SOIL GRID	0.00	0.25		
HD102FC4BAA	102FC	05/08/2001	SOIL GRID	0.25	0.50		
HD102FC4CAA	102FC	05/08/2001	SOIL GRID	0.50	1.00		
HD102FC5AAA	102FC	05/08/2001	SOIL GRID	0.00	0.25		
HD102FC5BAA	102FC	05/08/2001	SOIL GRID	0.25	0.50		
HD102FC5BAD	102FC	05/08/2001	SOIL GRID	0.25	0.50		
HD102FC5CAA	102FC	05/08/2001	SOIL GRID	0.50	1.00		
HD102S1AAA	102S	05/07/2001	SOIL GRID	0.00	0.25		
HD144A1AAA	144A	05/11/2001	SOIL GRID	0.00	0.25		
HD144A1BAA	144A	05/11/2001	SOIL GRID	0.25	0.50		
HD144A1CAA	144A	05/11/2001	SOIL GRID	0.50	1.00		
HD144B1AAA	144B	05/11/2001	SOIL GRID	0.00	0.25		
HD144B1BAA	144B	05/11/2001	SOIL GRID	0.25	0.50		
HD144B1CAA	144B	05/11/2001	SOIL GRID	0.50	1.00		
HD144C1AAA	144C	05/11/2001	SOIL GRID	0.00	0.25		
HD144C1BAA	144C	05/11/2001	SOIL GRID	0.25	0.50		
HD144C1CAA	144C	05/11/2001	SOIL GRID	0.50	1.00		
HD144D1AAA	144D	05/11/2001	SOIL GRID	0.00	0.25		
HD144D1BAA	144D	05/11/2001	SOIL GRID	0.25	0.50		
HD144D1CAA	144D	05/11/2001	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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BWTS = Depth below water table, start depth, measured in feet

TABLE 3 DETECTED COMPOUNDS-UNVALIDATED SAMPLES COLLECTED 4/21/01-5/11/01

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G168DAA	MW-168	05/02/2001	PROFILE	93.00	93.00	6.90	6.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	; NO
G168DAA	MW-168	05/02/2001	PROFILE	93.00	93.00	6.90	6.90	8330N	NITROBENZENE	NO
G168DAA	MW-168	05/02/2001	PROFILE	93.00	93.00	6.90	6.90	8330N	PENTAERYTHRITOL TETRANITI	F NO
G168DAA	MW-168	05/02/2001	PROFILE	93.00	93.00	6.90	6.90	8330N	PICRIC ACID	NO
G169DBA	MW-169	05/09/2001	PROFILE	14.00	19.00	11.40	16.40	8330N	1,3,5-TRINITROBENZENE	NO
G168DBA	MW-168	05/02/2001	PROFILE	103.00	103.00	16.90	16.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
G168DBA	MW-168	05/02/2001	PROFILE	103.00	103.00	16.90	16.90	8330N	PICRIC ACID	NO
G168DCA	MW-168	05/02/2001	PROFILE	113.00	113.00	26.90	26.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
G168DCD	MW-168	05/02/2001	PROFILE	113.00	113.00	26.90	26.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
G168DDA	MW-168	05/02/2001	PROFILE	123.00	123.00	36.90	36.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	ON:
G168DEA	MW-168	05/02/2001	PROFILE	133.00	133.00	46.90	46.90	8330N	2,4-DIAMINO-6-NITROTOLUENE	YES
G168DEA	MW-168	05/02/2001	PROFILE	133.00	133.00	46.90	46.90	8330N	3-NITROTOLUENE	ОИ
G168DEA	MW-168	05/02/2001	PROFILE	133.00	133.00	46.90	46.90	8330N	4-NITROTOLUENE	NO
G168DEA	MW-168	05/02/2001	PROFILE	133.00	133.00	46.90	46.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DEA	MW-168	05/02/2001	PROFILE	133.00	133.00	46.90	46.90	8330N	NITROBENZENE	NO
G168DFA	MW-168	05/03/2001	PROFILE	143.00	143.00	56.90	56.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DFD	MW-168	05/03/2001	PROFILE	143.00	143.00	56.90	56.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DGA	MW-168	05/03/2001	PROFILE	153.00	153.00	66.90	66.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DHA	MW-168	05/03/2001	PROFILE	163.00	163.00	76.90	76.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DIA	MW-168	05/03/2001	PROFILE	173.00	173.00	86.90	86.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DJA	MW-168	05/03/2001	PROFILE	183.00	183.00	96.60	96.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DKA	MW-168	05/03/2001	PROFILE	193.00	193.00	106.90	106.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DLA	MW-168	05/03/2001	PROFILE	203.00	203.00	116.90	116.90	8330N	2,4-DIAMINO-6-NITROTOLUENE	YES
G168DLA	MW-168	05/03/2001	PROFILE	203.00	203.00	116.90	116.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DLA	MW-168	05/03/2001	PROFILE	203.00	203.00	116.90	116.90	8330N	NITROBENZENE	NO
G168DMA	MW-168	05/03/2001	PROFILE	213.00	213.00	126.90	126.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DNA	MW-168	05/03/2001	PROFILE	223.00	223.00	136.90	136.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DNA	MW-168	05/03/2001	PROFILE	223.00	223.00	136.90	136.90	OC21V	ACETONE	
G168DNA	MW-168	05/03/2001	PROFILE	223.00	223.00	136.90	136.90	OC21V	CHLOROFORM	
G168DNA	MW-168	05/03/2001	PROFILE	223.00	223.00	136.90	136.90	OC21V	METHYL ETHYL KETONE (2-BU)	1
G168DNA	MW-168	05/03/2001	PROFILE	223.00	223.00	136.90	136.90	OC21V	TOLUENE	
G168DOA	MW-168	05/03/2001	PROFILE	233.00	233.00	146.90	146.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DOA	MW-168	05/03/2001	PROFILE	233.00	233.00	146.90	146.90	OC21V	ACETONE	

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 4/21/01-5/11/01

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G168DOA	MW-168	05/03/2001	PROFILE	233.00	233.00	146.90	146.90	OC21V	CHLOROFORM	
G168DOA	MW-168	05/03/2001	PROFILE	233.00	233.00	146.90	146.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G168DPA	MW-168	05/03/2001	PROFILE	243.00	243.00	156.90	156.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DPA	MW-168	05/03/2001	PROFILE	243.00	243.00	156.90	156.90	OC21V	ACETONE	
G168DPA	MW-168	05/03/2001	PROFILE	243.00	243.00	156.90	156.90	OC21V	CHLOROFORM	
G168DPA	MW-168	05/03/2001	PROFILE	243.00	243.00	156.90	156.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G168DQA	MW-168	05/03/2001	PROFILE	253.00	253.00	166.90	166.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DQA	MW-168	05/03/2001	PROFILE	253.00	253.00	166.90	166.90	OC21V	ACETONE	
G168DQA	MW-168	05/03/2001	PROFILE	253.00	253.00	166.90	166.90	OC21V	CHLOROFORM	
G168DQA	MW-168	05/03/2001	PROFILE	253.00	253.00	166.90	166.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G168DQD	MW-168	05/03/2001	PROFILE	253.00	253.00	166.90	166.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DQD	MW-168	05/03/2001	PROFILE	253.00	253.00	166.90	166.90	OC21V	ACETONE	
G168DQD	MW-168	05/03/2001	PROFILE	253.00	253.00	166.90	166.90	OC21V	CHLOROFORM	
G168DQD	MW-168	05/03/2001	PROFILE	253.00	253.00	166.90	166.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G168DRA	MW-168	05/04/2001	PROFILE	263.00	263.00	176.90	176.90	8330N	2,4-DIAMINO-6-NITROTOLUENE	YES
G168DRA	MW-168	05/04/2001	PROFILE	263.00	263.00	176.90	176.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	NO
G168DRA	MW-168	05/04/2001	PROFILE	263.00	263.00	176.90	176.90	OC21V	ACETONE	
G168DRA	MW-168	05/04/2001	PROFILE	263.00	263.00	176.90	176.90	OC21V	CHLOROFORM	
G168DRA	MW-168	05/04/2001	PROFILE	263.00	263.00	176.90	176.90	OC21V	CHLOROMETHANE	
G168DRA	MW-168	05/04/2001	PROFILE	263.00	263.00	176.90	176.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G168DRA	MW-168	05/04/2001	PROFILE	263.00	263.00	176.90	176.90	OC21V	TOLUENE	
G168DSA	MW-168	05/04/2001	PROFILE	273.00	273.00	186.90	186.90	OC21V	ACETONE	
G168DSA	MW-168	05/04/2001	PROFILE	273.00	273.00	186.90	186.90	OC21V	CHLOROFORM	
G168DSA	MW-168	05/04/2001	PROFILE	273.00	273.00	186.90	186.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G168DTA	MW-168	05/04/2001	PROFILE	283.00	283.00	196.90	196.90	OC21V	ACETONE	
G168DTA	MW-168	05/04/2001	PROFILE	283.00	283.00	196.90	196.90	OC21V	CHLOROFORM	
G168DTA	MW-168	05/04/2001	PROFILE	283.00	283.00	196.90	196.90	OC21V	METHYL ETHYL KETONE (2-BUT	

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

SBD = SAMPLE COLLECTION BEGIN DEPTH IN FEET BGS

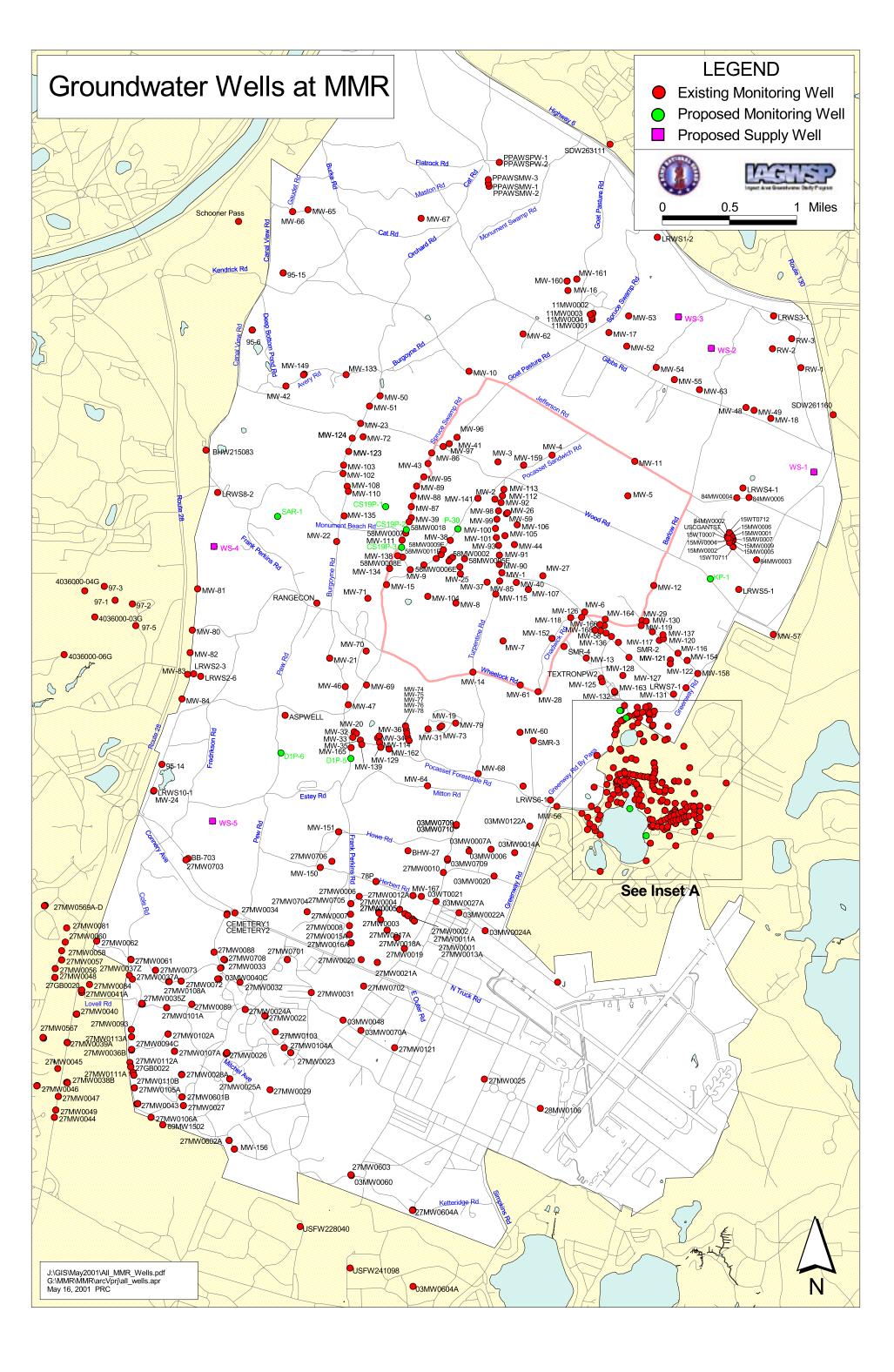
SED = SAMPLE COLLECTION END DEPTH IN FEET BGS

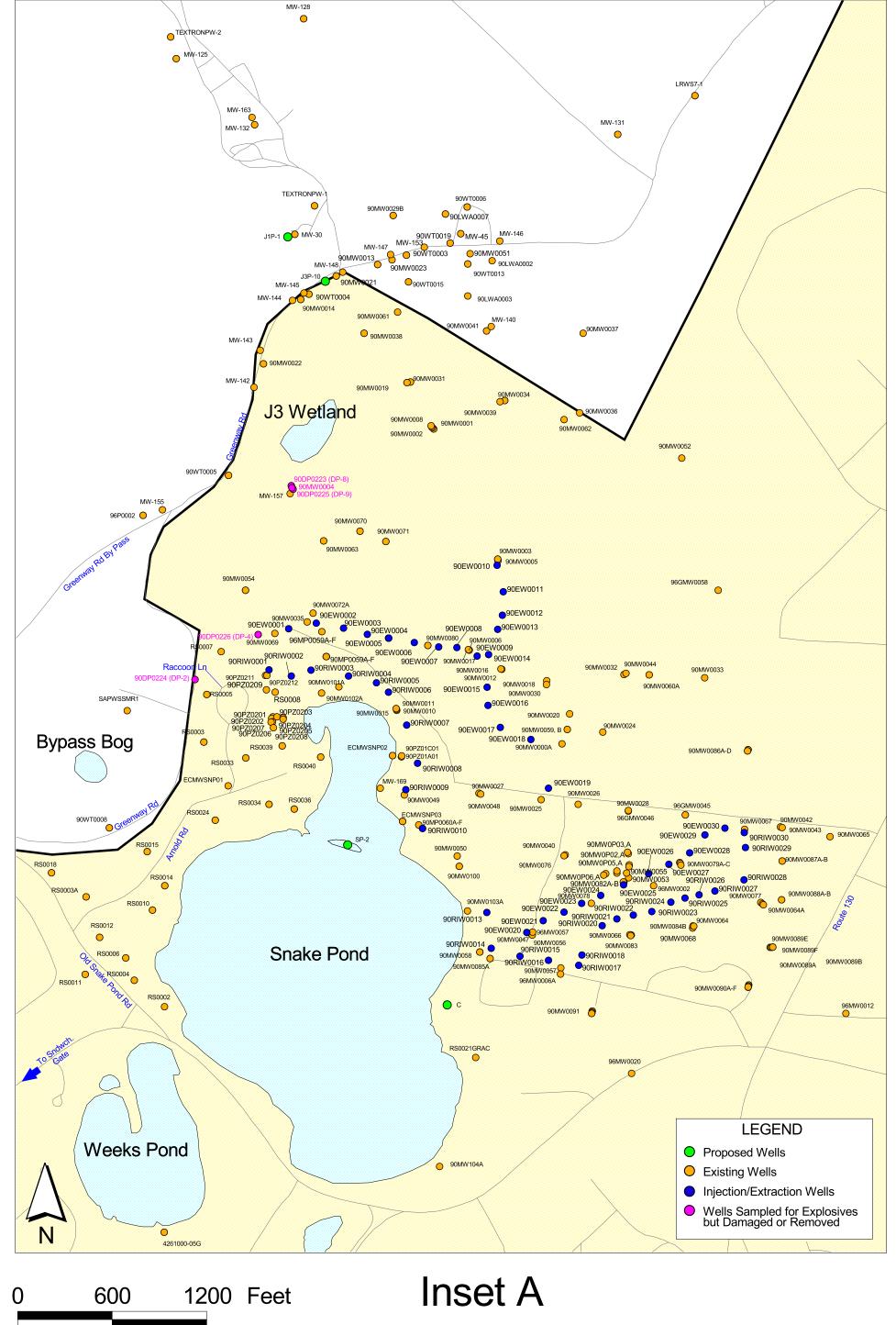
BWTS = DEPTH BELOW WATER TABLE, START DEPTH, MEASURED IN FEET

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











May 16, 2001 PRC