WEEKLY PROGRESS UPDATE
FOR JANUARY 12 – JANUARY 16, 2004

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

MASSACHUSETTS MILITARY RESERVATION
TRAINING RANGE AND IMPACT AREA

The following summary of progress is for the period from January 12 through January 16, 2004.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of January 16, 2004 is summarized in Table 1.

Table 1. Drilling progress as of January 16, 2004

Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
IW-271	Demo Area 1 (IW-D1-1)	330	297	220-305; 305-320
IW-272	Demo Area 1 (IW-D1-2)	331	236	
MW-299	Northwest Corner (NWP-12)	125	28	
MW-301	Northwest Corner (NWP-8ba)	190	92	
MW-302	J-2 Range (J2P-32)	310	201	
MW-303	J-1 Range (J1P-21)	321	218	
MW-305	J-2 Range (J2P-33)	338	235	
MW-306	J-1 Range (J1P-22)	30		
MW-307	J-2 Range (J2P-28)	10		

bgs = below ground surface
bwt = below water table

Completed well installation of IW-271 (IW-D1-1), continued well installation of IW-272 (IW-D1-2), completed drilling of MW-305 (J2P-33), continued drilling of MW-299 (NWP-12), and commenced drilling of MW-307 (J2P-28).

Samples collected during the reporting period are summarized in Table 2. Groundwater profile samples were collected from MW-299 and MW-305. Groundwater samples were collected from Bourne water supply and monitoring wells, recently installed wells, and as part of the December round of the Draft 2003 Long-Term Groundwater Monitoring Program. Soil samples were collected from the J-2 Range at MW-307 and from a grid at Target 42 in the Central Impact Area.

The following are the notes from the January 15, 2004 Technical Team meeting of the Impact Area Groundwater Study Program office at Camp Edwards. Although Camp Edwards was closed due to the weather, an abbreviated Tech meeting was held to address questions from EPA and MADEP, who were not notified of the base closure prior to driving to the Cape:

Participants

Dave Hill (IAGWSPO)
Desiree Moyer (EPA)
Mark Panni (MADEP)
Kim Harriz (AMEC)
Bill Gallagher (IAGWSPO)
Len Pinaud (MADEP)
Dave Williams (MDPH)
Kevin Hood (UConn)
Meghan Cassidy (EPA)
Millie Garcia-Surette (MADEP)
Ed Wise (ACE)

Punchlist Items

#1 Provide update on requested access letter to Regional Technical School (IAGWSP). Bill Gallagher (IAGWSPO) has not received the requested written response from Barry Motta (UPRTS).

#2 Provide update on access agreement to install a monitoring well at Schooner Pass Condominium Association (IAGWSPO). Corps Real Estate is working on the access agreement. Meghan Cassidy (EPA) requested an email summarizing the progress of the agreement. The Schooner Pass Water Supply well 12/17/03 sample was non detect for explosives and perchlorate. Validated data to be faxed to Bob Smith & Terry Martin by the end of the week. Next sampling event has been scheduled for 2/18 at 9 am.

Southeast Ranges Update/Scheduling

Dave Hill (IAGWSPO) addressed EPA and MADEP's questions regarding the Southeast Ranges.

- The J-3 Range RRA will be rescoped. Textron will execute the RRA and remove the concrete/concrete blocks.
- Millie Garcia-Surette (MADEP) indicated MADEP wants to schedule a meeting to discuss non-compliance issues related to the MCP, specifically regarding the RRA's but also in the investigation program in general. Although MADEP agrees with 80% of the program's activities, MADEP contends the finer details of the MCP are not being addressed. MADEP has generated a list that they would like to share with the IAGWSPO; some of the details are performance based. Because these elements have not been addressed, the MADEP reserves the right to request that these issues be addressed once the work pursuant to the Administrative Orders are completed. This language will be placed in letters. Any "show stoppers" will be identified specifically in a letter; although to date no issues that qualifed as "show stoppers" had been identified. MADEP's expectation was that a meeting would be held to discuss non compliance issues, but the IAGWSPO had not responded to the request for a meeting.
- Mr. Hill indicated fieldwork (sampling) to support the J-3 Range RRA was ready to commence. Mr. Hill indicated that sampling data will be sent to EPA with recommendations to follow.
- Meghan Cassidy (EPA) indicated the IAGWSPO would need individual Soil Treatment Plans for RRA's to be completed in areas other than Demo 1 or a site-wide plan could be developed. Using the plan produced for Demo 1 for all areas would not be sufficient. The EPA was only considering approving the soil treatment system for the Demo 1, not for the other areas. In addition, the IAGWSPO would need to investigate potential RCRA-compliance issues if it intended to move soil from one part of the base to treat it in another part of the base. Although the plans for the other areas (i.e. Central Impact Area, J-3 Range) could be abbreviated, referencing the Demo 1 document, site-specific issues for these areas would still need to be considered, especially the type and concentration of constituents.
- Jane Dolan (EPA), although not present at the meeting, sent along several questions regarding Southeast Range activities, which were addressed by Mr. Hill as follows:
  - J-1/J-2 Ranges sampling is scheduled to start in January, which is still on schedule.
  - Final AirMag Report is shown on schedule as being submitted at the end of January. However, agencies have not received an RCL. Mr. Hill to convey EPA's concerns to Ben Gregson and USACE project manager.
  - Sampling locations at L Range are being staked, Ms. Dolan to be shown locations. Neither the staking nor the site visit can not be done with snow cover, although this activity was originally scheduled for this week.
  - EM31 Survey of L Range is not scheduled to be completed; Mr. Hill thought that this had already been addressed with Ms. Dolan. Mr. Hill to call Ms. Dolan to discuss.

- To Megan Cassidy's inquiry, Mr. Hill indicated no response had been received from the Co-op regarding the sampling of the Co-op sentinel wells. This issue was on the agenda of the Board's 1/14/04 meeting. The Co-op had some concerns about sampling of the wells that Ms. Cassidy would address with Todd Borci (EPA). Len Pinaud indicated the decision to become involved in the request. Dave Rich (Co-op Board) to be contacted if the IAGWSPO is not notified of the Board's decision.

Document and Schedule Issues

Ed Wise (ACE) addressed MADEP and EPA comments on documents and schedules. A list of scheduling issues and a document status table were distributed.

- Desiree Moyer (EPA) asked for a status update on her email requesting the IAGWSPO to look into using subaudio magnetics as part of the investigation of areas where geology causes a problem, such as the Former A Range. Bill Gallagher (IAGWSPO) indicated that the email was not received.
- Mr. Gallagher noted that EPA had set an enforceable milestone for the Former A Range Data Summary Report. The IAGWSP may have problems meeting this milestone because the agencies have not yet provided comments on the Workplan, which may delay the start of the field program.
- Ms. Moyer noted that the IAGWSPO was resubmitting the MSP G&M Letter Report and therefore the dates currently listed on the schedule for this document did not apply. Mr. Wise indicated that this was being corrected on the revised combined schedule.
- Dave Hill noted the CRM and site visits for the Revised J-1 and J-2 Ranges' Supplemental Workplans was scheduled for 10 am, Wednesday, 1/21/04.
- Len Pinaud (MADEP) indicated comments were forthcoming shortly on the J-3 and J-2 Ranges and Central Impact Area Soil RRA Plans.

Northwest Corner Update

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

- Drilling of MW-301 (NWP-8ba) continues from the week of Christmas, total depth of 190 feet to date. The drillers had demobbed temporarily to complete other work during the holiday and down-time due to hunting.
- Drilling of NWP-12 commenced last week using a Rotosonic Rig. Total depth to date is 125 ft.
- A Cable-tool rig has been brought on site to set any Barber Rig wells to keep the this rig busy with drilling and profiling and to general expedite the investigation of all areas. However, this may cause a 2-3 week delaying in setting a well once it is drilled. Mr. Gallagher requested input from the agencies as to whether this delay would be acceptable for Northwest Corner wells.
- A figure was distributed showing the newly proposed wells, particularly NWP-14 & NWP-15. Site walk set for Friday (1/16) at 10 am to review locations.
- Biweekly sampling of well RSNW03 was accidentally skipped on 12/24/03. Last sample was collected on 1/8/04.
- Owner of well RSNW02 has not responded to repeated phone messages. Mr. Gallagher will send another letter to the homeowner.
- One of the contractors spoke with the homeowner of well RSNW03. As a part of that conversation, the homeowner indicated based on the data he received so far, showing very little change in the perchlorate concentrations week to week, sampling of the well could be reduced to monthly.
- AMEC is working on calibrating the regional model. Once this is completed, the Northwest Corner subregional model can be developed. The calibration will be completed at the end of the month.

- The analytical results for soil sampling at grids 199E, 199G, and 220A are not available yet.
- Draft Northwest Corner Data Summary Report is to be sent out to the IART team on 2/22/04, next Thursday.
- Table showing unvalidated data for soil sample collected in a burn pit at GP-16, as part of the 100% anomaly validation, was distributed.
- EPA requested the raw data package and validation report for the explosives analysis for the recent sample of MW-270S. There was a PDA reversal for the detection of RDX for this sample. Package to be forwarded by AMEC.
- The agencies and IAGWSPO participated in a conference call with the TOSC group regarding speciation of perchlorate in the Northwest Corner. Possible approaches including age dating of the water and source identification based on isotope ratios were discussed. Kevin Hood (UConn) indicated the TOSC group would put together an approach and convene another conference call to discuss further. Mr. Hood noted that it was likely difficult to backtrack the fireworks to specific manufactures and sources of perchlorate as the commercial distribution of fireworks and perchlorate was not particularly systematic.
- Two water table contour maps of the Northwest Corner were distributed. The maps showed a comparison of modeled groundwater contours to contours developed from synoptic water level rounds conducted in July and October 2003.
- The IAGWSPO agreed to conduct monthly sampling of the shallow wells among MW-277, MW-278 and MW-279 in response to EPA's request at the 12/11 Tech meeting. The IAGWSPO did not agree it was necessary to sample HW-2 and HW-3, because these wells were shallow and sufficient data regarding the shallow aquifer is already available in the general vicinity of these wells, particularly data from HW-1. Mr. Gallagher to send email stating this response to EPA's requests.

Miscellaneous

- Bill Gallagher indicated the IAGWSPO have proposed a conference call to discuss the well depths of the remaining proposed Western Boundary wells and changes in sampling frequency of monitoring wells in the same area. Haley & Ward will get back on acceptable date/time.
- CBP-3 is the next Western Boundary well scheduled to be drilled.
- The IART Dry Run was rescheduled for next Thursday at 1 pm. IAGWSPO and TOSC to forward dry run materials via email to EPA and MADEP.
- Conference call for Demo 1 to be scheduled Friday at 1 pm or Wednesday (1/21) morning.
- EPA/MADEP indicated they would follow-up with questions if additional information regarding topics not covered today was needed.
- Ed Wise (ACE) to send out schedule showing all meetings for week of 2/19.
- Meghan Cassidy (EPA) stated that weekly updates should be sent out by the Army Corps no later than Tuesday of each week, as agreed upon previously.

2. SUMMARY OF DATA RECEIVED

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

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

Table 3 includes detections from the following areas:

Northwest Corner

- Groundwater samples from MW-270D and RSNW03 had detections of perchlorate. The results were similar to previous sampling rounds.

Western Boundary

- A groundwater sample from MW-80M2 had a detection of perchlorate. The result was similar to previous sampling rounds.

Southeast Ranges

- Profile samples from MW-305 had detections of perchlorate and various explosive compounds. Perchlorate was detected in four intervals between 97 and 127 feet below the water table. Of the explosives compounds, only RDX was confirmed by PDA spectra but with interference at 227 feet below the water table. A well screen will be set at the depth (100 to 110 ft bwt) corresponding to the highest perchlorate detection.

3. DELIVERABLES SUBMITTED

Weekly Progress Update for January 5 – January 9, 2004	01/15/2004
Revised Draft Training Areas Field Sampling Plan	01/15/2004

4. SCHEDULED ACTIONS

Scheduled actions for the week of January 19 include continue well installation at IW-272 (IW-D1-2); complete drilling of MW-301 (NWP-8ba); and continue drilling at MW-306 (J1P-22) and MW-307 (J2P-28). Groundwater sampling of Bourne water supply and monitoring wells and as part of the December round of the Draft 2003 Long-Term Groundwater Monitoring Plan will continue.

5. SUMMARY OF ACTIVITES FOR DEMO AREA 1

A comment resolution meeting for the Draft Groundwater Report Addendum is planned for January 22, 2004. Modeling activities in support of the Feasibility Study are ongoing. A modeling meeting is scheduled with the Agencies to discuss the Demo Area 1 Feasibility Study modeling results on January 22, 2004.

Installation of extraction and injection wells for the Groundwater RRA is ongoing. Installation of subsurface piping and well vaults for the Frank Perkins Road Extraction, Treatment and Recharge System is nearly compete but has been temporarily delayed due to weather conditions.

Geophysical anomaly excavation within the Demo Area 1 depression continues. Site preparation activities for the Thermal Treatment of excavated soils continues at the H Range just south of Demo Area 1.

TABLE 2
SAMPLING PROGRESS
01/11/2004 - 1/17/2004

SAMPLE_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
4036000-01G-A	4036000-01G	01/12/2004	GROUNDWATER	38	69.8	6	12
4036000-03G-A	4036000-03G	01/12/2004	GROUNDWATER	50	60	6	12
4036000-04G-A	4036000-04G	01/12/2004	GROUNDWATER	54.6	64.6	6	12
4036000-06G-A	4036000-06G	01/12/2004	GROUNDWATER	108	128	6	12
90WT0013-A	90WT0013	01/13/2004	GROUNDWATER	92	102	0	10
90WT0019-A	90WT0019	01/13/2004	GROUNDWATER	96	106	0	10
90WT0019-D	90WT0019	01/13/2004	GROUNDWATER	96	106	0	10
TW1-88A-A	1-88	01/12/2004	GROUNDWATER	102.9	102.9	67.4	67.4
TW1-88A-D	1-88	01/12/2004	GROUNDWATER	102.9	102.9	67.4	67.4
TW1-88B-A	1-88	01/12/2004	GROUNDWATER	105.5	105.5	69.6	69.6
W02-04M1A	02-04	01/13/2004	GROUNDWATER	123	133	73.97	83.97
W02-04M2A	02-04	01/13/2004	GROUNDWATER	98	108	48.93	58.93
W02-04M3A	02-04	01/12/2004	GROUNDWATER	83	93	34.01	44.01
W02-12M1A	02-12	01/13/2004	GROUNDWATER	109	119	58.35	68.35
W02-12M2A	02-12	01/13/2004	GROUNDWATER	94	104	43.21	53.21
W02-12M3A	02-12	01/12/2004	GROUNDWATER	79	89	28.22	38.22
W02-13M1A	02-13	01/12/2004	GROUNDWATER	98	108	58.33	68.33
W02-13M2A	02-13	01/12/2004	GROUNDWATER	83	93	44.2	54.2
W02-13M3A	02-13	01/12/2004	GROUNDWATER	68	78	28.3	38.3
W05M1A	MW-05	01/14/2004	GROUNDWATER	210	215	98	103
W05M2A	MW-05	01/14/2004	GROUNDWATER	170	175	58	63
W177M2A	MW-177	01/13/2004	GROUNDWATER	278	288	87.3	97.3
W216SSA	MW-216	01/14/2004	GROUNDWATER	199	209	0	7.13
W295M1A	MW-295	01/14/2004	GROUNDWATER	145	155	49.5	59.5
W295M1D	MW-295	01/14/2004	GROUNDWATER	145	155	49.5	59.5
W295M2A	MW-295	01/14/2004	GROUNDWATER	117	127	21.6	31.6
W80DDA	MW-80	01/13/2004	GROUNDWATER	158	168	114	124
W80M1A	MW-80	01/12/2004	GROUNDWATER	130	140	86	96
W81M2A	MW-81	01/12/2004	GROUNDWATER	83	93	55	65
W81M2D	MW-81	01/12/2004	GROUNDWATER	83	93	55	65
W81M3A	MW-81	01/12/2004	GROUNDWATER	53	58	25	30
W81SSA	MW-81	01/12/2004	GROUNDWATER	25	35	0	10
W82DDA	MW-82	01/13/2004	GROUNDWATER	125	135	97	107
W82M1A	MW-82	01/14/2004	GROUNDWATER	104	114	76	86
W82M2A	MW-82	01/14/2004	GROUNDWATER	78	88	50	60

Profiling methods may include: Volatiles, Explosives, and Perchlorate
Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, Perchlorate and Wet Chemistry
Other Sample Types methods are variable
SBD = Sample Begin Depth, measured in feet bgs
SED = Sample End Depth, measured in feet bgs
BWTS = Depth below water table, start depth, measured in feet
BWTE = Depth below water table, end depth, measured in feet

TABLE 2
SAMPLING PROGRESS
01/11/2004 - 1/17/2004

SAMPLE_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
W82M3A	MW-82	01/14/2004	GROUNDWATER	54	64	26	36
W82M3D	MW-82	01/14/2004	GROUNDWATER	54	64	26	36
W82SSA	MW-82	01/14/2004	GROUNDWATER	25	35	0	10
W83DDA	MW-83	01/14/2004	GROUNDWATER	142	152	109	119
W83M1A	MW-83	01/13/2004	GROUNDWATER	110	120	77	87
W83M2A	MW-83	01/14/2004	GROUNDWATER	85	95	52	62
W83M3A	MW-83	01/14/2004	GROUNDWATER	60	70	27	37
G299DAA	MW-299	01/13/2004	PROFILE	105	105	8.5	8.5
G299DBA	MW-299	01/13/2004	PROFILE	115	115	18.5	18.5
G299DCA	MW-299	01/14/2004	PROFILE	125	125	28.5	28.5
G299DCD	MW-299	01/14/2004	PROFILE	125	125	28.5	28.5
MW-305-17	MW-305	01/12/2004	PROFILE	260	260	157	157
MW-305-18	MW-305	01/12/2004	PROFILE	270	270	167	270
MW-305-19	MW-305	01/12/2004	PROFILE	280	280	177	280
MW-305-20	MW-305	01/12/2004	PROFILE	290	290	187	290
MW-305-21	MW-305	01/12/2004	PROFILE	300	300	197	300
MW-305-22	MW-305	01/12/2004	PROFILE	310	310	207	310
MW-305-23	MW-305	01/12/2004	PROFILE	320	320	217	320
MW-305-25	MW-305	01/13/2004	PROFILE	330	330	227	330
MW-305-25FD	MW-305	01/13/2004	PROFILE	330	330	227	330
MW-305-26	MW-305	01/13/2004	PROFILE	337.9	337.9	234.7	234.7
MW-307-S01	MW-307	01/14/2004	SOIL	1.5	2		
HD125LA1CAA	125L	01/13/2004	SOIL GRID	10	10		

Profiling methods may include: Volatiles, Explosives, and Perchlorate
Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, Perchlorate and Wet Chemistry
Other Sample Types methods are variable
SBD = Sample Begin Depth, measured in feet bgs
SED = Sample End Depth, measured in feet bgs
BWTS = Depth below water table, start depth, measured in feet
BWTE = Depth below water table, end depth, measured in feet

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 12/19/03 - 1/17/04

SAMPLE_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	ANALYTE	PDA
RSNW03-A	RSNW03	01/08/2004	GROUNDWATER	0	0			E314.0	PERCHLORATE	
W270DDA	MW-270	01/06/2004	GROUNDWATER	127	137	103.9	113.9	E314.0	PERCHLORATE	
W80M2A	MW-80	01/10/2004	GROUNDWATER	100	110	56	66	E314.0	PERCHLORATE	
MW-305-01	MW-305	01/06/2004	PROFILE	120	120	17	17	8330N	Picric Acid	NO
MW-305-01	MW-305	01/06/2004	PROFILE	120	120	17	17	8330N	Nitroglycerin	NO
MW-305-03	MW-305	01/07/2004	PROFILE	140	140	37	37	8330N	Picric Acid	NO
MW-305-03FD	MW-305	01/07/2004	PROFILE	140	140	37	37	8330N	Picric Acid	NO
MW-305-09	MW-305	01/08/2004	PROFILE	200	200	97	97	E314.0	Perchlorate	
MW-305-10	MW-305	01/08/2004	PROFILE	210	210	107	107	E314.0	Perchlorate	
MW-305-11	MW-305	01/08/2004	PROFILE	220	220	117	117	E314.0	Perchlorate	
MW-305-13	MW-305	01/09/2004	PROFILE	230	230	127	127	E314.0	Perchlorate	
MW-305-13FD	MW-305	01/09/2004	PROFILE	230	230	127	127	E314.0	Perchlorate	
MW-305-17	MW-305	01/12/2004	PROFILE	260	260	157	157	8330N	Picric Acid	NO
MW-305-17	MW-305	01/12/2004	PROFILE	260	260	157	157	8330N	2-Amino-4,6-Dinitrotoluene	NO
MW-305-25	MW-305	01/13/2004	PROFILE	330	330	227	227	8330N	Picric Acid	NO
MW-305-25	MW-305	01/13/2004	PROFILE	330	330	227	227	8330N	RDX	YES+
MW-305-25FD	MW-305	01/13/2004	PROFILE	330	330	227	227	8330N	Picric Acid	NO
MW-305-25FD	MW-305	01/13/2004	PROFILE	330	330	227	227	8330N	RDX	YES+

DATA REPORTED REFLECT CURRENT DATABASE FOR SAMPLES COLLECTED IN SPECIFIED TIMEFRAME. NOT ALL RESULTS ARE COMPLETE.
SBD = SAMPLE COLLECTION BEGIN DEPTH IN FEET BELOW GROUND SURFACE
SED = SAMPLE COLLECTION END DEPTH IN FEET BELOW GROUND SURFACE
BWTS = DEPTH BELOW WATER TABLE, START DEPTH, MEASURED IN FEET
BWTE = DEPTH BELOW WATER TABLE, END DEPTH, MEASURED IN FEET
PDA/YES = Photo Diode Array, Detect Confirmed
PDA/NO = Photo Diode Array, Detect Not Confirmed
*** = Interference in sample**
+ = PDAs are not good matches