

**WEEKLY PROGRESS UPDATE
FOR MAY 26 – MAY 30, 2003**

**EPA REGION I ADMINISTRATIVE ORDERS SDWA 1-97-1019, 1-2000-0014,
& BOURNE-BWSC 4-15031**

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

The following summary of progress is for the period from May 26 through May 30, 2003.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of May 30 is summarized in Table 1.

Table 1. Drilling progress as of May 30, 2003				
Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-270	Northwest Corner (NWP-1)	139	115	22-32; 74-79; 132-137
Well 271	Demo Area 1 Injection Well (IW-D1-1)	230	124	
Well 272	Demo Area 1 Injection Well (IW-D1-2)	105	11	
MW-276	Bourne Area (BP-3)	230	47	
bgs = below ground surface bwt = below water table				

Completed well installation of MW-270 (NWP-1), completed drilling of Well 271 (IW-D1-1), and commenced drilling of Well 272 (IW-D1-2) and MW-276 (BP-3). Well development continued for newly installed wells.

Samples collected during the reporting period are summarized in Table 2. Groundwater profile samples were collected from Well 271 and MW-276. Groundwater samples were collected from Bourne water supply and monitoring wells, recently installed wells, residential wells, and as part of the April Long-Term Groundwater Monitoring Plan. Supplemental soil sampling was conducted at BIP craters.

The following are the notes from the May 29, 2003 Technical Team meeting of the Impact Area Groundwater Study Program office at Camp Edwards:

Participants

Hap Gonser (IAGWSPO)	Ben Gregson (IAGWSPO)	Tina Dolen (IAGWSPO)
Bill Gallagher (IAGWSPO)	LTC Will Tyminsky (E&RC)	Meghan Cassidy (EPA)
Desiree Moyer (EPA)	Jane Dolan (EPA)	Todd Borci (EPA)
Len Pinaud (MADEP)	Mark Panni (MADEP)	Dave Williams (MDPH)
Darrell Deleppo (ACE)	Heather Sullivan (ACE)	Ed Wise (ACE)
Dave Margolis (ACE)	Katarzyna Chelkowska (ACE)	Darrin Smith (ACE)
Kim Harriz (AMEC)	Dick Skryness (ECC-phone)	Larry Pannell (Jacobs-phone)
Kevin Hood (UConn)		

Punchlist Items

- #1 Provide update on sampling PZ211 (Corps). The Corps is attempting to talk to the property owners' yard work contractor to see if he knows where the well is located on the property. Todd Borci requested the IAGWSPO evaluate the option of installing a well on the Raccoon Lane cul-de-sac prior to the J-3 Range Scoping meeting. IAGWSPO to determine if this area in the cul-de-sac is owned by the town or by the homeowner's association.
- #3 Provide Corrective Action Report for J-2 Range gravel incident (Corps). Draft Corrective Action Report (MMR-7438) was distributed to the agencies at the meeting. EPA to provide comment, since Todd Borci objected to EPA being referenced in explanations of the root cause of the action.
- #5 Provide Project Note for modifications to NW Corner Characterization Approach (IAGWSPO). Emailed draft Project Note on 5/28. Hard copies distributed at the Tech meeting. Discussion of note addressed as part of the Northwest Corner Update later in the meeting.
- #6 Provide list of SE Range wells for synoptic water level measurements (Corps). List distributed at meeting. Heather Sullivan (ACE) to check on status of a "vector map" of synoptic water level rounds and date to start latest round, which will be after the installation of the J-1 Range piezometers. Site visit for piezometers was conducted pursuant to ROA approval; Karen Wilson (IAGWSPO) requested a modification to the ROA. UXO clearance is being conducted at J1P-19.

MSP3 and Southeast Ranges Update

Heather Sullivan (ACE) provided an update on the MSP3 task and SE Ranges fieldwork.

J-3 Range Hillside site and Barrage Rocket site. Schonstedt surveys completed.

Deep Bottom Pond. Findings table distributed at meeting.

Gun and Mortar Positions. Findings to be provided. Tetra Tech relocated 5 anomalies using the EM61 that could not be located using the Schonstedt. No significant findings, all aluminum scrap. Todd Borci (EPA) objected to the IAGWSPO continuing field work at the Gun and Mortar Positions without an approved workplan.

- Tetra Tech field crews have demobbed. No additional MSP work will be completed until ECC begins the Hillside/Barrage surveys on 6/16. However, ECC will begin brush cutting at Demo 1 shortly.
- Todd Borci requested that personnel responsible for fieldwork be present at the Tech meeting to address EPA's questions. In particular, Mr. Borci requested that Rob Foti be made available at Tech meetings to address MSP questions. Mr. Borci also requested that Ben Gregson respond to his recent email regarding this issue.
- SE Ranges – Corps would like to begin soil sampling at the Hillside site. Mr. Borci indicated sampling could be started pending resolution of three issues: 1) 2 geophysical grids could be swapped with 3 grids requested by EPA. 2) requesting soil sampling be conducted at large anomalies in grids J10 and F7. 3) sampling depths should be the 3 shallow intervals 0-3, 3-6 and 6-12 inches.
- Todd Borci indicated that more information was needed from Tetra Tech regarding the Hillside data. Rob Foti to follow up on request based on a discussion with Todd Borci in a pre-meeting.
- Jane Dolan (EPA) asked if sampling additional wells downgradient of the L Range was to be added as a part of the LTGM. Heather Sullivan to address.

Northwest Corner of Camp Edwards

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

- Drilling and well installation was completed at NWP-1 (MW-270). Perchlorate was detected from the water table to the bedrock, with the highest concentration of 8.8 ppb at 52 feet bwt. Three wells were installed in the borehole. The well is scheduled to be developed this week. Survey of the well will be completed by the end of next week. Particle backtracks will then be generated for this well. Todd Borci requested the lab be asked about the conductivity of these samples.
- Ben Gregson (IAGWSPO) spoke with Denis LeBlanc (USGS) regarding the distribution of the perchlorate in the NWP-1 borehole. Mr. LeBlanc indicated groundwater flow in the vicinity of the Canal was not well understood. There would likely be flow of groundwater at deeper levels within the aquifer up toward the canal that may cause deeper contamination to travel to shallower zones.
- Ben Gregson relayed that Dr. Dahmani (TOSC) had stated during the IART meeting that smearing of the contamination in the borehole may have contributed to the distribution of perchlorate throughout the borehole. Mr. Gallagher stated that this was unlikely because the soil and water were completely evacuated as the borehole and drill casing were advanced.
- Heather Sullivan indicated the NStar easement access approval had not been received despite the Corps daily effort to obtain the approval through contact by John MacPherson and Ray Cottengaim (ACE). Jim Weaver (NStar) had indicated a faxed approval would be forwarded to Ray Cottengaim by the end of the day yesterday, 5/28. However, no fax was received as of this morning. NStar would not provide a verbal approval. Mr. Cottengaim is following up with his request. Len Pinaud (MADEP) had not had the opportunity to contact Mr. Weaver, but indicated he would attempt to do so either today or tomorrow, if needed. Meghan Cassidy (EPA) requested the Corps provide an email next week saying that access had been granted or outlining an alternative approach to obtain the access to the easement.
- The drilling subcontractor has agreed to supply another drill rig by the third week in June.
- Evaluation of the private wells continues with several responses to the letters that were mailed to area residents on 5/19/03. Tina Dolen (IAGWSPO) distributed the Northwest Corner Private Residence/House Lot database table; the table was revised to indicate new responses from area residents. An irrigation well was identified on Weatherdeck Drive. The property owners indicate they use the well, but not for drinking water. Ben Gregson committed to sampling this well for perchlorate and explosives.
- The common anion analysis for the RSNW05 (private well off Sandwich Road) was received. A table of results was distributed at the meeting. The results show that the high conductivity is from chloride at 659 mg/L, approximately 10 to 100X greater than typical Cape groundwater samples. The property owners have been informed of the results and suspect the chloride may be from run-off from the roadway as there are catch basins adjacent to their property. They also noted that the water started "tasting different" after they filled their in-ground swimming pool for the season. Todd Borci recommended that someone suggest the property owners contact the Board of Health.
- Based on spike results of the RSNW05 sample that resulted in a 102% recovery of perchlorate, the AMEC validators feel the sample is a valid non detect for perchlorate at a reporting limit of 1 ppb and MDL at 0.35 ppb, in spite of the elevated conductivity. At EPA's request Heather Sullivan to arrange a conference call between Liz Wessling (AMEC), the EPA chemist and the Corps to discuss the results.
- The property owners of RSNW05 were sent a letter from the IAGWSPO last week reporting results from the sampling of this well. A second letter is being sent today. Copies of both letters will be sent to EPA, as requested.

- The Army/Guard's response to MADEP's NOR and a cover letter were distributed to the agencies at the Tech meeting. EPA requested that this letter and response also be sent to the IART team members.
- As requested by EPA, Ben Gregson (IAGWSPO) is assessing whether the task to identify all wells within ½ mile of the Camp Edwards Impact Area had been completed as requested in the AO. Mr. Gregson indicated based on preliminary information he had, all areas surrounding the base may not have been checked during the evaluation.
- A draft Project Note documenting modifications to the Northwest Corner Characterization Approach was emailed 5/28. Desiree Moyer (EPA) emailed a list of additional requests for the investigation of this area. These requests were briefly discussed at the Tech meeting, as follows.
 1. Scope additional well 200 ft south of the forward particle track from MW-270 located along the canal to determine the southern boundary of the perchlorate detected in MW-270, along with an additional well another 200 feet south in the advent that contamination is exhibited in the first well. A railroad easement in this area may be an issue. The EPA requested that the IAGWSPO initiate the process to get this location pre-approved, although additional information obtained from the current scope of work may negate the need for this specific location(s).
 2. To accommodate additional wells to the north and south of MW-270, EPA requested that an ROA and access agreement be obtained for the dirt road running parallel to the railroad tracks along the canal. Hap Gonser (IAGWSPO) indicated the ROA process on Corps property would follow Corps guidelines.
 3. Scope well in the NW Corner of the Corps Property parking lot to assess northern boundary of contamination in vicinity of well 4036009DC and MW-270.
 4. Scope well north of MW-66 forward particle track at base boundary to assess the northern boundary of contamination in the vicinity of GP-16.
 5. Locate HW-1 accurately in the field and on an updated figure.
 6. Complete soil sampling for perchlorate analysis at GP-19 and at four areas along the particle backtrack between MW-270 and the base boundary. In response to this request, Hap Gonser indicated he was uncertain if federal funds could be used to investigate source areas of perchlorate other than those on the base, which would be the objective of soil sampling in off-base locations. The EPA/MADEP indicated that this would be an extension of testing the site conceptual model for the Northwest Corner, as to whether or not the contamination in the groundwater had originated at the base.
 7. Develop contingency plan for additional well locations.
 8. Acquire structural drawings for the Cape Cod Canal.
 9. Begin preparation of cross sections in the area of the NW Corner now to expedite their submittal once data is obtained.
- Hap Gonser indicated the Army/Guard would review the EPA's requests and incorporate proposed actions in a revised Project Note. EPA indicated they would provide comments on the actions documented/proposed in the current version of the Project Note by Thursday 6/5. These comments should also be incorporated into the revised Project Note.
- EPA/MADEP/MDPH further stated they did not concur with the Army/Guard's proposal to conduct monthly monitoring at the Foretop Rd private wells. Len Pinaud indicated he would review this information with MADEP's risk group to see what monitoring frequency they would recommend. Ben Gregson indicated he would like to know what is a typical monitoring frequency for other wells in the State with similar contaminant detections.

Documents and Schedules

Heather Sullivan (ACE) reviewed document and schedule issues, distributing a one-page Document status table.

- The Army/Guard's top priority is the RCRA Sampling Plan for Demo 1. EPA comments expected on Monday, 6/2. MADEP indicated they may not comment.
- Another priority is a response to the extension request from the Army/Guard that was sent out on 5/21 for the Demo 1 Groundwater Addendum, currently with an enforceable milestone of 5/30.
- Responding to Len Pinaud's inquiry, Ms. Sullivan relayed that resolution of several issues was needed for the Demo 1 GW FS MOR.
- Desiree Moyer (EPA) requested that dates be listed for the Guard's submittal of the HUTA1 and HUTA2 RCL and revised Reports. Ms. Moyer also pointed out that the extension request for these documents was received one-day short of the due date, expressing concern and requesting an explanation why it took the Army/Guard 2 months after receiving EPA's comments to request a meeting with EPA on the HUTA reports, and never mentioning during the 2-month time frame the need for an extension.
- EPA pointed out inconsistencies between AMEC's meeting schedule, the Army Corps' meeting schedule, and what was actually likely to occur, requesting that this be resolved for future schedules.

Miscellaneous

- Jane Dolan inquired as to the status of the OE Disposal White Paper. Hap Gonser indicated he had asked ECC to review the Army/Guard's standard operating procedure prior to submitting the document to the agencies. Todd Borci requested an update next week.
- Jane Dolan inquired about the Rapid Small Scale Column Test. Heather Sullivan indicated a draft would be forwarded shortly to MDEP Water Supply; EPA would be copied.
- Todd Borci inquired as to how EPA comments on the LTGM could be resolved. Did the Army/Guard want to go back to the old program for another round or did they want to painstakingly work through each of the EPA comments and come to a resolution on a per well basis? The later approach may considerably delay the monitoring schedule. Guard/Corps to discuss way forward internally and then discuss with EPA.

2. SUMMARY OF DATA RECEIVED

Rush data are summarized in Table 3. These data are for analyses that are performed on a fast turn around time, typically 1-5 days. Explosive analyses for monitoring wells, and explosive and volatile organic compound (VOC) analyses for groundwater profile samples, are conducted in this timeframe, as well as any analyses pursuant to a special request. The rush data are not validated, but are provided as an indication of the most recent preliminary results. Table 3 summarizes only detects, and does not show samples with non-detects.

The status of the explosive detections with respect to confirmation using Photo Diode Array (PDA) spectra is indicated in Table 3. PDA is a procedure that has been implemented for the explosive analysis, to reduce the likelihood of false positive identifications. Where the PDA status is "YES" in Table 3, the detected compound is verified as properly identified. Where the status is "NO", the identification of an explosive has been determined to be a false positive. Where the status is blank, PDA has not yet been used to evaluate the detection, or PDA is not applicable because the analyte is a VOC or perchlorate. Most explosive detections verified by PDA are confirmed to be present upon completion of validation. Table 3 includes the following detections:

Table 3 includes detections from the following areas:

Bourne Area

- Groundwater samples from 02-05M1, M2 and duplicate, and MW-213M2, M3 had detections of perchlorate. The results were similar to the previous sampling rounds.

Demo Area 1

- Profile samples from Well 271 (IW-D1-1) had detections of perchlorate and various explosives. Perchlorate was detected in four intervals between 24 and 54 feet below the water table. 2,6-DNT; 2,4-DNT; 2,6-DANT; 1,3,5-trinitrobenzene; TNT; nitrobenzene; and tetryl were detected and confirmed by PDA spectra, but with interference, between 14 and 124 feet below the water table.

DELIVERABLES SUBMITTED

Weekly Progress Update for May 19 – May 23, 2003

05/29/2003

3. SCHEDULED ACTIONS

Scheduled actions for the week of June 2 include complete drilling of injection well IW-D1-2 in Demo Area 1 and BP-3, and commence drilling of NWP-4. Groundwater sampling at Bourne water supply and monitoring wells, recently installed wells, and as part of the April Long-Term Groundwater Monitoring Plan will continue.

4. SUMMARY OF ACTIVITIES FOR DEMO AREA 1

Pumping and treating groundwater near the toe of the Demo Area 1 plume and at Frank Perkins Road has been selected as an Interim Action to address the Demo Area 1 Groundwater Operable Unit. Efforts to resolve EPA and DEP comments on the Draft RRA/RAM Plan for the Groundwater Operable Unit are ongoing. Responses to EPA and MADEP comments on the Soil RRA/RAM Plan are being developed. Drilling of Well 271 (IW-D1-1) at Frank Perkins Road was completed and drilling of Well 272 (IW-D1-2) commenced. Injection Well 271 will be converted to a monitoring well and screens will be set.

**TABLE 2
SAMPLING PROGRESS
05/25/2003 - 05/31/2003**

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
97-2D-E	FIELDQC	05/29/2003	FIELDQC	0	0		
G271DLE	FIELDQC	05/28/2003	FIELDQC	0	0		
G276DBE	FIELDQC	05/30/2003	FIELDQC	0	0		
G276DBT	FIELDQC	05/30/2003	FIELDQC	0	0		
W114M2T	FIELDQC	05/28/2003	FIELDQC	0	0		
XXM971-E	FIELDQC	05/27/2003	FIELDQC	0	0		
XXM973-E	FIELDQC	05/28/2003	FIELDQC	0	0		
4036000-01G-A	4036000-01G	05/27/2003	GROUNDWATER	38	69.8	6	12
4036000-06G-A	4036000-06G	05/27/2003	GROUNDWATER	108	128	6	12
97-2C-A	97-2C	05/29/2003	GROUNDWATER	132	132	68	68
97-2D-A	97-2D	05/29/2003	GROUNDWATER	115.4	115.4	82.9	82.9
97-2F-A	97-2F	05/29/2003	GROUNDWATER	120	120	76.7	76.7
TW00-1-A	00-1	05/29/2003	GROUNDWATER	64	70	52.1	58.1
TW00-2D-A	00-2	05/29/2003	GROUNDWATER	71	77	43.95	49.95
TW00-2S-A	00-2	05/29/2003	GROUNDWATER	29	35	1.17	7.17
TW01-1-A	01-1	05/29/2003	GROUNDWATER	62	67	55.21	60.21
TW1-88A-A	1-88	05/28/2003	GROUNDWATER	102.9	102.9	67.4	67.4
W02-05M1A	02-05	05/27/2003	GROUNDWATER	110	120	81.44	91.44
W02-05M1A-QA	02-05	05/27/2003	GROUNDWATER	110	120	81.44	91.44
W02-05M2A	02-05	05/27/2003	GROUNDWATER	92	102	63.41	73.41
W02-05M2A-QA	02-05	05/27/2003	GROUNDWATER	92	102	63.41	73.41
W02-05M2D	02-05	05/27/2003	GROUNDWATER	92	102	63.41	73.41
W02-05M3A	02-05	05/27/2003	GROUNDWATER	70	80	41.37	51.37
W02-08M1A	02-08	05/27/2003	GROUNDWATER	108	113	86.56	91.56
W02-08M2A	02-08	05/27/2003	GROUNDWATER	82	87	60.65	65.65
W02-08M3A	02-08	05/27/2003	GROUNDWATER	62	67	40.58	45.58
W02-10M1A	02-10	05/30/2003	GROUNDWATER	135	145	94	104
W02-10M2A	02-10	05/30/2003	GROUNDWATER	110	120	68.61	78.61
W02-10M3A	02-10	05/30/2003	GROUNDWATER	85	95	43.65	53.65
W02-13M1A	02-13	05/27/2003	GROUNDWATER	98	108	58.33	68.33
W02-13M1A-QA	02-13	05/27/2003	GROUNDWATER	98	108	58.33	68.33
W02-13M2A	02-13	05/27/2003	GROUNDWATER	83	93	44.2	54.2
W02-13M2A-QA	02-13	05/27/2003	GROUNDWATER	83	93	44.2	54.2
W02-13M3A	02-13	05/27/2003	GROUNDWATER	68	78	28.3	38.3

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
05/25/2003 - 05/31/2003**

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
W10DDA	MW-10	05/30/2003	GROUNDWATER	351.5	361.5	204	214
W10SSA	MW-10	05/28/2003	GROUNDWATER	145	155	0	10
W114M1A	MW-114	05/27/2003	GROUNDWATER	177	187	96	106
W114M2A	MW-114	05/27/2003	GROUNDWATER	120	130	39	49
W173M1A	MW-173	05/28/2003	GROUNDWATER	243	253	104.2	114.2
W173M2A	MW-173	05/28/2003	GROUNDWATER	208	218	72.2	82.2
W173M2D	MW-173	05/28/2003	GROUNDWATER	208	218	72.2	82.2
W173M3A	MW-173	05/27/2003	GROUNDWATER	188	198	52.2	62.2
W257M1A	MW-257	05/29/2003	GROUNDWATER	290	300	145.52	155.52
W257M2A	MW-257	05/30/2003	GROUNDWATER	195	205	51.27	61.27
W257M2D	MW-257	05/30/2003	GROUNDWATER	195	205	51.27	61.27
W267M1A	MW-267	05/30/2003	GROUNDWATER	248	258	18.57	28.57
W268M1A	MW-268	05/30/2003	GROUNDWATER	97	107	47.75	57.75
W81DDA	MW-81	05/30/2003	GROUNDWATER	184	194	156	166
W81M1A	MW-81	05/30/2003	GROUNDWATER	128	138	100	110
W81M1D	MW-81	05/30/2003	GROUNDWATER	128	138	100	110
W81M2A	MW-81	05/30/2003	GROUNDWATER	83	93	55	65
W81M3A	MW-81	05/30/2003	GROUNDWATER	53	58	25	30
W81SSA	MW-81	05/30/2003	GROUNDWATER	25	35	0	10
W82DDA	MW-82	05/29/2003	GROUNDWATER	125	135	97	107
W82M1A	MW-82	05/29/2003	GROUNDWATER	104	114	76	86
W82M2A	MW-82	05/29/2003	GROUNDWATER	78	88	50	60
W82M3A	MW-82	05/29/2003	GROUNDWATER	54	64	26	36
W82M3D	MW-82	05/29/2003	GROUNDWATER	54	64	26	36
W82SSA	MW-82	05/29/2003	GROUNDWATER	25	35	0	10
XXM971-A	97-1	05/28/2003	GROUNDWATER	83	93	62	72
XXM972-A	97-2	05/27/2003	GROUNDWATER	75	85	53	63
XXM973-A	97-3	05/28/2003	GROUNDWATER	75	85	36	46
XXM975-A	97-5	05/28/2003	GROUNDWATER	84	94	76	86
G271DLA	MW-271	05/28/2003	PROFILE	230	230	124	124
G276DAA	MW-276	05/30/2003	PROFILE	190	190		
G276DBA	MW-276	05/30/2003	PROFILE	200	200		
G276DCA	MW-276	05/30/2003	PROFILE	210	210		
G276DDA	MW-276	05/30/2003	PROFILE	220	220		

Profiling methods include: Volatiles and Explosives
Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, and Wet Chemistry
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**TABLE 2
SAMPLING PROGRESS
05/25/2003 - 05/31/2003**

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
LKSNK0005AAA	LKSNK0005	05/27/2003	SURFACE WATER	0	0		
LKSNK0006AAA	LKSNK0005	05/27/2003	SURFACE WATER	0	0		
LKSNK0006AAA	LKSNK0006	05/27/2003	SURFACE WATER	0	0		
LKSNK0007AAA	LKSNK0005	05/27/2003	SURFACE WATER	0	0		
LKSNK0007AAA	LKSNK0007	05/27/2003	SURFACE WATER	0	0		

Profiling methods include: Volatiles and Explosives
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**TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 05/02/03 - 05/31/03**

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W02-05M1A	02-05	05/27/2003	GROUNDWATER	110	120	81.44	91.44	E314.0	PERCHLORATE	
W02-05M2A	02-05	05/27/2003	GROUNDWATER	92	102	63.41	73.41	E314.0	PERCHLORATE	
W02-05M2D	02-05	05/27/2003	GROUNDWATER	92	102	63.41	73.41	E314.0	PERCHLORATE	
W213M2A	MW-213	05/23/2003	GROUNDWATER	89	99	41.15	51.15	E314.0	PERCHLORATE	
W213M3A	MW-213	05/23/2003	GROUNDWATER	77	82	29.38	34.38	E314.0	PERCHLORATE	
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	2,6-DINITROTOLUENE	YES*
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	1,3,5-TRINITROBENZENE	NO*
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	1,3-DINITROBENZENE	NO
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	TETRYL	NO
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	NITROBENZENE	NO*
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	2,4,6-TRINITROTOLUENE	YES*
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	2,4-DINITROTOLUENE	YES*
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	PICRIC ACID	NO
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	2-NITROTOLUENE	NO*
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	4-NITROTOLUENE	NO*
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	3-NITROTOLUENE	NO
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	2,6-DIAMINO-4-NITROTOLUENE	YES*
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	PENTAERYTHRITOL TETRANITRATE	NO
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	NITROGLYCERIN	NO*
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	4-AMINO-2,6-DINITROTOLUENE	NO*
G271DAA	MW-271	05/21/2003	PROFILE	120	120	14	14	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO*

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BWTE = DEPTH BELOW WATER TABLE, END DEPTH, MEASURED IN FEET

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**TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 05/02/03 - 05/31/03**

OGDEN ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN ANALYTE	PDA
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	2,6-DINITROTOLUENE	YES*
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	2,4-DINITROTOLUENE	YES*
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	PICRIC ACID	NO
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	2-NITROTOLUENE	NO
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	4-NITROTOLUENE	NO
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	3-NITROTOLUENE	NO
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	PENTAERYTHRITOL TETRANITRATE	NO
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	NITROGLYCERIN	NO
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	TETRYL	NO
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	2,4,6-TRINITROTOLUENE	YES*
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	NITROBENZENE	YES*
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	8330N	1,3-DINITROBENZENE	NO*
G271DBA	MW-271	05/22/2003	PROFILE	130	130	24	24	E314.0	PERCHLORATE	
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	TETRYL	NO
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	1,3-DINITROBENZENE	NO
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	NITROBENZENE	YES*
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	2,4,6-TRINITROTOLUENE	YES*
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	2,6-DINITROTOLUENE	YES*

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**TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 05/02/03 - 05/31/03**

OGDEN ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN ANALYTE	PDA
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	2,4-DINITROTOLUENE	YES*
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	PICRIC ACID	NO
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	2-NITROTOLUENE	NO
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	4-NITROTOLUENE	NO
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	3-NITROTOLUENE	NO
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	PENTAERYTHRITOL TETRANITRATE	NO
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	1,3,5-TRINITROBENZENE	YES*
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	8330N	NITROGLYCERIN	NO
G271DCA	MW-271	05/22/2003	PROFILE	140	140	34	34	E314.0	PERCHLORATE	
G271DDA	MW-271	05/22/2003	PROFILE	150	150	44	44	8330N	2,4,6-TRINITROTOLUENE	YES*
G271DDA	MW-271	05/22/2003	PROFILE	150	150	44	44	8330N	2,6-DINITROTOLUENE	NO*
G271DDA	MW-271	05/22/2003	PROFILE	150	150	44	44	8330N	PICRIC ACID	NO
G271DDA	MW-271	05/22/2003	PROFILE	150	150	44	44	8330N	2-NITROTOLUENE	NO*
G271DDA	MW-271	05/22/2003	PROFILE	150	150	44	44	8330N	PENTAERYTHRITOL TETRANITRATE	NO
G271DDA	MW-271	05/22/2003	PROFILE	150	150	44	44	8330N	NITROGLYCERIN	NO
G271DDA	MW-271	05/22/2003	PROFILE	150	150	44	44	E314.0	PERCHLORATE	
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	4-NITROTOLUENE	NO*
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	1,3-DINITROBENZENE	NO
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	TETRYL	NO
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	2,4,6-TRINITROTOLUENE	YES*
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	2-AMINO-4,6-DINITROTOLUENE	NO

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DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 05/02/03 - 05/31/03**

OGDEN ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN ANALYTE	PDA
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	2,6-DINITROTOLUENE	YES*
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	2,4-DINITROTOLUENE	YES*
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	2-NITROTOLUENE	NO*
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	PENTAERYTHRITOL TETRANITRATE	NO
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	NITROGLYCERIN	NO
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	8330N	PICRIC ACID	NO
G271DEA	MW-271	05/22/2003	PROFILE	160	160	54	54	E314.0	PERCHLORATE	
G271DFA	MW-271	05/22/2003	PROFILE	170	170	64	64	8330N	2,6-DINITROTOLUENE	NO
G271DFA	MW-271	05/22/2003	PROFILE	170	170	64	64	8330N	PICRIC ACID	NO
G271DFA	MW-271	05/22/2003	PROFILE	170	170	64	64	8330N	NITROGLYCERIN	NO
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	2,4,6-TRINITROTOLUENE	YES*
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	2,6-DINITROTOLUENE	YES*
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	2,4-DINITROTOLUENE	YES*
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	PICRIC ACID	NO
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	2-NITROTOLUENE	NO
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	4-NITROTOLUENE	NO
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	3-NITROTOLUENE	NO
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	2,4-DIAMINO-6-NITROTOLUENE	NO
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	PENTAERYTHRITOL TETRANITRATE	NO
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	NITROGLYCERIN	NO
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	NITROBENZENE	NO
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO

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SAMPLES COLLECTED 05/02/03 - 05/31/03**

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G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	1,3-DINITROBENZENE	NO
G271DGA	MW-271	05/22/2003	PROFILE	180	180	74	74	8330N	TETRYL	YES*
G271DHA	MW-271	05/23/2003	PROFILE	190	190	84	84	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO
G271DHA	MW-271	05/23/2003	PROFILE	190	190	84	84	8330N	PENTAERYTHRITOL TETRANITRATE	NO
G271DHA	MW-271	05/23/2003	PROFILE	190	190	84	84	8330N	NITROGLYCERIN	NO
G271DHA	MW-271	05/23/2003	PROFILE	190	190	84	84	8330N	2,4,6-TRINITROTOLUENE	YES*
G271DHA	MW-271	05/23/2003	PROFILE	190	190	84	84	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G271DHA	MW-271	05/23/2003	PROFILE	190	190	84	84	8330N	2,6-DINITROTOLUENE	YES*
G271DHA	MW-271	05/23/2003	PROFILE	190	190	84	84	8330N	2,4-DINITROTOLUENE	YES*
G271DHA	MW-271	05/23/2003	PROFILE	190	190	84	84	8330N	PICRIC ACID	NO
G271DHA	MW-271	05/23/2003	PROFILE	190	190	84	84	8330N	2-NITROTOLUENE	NO
G271DHA	MW-271	05/23/2003	PROFILE	190	190	84	84	8330N	4-NITROTOLUENE	NO*
G271DHA	MW-271	05/23/2003	PROFILE	190	190	84	84	8330N	3-NITROTOLUENE	NO*
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	TETRYL	NO
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	NITROBENZENE	NO
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	2,4,6-TRINITROTOLUENE	YES*
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	2-AMINO-4,6-DINITROTOLUENE	NO*
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	2,6-DINITROTOLUENE	YES*
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	2,4-DINITROTOLUENE	YES*
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	PICRIC ACID	NO
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	2-NITROTOLUENE	NO*
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	4-NITROTOLUENE	NO*

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G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	3-NITROTOLUENE	NO*
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	NITROGLYCERIN	NO
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	PENTAERYTHRITOL TETRANITRATE	NO
G271DIA	MW-271	05/23/2003	PROFILE	200	200	94	94	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO
G271DJA	MW-271	05/23/2003	PROFILE	210	210	104	104	8330N	NITROGLYCERIN	NO
G271DJA	MW-271	05/23/2003	PROFILE	210	210	104	104	8330N	2,4-DINITROTOLUENE	YES*
G271DJA	MW-271	05/23/2003	PROFILE	210	210	104	104	8330N	PENTAERYTHRITOL TETRANITRATE	NO
G271DJA	MW-271	05/23/2003	PROFILE	210	210	104	104	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO
G271DJA	MW-271	05/23/2003	PROFILE	210	210	104	104	8330N	2,4,6-TRINITROTOLUENE	YES*
G271DJA	MW-271	05/23/2003	PROFILE	210	210	104	104	8330N	2,6-DINITROTOLUENE	YES*
G271DJA	MW-271	05/23/2003	PROFILE	210	210	104	104	8330N	PICRIC ACID	NO
G271DLA	MW-271	05/28/2003	PROFILE	230	230	124	124	8330N	2-AMINO-4,6-DINITROTOLUENE	NO*
G271DLA	MW-271	05/28/2003	PROFILE	230	230	124	124	8330N	2,6-DINITROTOLUENE	YES*
G271DLA	MW-271	05/28/2003	PROFILE	230	230	124	124	8330N	2,4-DINITROTOLUENE	YES*
G271DLA	MW-271	05/28/2003	PROFILE	230	230	124	124	8330N	PICRIC ACID	NO
G271DLA	MW-271	05/28/2003	PROFILE	230	230	124	124	8330N	PENTAERYTHRITOL TETRANITRATE	NO
G271DLA	MW-271	05/28/2003	PROFILE	230	230	124	124	8330N	NITROGLYCERIN	NO
G271DLA	MW-271	05/28/2003	PROFILE	230	230	124	124	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NO
G271DLA	MW-271	05/28/2003	PROFILE	230	230	124	124	8330N	2,4,6-TRINITROTOLUENE	YES*

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