MONTHLY PROGRESS REPORT #69
FOR DECEMBER 2002

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 December 1 to December 30, 2002. Scheduled actions are for the six-week period ending February 14, 2003.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress for the month of December is summarized in Table 1.

Table 1. Drilling progress as of December 2002

Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-157M3	J-3 Range (MW-157M3)	90	74	70-80
MW-249	Central Impact Area (CIAP-14)	300	159	154-164; 174-184; 243-253
MW-250	J-3 Range (J3P-19)	214	201	95-105; 145-155; 185-195
MW-251	J-3 Range (J3P-26)	170	165	83-88; 98-103; 128-133
MW-252	Demo Area 2 (KP-2)	250	136	
MW-253	J-1 Range (J1P-18)	317	188	
MW-254	Demo Area 1 (D1P-18)	130		

bgs = below ground surface
bwt = below water table

Completed well installation of MW-157M3, MW-249 (CIAP-14), MW-250 (J3P-19), MW-251 (J3P-26), completed drilling of MW-253 (J1P-18), and commenced drilling of MW-252 (KP-2) and MW-254 (D1P-18). Well development continued for newly installed wells.

Samples collected during the reporting period are summarized in Table 2. Groundwater profile samples were collected from MW-251, MW-252, MW-253 and MW-254. Groundwater samples were collected from Bourne water supply and monitoring wells, the Gallo Ice Skating Rink well, and as part of the December Long Term Groundwater monitoring round. Water samples were collected from the GAC treatment system. Animal tissue samples were collected from a soil digestion study conducted as part of the Demo 1 Ecological Risk Characterization.

As part of the Munitions Survey Project, soil samples were collected from the J-2 Range Polygon 1 and Polygon 2. Pre-detonation and post-detonation soil samples were collected from the J-2 and U Ranges.

The following are the notes from the December 5, 2002 Technical Team meeting at the IAGWSPO:

Punchlist Items

#3 Determine status of sampling the Gallo Skating Rink well (Guard). AMEC is scheduling the sampling of the well. The well specifications are not known. EPA requested GIS coordinates be established for the well at the time of sampling and the well be included on figures.

#4 Provide new ZOC's for Base Water Supply Wells (MADEP). Mark Panni (MADEP) indicated Jeff Rose (MADEP Water Supply) reported that the permit information is being reviewed in the Boston office.

#6 Determine if WS4P-6 is a contingency well (Guard). Installation of this well to be determined based on results of other wells to be installed. Item to be removed from punchlist.

#8 Provide expedited data for Snake Pond samples (Corps). Information was provided by email last week.

#9 Resubmit ROAs for WS4P-3 and WS4P-4 with modification to access road construction (Corps). ROAs were submitted and will be tracked on the ROA status table.

#12 Evaluate possibility of splitting J-2 Range Polygon Report into 2 separate reports (Corps). MAJ Myer (IAGWSPO) indicated the Guard intended to keep the reporting to a single submittal to maintain the continuity of the investigation. Gina Kaso (ACE) indicated the report was scoped and funded as a single submittal and a modification to the contract would be required for two separate submittals. At EPA's request, Ms. Kaso to determine the feasibility of compressing the schedule and submitting the report prior to the current due date in April 03.

#13 Provide email to Corps with questions regarding the MW-219 Corrective Action Report (MADEP). MADEP comments have not been received to date. EPA has forwarded the CAR to their laboratory specialist for comment.

MSP3 and Southeast Ranges Update

Larry Hudgins (Tetra Tech) provided an update on the MSP3 tasks.

J-2 Range Polygons. Crews are working on Polygons 1A and 2E. Polygon 2E was a brick-lined pit. Pictures of the 2E pit and findings were distributed with the J-2 Polygon 1 & 2 update table. Jane Dolan (EPA) notified the Corps that EPA was reviewing the MSP3 RCL and were going to request the additional investigation of one anomaly in Polygon 2 and another anomaly outside the polygon.

U Range. The geophysical survey for the north side of the berm has been completed. An anomaly map of the north side and pictures and an updated table of findings for the north and south sides of the berm were distributed. A meandering path geophysics survey is currently being conducted on the south side of the berm; this survey to be coupled with a Schonstedt survey in areas of heavy vegetation. An anomaly map will be presented next week. Over 2,000 3.5-inch rockets have been recovered behind the berm. Approximately 350 rockets are scheduled to be blown-in-place.

Demo Area 1 Update

Heather Sullivan (ACE) gave a brief update on Demo Area 1 activities.

- Screen selection for D1P-16 (MW-248) was completed last week.
- Drilling of D1P-18, to the south, is scheduled to begin Monday 12/09. The next scheduled drilling location is D1P-17, which is north of D1P-16. However, this drilling location could be adjusted based on the results from D1P-18.

Bourne Update

Bill Gallagher (IAGWSPO) summarized recent Bourne-related activities particularly issues discussed at the Guard/Corps most recent meeting with the Bourne Water District (BWD).

- Sampling of Bourne supply wells continues with no new significant results. Monthly sampling of the Bourne monitoring wells is on hold because of contractual issues with AMEC, resulting in a three-week delay in the sampling schedule. It is anticipated that these issues will be resolved soon. Todd Borci (EPA) requested that EPA be notified by email when the monthly sampling was resumed.
- The Guard forwarded a letter to the BWD and Haley & Ward proposing to discontinue sampling of wells for explosives and VOCs where they had not been detected. The Guard provided a list of VOCs detected in the Far Field Wells, which were mostly chloroform. Based on this information the BWD/Haley & Ward agreed to the Guard's proposal. The Guard requests that EPA/MADEP also provide input.
- The Corrective Action Report (CAR) on MW-219 was discussed at the Bourne meeting, the information was the same as discussed in the 11/21 Tech meeting. As requested by EPA, data for the 0.5 ppb perchlorate standard will be supplied for the perchlorate analysis. The laboratory is working on data needed to provide this standard. No comment had been received from MADEP. The Metrohm instrument, which was used in the analysis of profile samples from MW-219, was used at the laboratory for analysis of MMR samples from 5/9/02 to 6/29/02. It was not used in analysis of the Bourne Supply Well #1 sample that was a false positive. Because of problems with the instrument, the laboratory replaced the Metrohm with a Dionex instrument in July. MAJ Myer questioned if any changes needed to be made to the QAPP to ensure that similar problems did not occur as new contractors were added to the project. Mr. Gallagher explained that the proper protocol would be to have an audit performed on any new laboratories. Mr. Borci explained that although this laboratory had been audited, the EPA had not been notified that the lab had acquired new equipment. Therefore, the proper QA/QC procedures were in place, and with this incident the team would be more aware of potential future issues.
- The BWD/Haley & Ward were holding comment of the Draft Bourne Perchlorate Response Plan until 12/18, pending a meeting with the Board. Leo Yuskus (Haley & Ward) had questions regarding the following issues:
    1. how the northern and southern boundaries of contamination were to be defined. The Guard pledged to work with them regarding the specific language.
    2. installation of additional wells between the Far Field and Sentry wells. Mr. Yuskus agreed that these wells could be provisional depending on concentration increases in the Far Field Wells. However, the Guard has not agreed to these wells even on a provisional basis.
    3. removal of WS4P-4 on the map. The Guard explained that this was an error in the map and this proposed well would be added in the Final Draft.
    4. why a decrease in sampling frequency of monitoring wells was proposed. The Guard proposed to sample the wells located in the three fences west of the supply wells. Other less important wells would be relegated to the LTGM for sampling three times per year.

- The Corps has sent AMEC an RFP for pilot testing of groundwater treatment systems. The RFP is due 12/09. Pilot testing will be completed on base and in the Bourne area. A mini-pump test will be conducted on wells to gauge requirements for the pilot testing. Pilot testing is being considered for the toe of the Demo 1 plume (perchlorate concentrations in groundwater from 1-3 ppb), in the Central Impact Area (perchlorate and explosive concentrations in groundwater from 1-3 ppb), and in the Bourne area (especially MW-80M1). The RFP would be modified to be submitted as the Pilot Study proposal that needs to be provided to MADEP. Heather Sullivan to check on timing of proposal submittal to MADEP. Paperwork for the pilot testing will be completed by Haley & Ward under subcontract to AMEC.

Documents

Marc Grant (AMEC) pointed out several document priorities.
Gun & Mortar Workplan Addendum #2. A 3-page letter Workplan. MADEP approval had been received. Waiting on EPA comment, preferably by early next week.
Small Arms Ranges Report. Still looking for DEP comments that were expected on 11/22.
Soil Background Report Supplement. Comment Resolution Meeting rescheduled for 12/19. Comments from EPA Cincinnati are still being reconciled with other EPA internal comments, to be forwarded soon.
MSP Phase I Report RCL. EPA comments to be provided 12/19.

- Gina Kaso (ACE) indicated the Corps would forward a letter to the agencies proposing an alternative schedule for the SCAR Rocket Report that allowed for more internal review time.

Miscellaneous

- BIP Perchlorate List, as requested by EPA, will be provided by Nick Iaiennaro (ACE) on 12/12.
- Gina Kaso explained the CDC schedule was extended to the end of January. After this week, the Corps will have a better idea of what can be detonated within the current contract period of 4 weeks. Update will be provided next week.
- Todd Borci requested that MW-62 at U Range, which was dry in the recent sampling attempt, be tracked for eventual sampling for perchlorate. Mr. Borci further requested that all the dry wells proposed for perchlorate sampling be monitored and eventually sampled for perchlorate analysis. Ms. Sullivan noted that this was already considered as a recommendation for the Draft Site-Wide Perchlorate Characterization Report to be submitted later this month.

The EPA convened a meeting of the Impact Area Review Team on December 10, 2002. The issues discussed included a general investigations update, the Archive Search Report, and the Demolition Area 1 Schedule.

The following are the notes from the December 12, 2002 Technical Team meeting at the IAGWSPO:

Punchlist Items

#3 Determine status of sampling the Gallo Skating Rink well (Guard). Attempt will be made to sample the well next week.
#5 Provide data validation summary for MW-187, MW-188 and MW-215 (Corps). Additional data to be emailed by the end of the week.
#10 Provide EPA with costs and option selection for Scrap staging area run-off water treatment/disposal (Guard). Cost data was provided to the EPA. EPA approved sending of the surface run-off water to Blackstone.

#13 Provide email to Corps with questions regarding the MW-219 Corrective Action Report (EPA/MADEP). EPA has requested additional information from the laboratory. Len Pinaud (MADEP) indicated the DEP Water Supply Division is evaluating whether they wish to provide comments.

Archive Search Update

Carla Buriks (Tetra Tech) provided the monthly ASR Update.

- Interview activities/issues will be discussed in an after meeting.
- As a follow-up to some interviews, the Indian Head Naval Base, Maryland was contacted regarding information on OE activities. Representatives at the base referred Tetra Tech to Tyndel Air Force Base. Information requests will be sent to both bases. Jane Dolan (EPA) requested the opportunity to the review the draft letter prior to transmittal. Draft of the letter to be tracked on the Punchlist.
- ASR Response to Comments and ASR Data Archive link are on schedule to be submitted to the agencies on 12/16.
- Update of the 104(e) response tracking table should be available Monday, 12/16. Six sets of recent 104(e) responses have been copied for distribution to the agencies.

CDC Destruction Schedule

Nick Iaiennaro (ACE) provided an update on the CDC destruction schedule.

- Based on the CDC destruction capability of current incident ammunition, the following time frame is estimated to destroy the current inventory of CDC-capable munitions based on 25 shots per day:
  - 32 shots required to exhaust ASP CDC-capable items,
  - 71 shots required to exhaust CDC Bunker Inventory (complete 12/13).
  - 830 shots required to exhaust awaiting CDC-capable items (includes all J-2 Polygons discovered as of 12/11).
  - 852 total shots required to exhaust ASP and awaiting CDC-capable items.
  - 8 weeks, 2.53 days, beginning next week, required to exhaust all items (should factor 10-15% for contingency due to weather, etc.). That is approximately 4 weeks more time than currently scheduled for the CDC at MMR.
  - 31 Jan 03 is the scheduled departure date of CDC to Spring Valley.
- Based on delays at Spring Valley, the CDC may be able to remain at MMR. Gina Kaso (ACE) explained the current contract needs to be modified to keep the CDC until 01/31/03. Closer to 01/31/03 and if Spring Valley has a postponement, the budget will be reviewed to determine if additional work can be accommodated for the CDC.
- The priorities for destruction of items are 1) U Range items, 2) CS-19 items, 3) ASP items and 4) J-2 Polygon items. The priority and shots required for J-2 Polygon items are: 1) 417, 105MM Cartridge Cases with live primers; 60 shots, 2.5 days; 2) 192 Underground Sound Practice Signals, MK64; 192 shots, 2 weeks; 3) 9,475 20MM Projectile, potential HEI M56; 3 weeks, 3.25 days.
- There is plenty of storage space for items if the CDC cannot remain past the scheduled departure date.
- To date, 1,759 CDC-capable items have been destroyed during the current operational period, out of an approximate total 16,000.
- A list of items to be destroyed will be provided shortly.
- The Range Control log inventory has been permitted for release and will be distributed shortly.
- The list of items with components containing perchlorate will be emailed. Several hard copies were distributed at the Tech meeting.

MSP3 and Southeast Ranges Update

Rob Foti (ACE) provided an update on the MSP3 tasks.

J-2 Range Polygons. Crews completed Polygon 2 excavations, currently working on Polygon 1B, a burn/burial area. Polygon 1 excavations should be finished by next week. A final update of discoveries will likely be provided after the Christmas holiday. BIPs of several items are scheduled for next week.

U Range. The agencies approved of the excavation of 10 anomalies proposed by the Guard; excavation of these anomalies was completed yesterday, 12/11. The anomalies consisted of single 3.5-inch rockets and LAW subcal rounds; no burial or burned items were uncovered. A Schonstedt survey of the area south of the berm is being conducted today. The meandering Path EM61 survey was completed last week. This data will be combined for evaluation and selection of 10 anomaly picks. The anomaly picks potentially could be available for agency review by Monday, 12/16.

- Gina Kaso (ACE) indicated that sufficient funds should be available to conduct the excavations.
- Approximately 350 rockets with suspect fuzes are scheduled to be blown-in-place next week.
- U Range fieldwork is restricted on Monday/Friday (12-16/20) next week due to hunting. Work can proceed in the J-2 Range Polygon 1 area.

Drilling – J3P-26 (MW-251) is waiting on profile results. The access road to J1P-18 (MW-253) needs repairs, but the drill rig is ready to mobilize to the drilling location.

ROA Status and Monitor Well Drilling Schedule Table

Heather Sullivan (ACE) gave a brief update on the status of ROAs and drilling schedule. A 1-page Drilling Schedule and a 3-page ROA Status Table were emailed today and distributed at the meeting.

- The current or pending, ROA-approved locations for the three drill rigs and one geoprobe are D1P-18, KP-2, J1P-18, and J3P-26. There are two ROA approved locations beyond these four.
- The geoprobe rig was only able to advance to 170 feet bgs at J3P-26, short of the scoped depth of 200 ft bgs, due to hard, subsurface drilling conditions. Further decision on this location is pending, based on the profile results. However, John Rice (AMEC) pointed out it is unlikely that the borehole can be advanced further using the geoprobe.
- ROA approval was received yesterday 12/11 for D1P-19. Proposed Demo 2 wells, J1P-16, WS4P-3, and WS4P-4 received ROA approval from Natural Heritage last week; still waiting on SHPO approval.
- The ROA for CIAP-27 was submitted this week. An ROA for the Demo 2 trench was recently prepared and will be submitted to NH/SHPO pending Karen Wilson's (IAGWSPO) review.
- Desiree Moyer (EPA) questioned about the possible accommodation of a fourth drill rig to speed up the drilling schedule. Ms. Sullivan explained there were not enough ROA-approved drilling locations to warrant the mobilization of a fourth drill rig. Maria Pologruto (AMEC) confirmed that the current number of drill rigs provided the most efficient use of resources while minimizing standby time. Len Pinaud (MADEP) suggested that the agency Remedial Project Managers should get together to discuss priorities and the number of drill rigs to see when/where the investigation schedule could be expedited.
- AMEC is currently working on particle tracks, as requested by Jane Dolan, for some new J-3 Range wells. The particle tracks will be available next week.

Bourne Update

Bill Gallagher (IAGWSPO) summarized recent Bourne-related activities.

- Sampling of Bourne supply wells continues this week with low-level detections of perchlorate in WS-3 (0.37 ug/L) and WS-4 (0.35 ug/L). These wells have had low level perchlorate detections in the past. The Bourne Water District had expressed interest in the reanalysis of these samples. John Rice (AMEC) explained to the BWD in a phone call yesterday evening that a reanalysis with a non-detect result would not mean that the original detections would be corrected. Therefore, the BWD indicated they would not request reanalysis of these samples.
- Weekly sampling of the Bourne-area wells continues. Monthly sampling of the Bourne monitoring wells has resumed.
- The BWD/Haley & Ward were holding comment of the Draft Bourne Perchlorate Response Plan until 12/18, pending a meeting with the Board. Agency comments have not been received. Desiree Moyer indicated EPA comments would be forwarded today. Len Pinaud indicated MADP comments would be forwarded tomorrow, 12/13.
- The Guard forwarded a letter to the BWD and Haley & Ward and the agencies proposing to discontinue sampling of wells for explosives and VOCs where they had not been detected, and biweekly sampling of supply wells WS-3 and WS-4. The BWD agreed to the Guard's proposal. The Guard is still awaiting agency comment. Heather Sullivan reforwarded the letter via email to the agencies earlier this week.
- Regarding the Corrective Action Report (CAR) on MW-219, as requested by EPA, information on a 0.5 ppb perchlorate standard is being compiled by AMEC and will be provided next week. No comment on the report had been received from MADEP. Mr. Pinaud explained the request for comment had been forward to the Boston office of MADEP Water Supply and they were evaluating whether or not to provide comment. Mr. Pinaud could forward the original email with questions that was sent to him from Jeff Rose.

Documents and Schedules

Marc Grant (AMEC) led a discussion of document priorities. A 6-page handout was distributed including scheduling issues overview, document status table, and 3-month look-ahead schedule.

MSP3 J-1 Polygon Report. 1st priority. Waiting EPA comments. Ms. Dolan indicated EPA comments would be sent early next week.

MSP3 Gun/Mortar Workplan RCL. 2nd priority. Waiting on EPA Comments. Ms. Moyer indicated EPA was ready to schedule the CRM. DEP to have comments shortly. Heather Sullivan to schedule a CRM for Friday, 12/20.

MSP3 J-3 Polygon Report. 3rd priority. Waiting on EPA/DEP comments. Ms. Dolan indicated EPA comments were possible for next week.

Bourne Perchlorate Response Plan. 4th priority. Awaiting comments. Ms. Moyer indicated EPA comment would be sent today. Mr. Pinaud indicated MADEP comments would be forwarded tomorrow, 12/13.

LTGM Supplemental Plan MOR. 5th priority. EPA approval was received yesterday, 12/10. Still waiting on DEP approval.

J1/J3/L Additional Delineation Report MOR. Waiting on EPA approval.

Method Comparability Study for Explosives in Soil. Waiting on EPA comment.

Soil Background Report CRM. Ms. Moyer to check if still on for next week.

HUTA1 Report. Response to Comment Letter sent 8/28. Ms. Moyer indicated EPA comments may be forwarded by next Friday, 12/20.

Laboratory Fate and Transport Study CRM. Still waiting to hear from EPA as to when the CRM can be scheduled.

HUTA2 Report. Need approval on MOR and combined, revised document (11/21 submittal) from both EPA/MADEP.

Miscellaneous

Monthly BIP cumulative table was distributed.

- Jane Dolan requested that the Guard assess the need to pilot test J-3 Range groundwater for perchlorate. This request to be tracked as a Punchlist item.
- Ms. Dolan requested that data for wells MW-125, MW-128, MW-127, and MW-158 on IART Figure 5 be checked.
- Ms. Dolan requested that explosive data for MW-104 and MW-105 be checked, as she could not locate it.
- Mr. Gallagher announced a CIA perchlorate plume map should be available in a few weeks.

The following are the notes from the December 19, 2002 Technical Team meeting at the IAGWSPO:

Punchlist Items

#3 Determine status of sampling the Gallo Skating Rink well (Guard). Attempt will be made to sample the well Friday, 12/20.

#5 Provide data validation summary for MW-187, MW-188 and MW-215 (Corps). Additional data emailed last Friday, 12/13. Remaining set of data from MW-187 will be available shortly.

#8 Provide ASR inquiry letter for Indiana Head NAVSTA and Tyndall AFB for EPA review (Corps). Draft letter to be forwarded to Jane Dolan today. Ms. Dolan noted that a 104e request may have been previously sent to Tyndall. Ms. Dolan to check further.

#9 Provide EPA updated 104e documents table (Corps). Table to be emailed with draft letter (see #8).

#10 Provide EPA/DEP with J-3 Range particle tracks (Corps). Particle tracks to be emailed to agencies today. Two sets of particle tracks were generated. The first set was generated with the older version of the subregional model. In this model run, particle tracks that are not captured in the FS-12 treatment system go under the pond and exit the footprint of the pond at the south end in the vicinity of the three proposed wells. The second set of particle tracks was generated with the recently updated version of the subregional model in which the transmissivity contrast between the pond bottom and aquifer had been increased. This adjustment was done to calibrate the modeled plume to intersect the middle screen of MW-171 (located on the spit) to match the field data. More of the particle tracks generated using this model were captured by the FS-12 treatment system. Some of the tracks continued under the pond exiting in an area east of the beaches. The agencies will review the particle tracks and discuss further at a later date.

MSP3 and Southeast Ranges Update

Rob Foti (ACE) provided an update on the MSP3 tasks.

J-2 Range Polygons. Crews completed Polygon 1 excavations this week. A final update of discoveries will likely be provided by 01/09/03. BIPs have been scheduled for Polygon 2 today.

U Range. Multiple BIPs of 3.5-inch rockets with suspect fuzes are scheduled for today.

Todd Borci requested that detail regarding unique demil operations be included in future BIP notifications. Geophysical and Schonstedt surveys of the range to be discussed in an after meeting today.

Drilling – J3P-26 (MW-251) was completed and developed by the drilling crew. Property owners to be notified within 48 hours of sampling event. Crews are currently drilling at J1P-18 and developing J3P-19.

CDC Update

Frank Fedele (ACE) gave a brief update on the status of the CDC.

- CDC operations were conducted on 12/03-12/06; 12/09-12/12.
- During these 8 days, 2688 items were detonated, including small arms, cartridge cases, flares, mortars, 20MM and 40MM projectiles and cartridge cases. Approximately 300 items were destroyed per day.
- Operations were discontinued this week due to a heart attack suffered by an individual on the crew. A replacement individual has not been found.
- The crew will demob over the next two weeks. Operations will continue beginning 01/07 through the end of January. Dependent on other scheduled events, there is a possibility that the operational schedule could be extended into February. However, extension of the schedule is completely conditional on the needs of the other facility for which the unit had previously been scheduled to provide service. Todd Borci requested the Guard ensure that all possible steps and coordination occur such that the entire stockpile of waste munitions can be disposed during the current mobilization of the CDC. Gina Kaso emphasized the Corps does not have control over whether or not the CDC can remain at MMR past the commitment date of 01/31.

Bourne Update

Bill Gallagher (IAGWSPO) summarized issues discussed in the Guard's 12/18 meeting with the Bourne Water District and Haley and Ward.

- Monthly sampling of the Bourne-area wells continues. Detects were noted in monitor wells 1-88 and 02-13. There have been detects in these wells in the past.
- All comments on the Draft Bourne Perchlorate Response Plan have been received. Of the comments made, Leo Yuskus (Haley & Ward) stressed the following:
    - the BWD favored continued weekly sampling of certain specific wells that they would need information on in case an emergency required them to turn back on Bourne Supply Well 3 or 4. The BWD did not object to decreasing the sampling to monthly for other wells.
    - the BWD requested contingency wells between the Far Field Wells and sentinel wells.
    - the BWD did not feel that the southern and northern boundaries of the contamination in the wellfield were clearly defined. Therefore, related language in the Workplan was objectionable (the Guard had already previously agreed to change this language in the Final version of the Plan). The BWD would not pursue this issue further, preferring to leave this matter to be resolved at the agencies' discretion.
    - the BWD wanted further clarification on EPA Comment 21, which related to EPA's desire to have wells that were to be installed with AFCEE funding to follow IAGWSP protocols in an effort to maintain consistency. The greatest concern was that screen intervals greater than 10 feet were proposed to be used. The IAGWSPO feels that since these wells have a purpose other than defining nature and extent of contamination, that this should not be a requirement for these wells. The BWD agreed to work with the IAGWSP, but would not commit to installing only 10-foot screens.

- IART and MADEP comments on the Bourne Plan requested that the Guard look at the need for additional downgradient well(s). Particle backtracks from the USGS BHW wells showed that these are directly downgradient of the wells with the highest levels of perchlorate (02-13, MW-80) and therefore, in the Guard's opinion, no additional downgradient wells were needed. Todd Borci recommended the Guard provide forward particle tracks from some of the contaminated wells to the north and south, such as 02-13, to better demonstrate this point. Mr. Gallagher also noted that additional downgradient wells were not being sought by the BWD or the MADEP Water Supply Division. Mr. Borci noted the IAGWSPO did not necessarily have the same objectives as the BWD or MADEP Water Supply.
- Another comment on the Bourne Plan noted there was no clear trigger for installation of the contingency wells. The Guard agreed and will work on this part of the plan.
- Based on the IART's desire for a Bourne plume map and similar comment from MADEP on the plan, the Guard indicated that they would update the previous internal draft map with new data and provide to all parties for review. Mr. Borci requested a plume map be drafted consistent with the protocols used for the other IAGWSP plumes and then this map be provided to the agencies for review. Following incorporation of the agencies' comments, this map could then be provided for the BWD's review. The map should in some way account for the MADEP's Drinking Water Advice for the Town of Bourne.
- The Guard's Response to Comment letter for the Draft Bourne Perchlorate Response Plan will incorporate all agency comments and BWD comments. RCL to be submitted to all parties on 01/15. CRM to be scheduled for 01/29. Len Pinaud (MADEP) requested the BWD be notified of these dates.
- At Mr. Borci's request, all parties agreed to discuss new Bourne well locations in an after Tech meeting on 01/09. Draft plume map to be submitted to agencies as soon as available.

Training Ranges Update

- Bill Gallagher (IAGWSPO) noted that based on information provided in the Range Control log recently distributed by Nick Iaiennaro (ACE), another FSP scoping meeting for the Training Areas was warranted.
- Todd Borci noted that he was interested in detonation/demolition activities that occurred on roads of the western training areas. Were these sites already included in the Phase IIb? Mr. Gallagher noted that while not all places that activities were reported were sampled, for areas that were sampled, no residual explosive constituents were detected in soil. Mr. Borci requested copies of the data that Mr. Gallagher was basing his statements on regarding suspected detonation areas which have been sampled, noting that the previous sampling was based entirely upon site reconnaissance, and correct locations may be able to be located with greater precision with this new information. Therefore, Mr. Borci recommended the Training Ranges FSP be held a few weeks pending review of the Phase IIb Report. Len Pinaud concurred with this approach.
- Mr. Gallagher indicated the Guard was considering rethinking some of the analysis parameters.
- Mr. Borci indicated, in particular, he would like the Guard to look into where Tobbin Road was located. Ed Pesche and Ralph Turner were named as potential sources for this information.

Miscellaneous

- Gina Kaso (ACE) noted the additional MSP3 site investigations would commence beginning 01/06 and would include Ox Pond, NBC, the Former Demo Site, Gun and Mortar firing positions and the ASP. ROA's for the first four sites are in place; the Corps is working on the ROA for the ASP site.
- Ms. Kaso requested an after meeting be scheduled on 01/16 to discuss the OE Characterization Workplan; the Corps to develop an agenda. The J-3 Range Barrage and Hillside sites would be included under the OE Characterization Plan, since they are not known to be burial or disposal sites. Further discussion on this matter can be addressed at the 01/16 meeting. Mr. Borci noted his disagreement with inclusion of these sites in the OE Characterization scope of work as opposed to the MSP3 scope of work. EPA objected to the proposal for the J-3 Range Hillside and Barrage rocket sites for two reasons - (1) the Corps requested EPA prioritize MSP3 sites early on in the 2002 calendar year, and these sites were higher in the priority list. This work was necessary to be completed in order to fold the findings in to the J3 range reports now being produced; and (2) that the MSP3 scope of work is different (less extensive) than would have been generated for OE Characterization Work Plan work.
- Ms. Kaso noted the tentative schedule was for the Final Draft OE Characterization Workplan to be submitted in July 03. Additional information could be provided in the 01/16 meeting. Tetra Tech will be under contract to complete the fieldwork and report writing for this effort.

2. SUMMARY OF DATA RECEIVED

Validated data were received during December for Sample Delivery Groups (SDGs): AO3092, CCE003, CCE004, CE0022, CE0023, CE0024, CE0025, CE0026, CE0029, CE0030, CEE339, CEE341, CEE343, CEE345, CEE349, CEE350, CEE354, CEE355, CEE360, CEE361, CEE362, CEE363, CEE364, CEE371, CEE372, CEE373, CEE374, CEE375, CEI323, CEI348, CEI351, CEI356, CEI357, CEI365, CEI366, CEI369, CEI370, CEI378, DCE003, DMR019, DMR027, DMR028, DMR029, DMR030, GCE011, GCE021, GMR028, GMR029, GMR030, GMR031, MMR979, MMR984, MMR985, MMR986, MMR987, MMR988, MMR998, NCE002, NCE003, NMR033, NMR034, TT004, TT005, TT006, USA007 and USA008

These SDGs contain results for 17 crater grab samples; 269 groundwater samples from supply wells, test wells, monitoring wells, and a spring; two process water samples from the FS-12 treatment system; 107 profile samples from monitoring wells MW-240, MW-241, MW-242, MW-243, MW-244, MW-245, MW-246, MW-247, MW-248, and MW-250; 86 soil grid samples from Demo Area 1, J-2 Range, HUTA II, the Eastern Test site, and Scar Rocket site; and 11 other samples from a Method Detection Limit study.

Validated Data

Figures 1 through 8 depict the cumulative results of groundwater analyses for the period from the start of the IAGS (July 1997) to the present. Each figure depicts results for a different analyte class:

- Figure 1 shows the results of explosive analyses by EPA Method 8330.
- Figure 2 shows the results of inorganic analyses (collectively referred to as "metals", though some analytes are not true metals) by methods E200.8, 300.0, 350.2M, 353M, 365.2, CYAN, IM40MB, and IM40HG.
- Figure 3 shows the results of Volatile Organic Compound (VOC) analyses by methods OC21V, 504, and 8021W, exclusive of chloroform detections
- Figure 4 shows the chloroform results using the Volatile Organic Compound (VOC) analyses by method OC21V, only detections of chloroform. This figure is updated and included semiannually in the June and December Monthly Progress Reports.
- Figure 5 shows the results of Semi-Volatile Organic Compound (SVOC) analyses by methods OC21B and SW8270, exclusive of detections of bis (2-ethylhexyl) phthalate (BEHP).
- Figure 6 shows the BEHP results using the Semi-Volatile Organic Compound (SVOC) analyses by methods OC21B and SW8270. This figure is updated and included semiannually in the June and December Monthly Progress Reports.
- Figure 7 shows the results of Pesticide (method OL21P) and Herbicide (method 8151) analyses.
- Figure 8 shows the results of Perchlorate analysis by method E314.0.

The concentrations from these analyses are depicted in Figures 1-7 compared to Maximum Contaminant Levels (MCLs) or Health Advisories (HAs) published by EPA for drinking water. The concentrations from Perchlorate analyses are depicted in Figure 8 compared to an EPA MMR Relevant Limit. A red circle is used to depict a well where the concentration of one or more analytes was greater than or equal to (GTE) the lowest MCL, HA, or EPA MMR Relevant Limit for the analyte(s). A yellow circle is used to depict a well where the concentration of all analytes was less than (LT) the lowest MCL, HA, or EPA MMR Relevant Limit. A green circle is used to depict a well where the given analytes were not detected. An open circle is used to depict an existing well where the analytes in question (for example, Explosives in Figure 1) have not yet been measured. Table 3 summarizes the detections that exceeded a MCL, HA, or EPA MMR Relevant Limit, sorted by analytical method and analyte, since 1997.

There are multiple labels listed for some wells in Figures 1-8, which indicate multiple well screens at different depths throughout the aquifer. The aquifer is approximately 200-300 feet thick in the study area. Well screens are positioned throughout this thickness based on various factors, including the results of groundwater profile samples, the geology, and projected locations of contaminants estimated by groundwater modeling. The screen labels are colored to indicate which of the depths had the chemical detected above MCLs/HAs/EPA Limit. Generally, groundwater entering the top of the aquifer will move deeper into the aquifer as it moves radially outward from the top of the water table mound. Light blue dashed lines in Figures 1-8 depict water table contours. Groundwater generally moves perpendicular to these contours, starting at the center of the 70-foot contour (the top of the mound) and moving radially outward. The rate of vertical groundwater flow deeper into the aquifer slows as groundwater moves away from the mound.

The results presented in Figures 1-8 are cumulative, which provides a historical perspective on the data rather than a depiction of current conditions. Any detection at a well that equals or exceeds the MCL/HA/EPA Limit results in the well having a red symbol, regardless of later detections at lower concentrations, or later non-detects. The difference between historical and current conditions varies according to the type of analytes. There are little or no differences between historical and current exceedances of drinking water criteria for Explosives, VOCs, Pesticides, and Herbicides; the minor differences are mentioned in the following paragraphs. There are significant differences between historical and current exceedances of drinking water criteria for Metals and SVOCs, as described further below. There is no historical data available for Perchlorate.

Figure 1: Explosives in Groundwater Compared to MCLs/HAs

For data validated in December 2002, one well, MW-235M1 (Central Impact Area) had a first time validated detection of RDX above the HA. Two wells, MW-235M1 (Central Impact Area) and MW-140M1 (Southeast Ranges) had first time validated detections of various explosives below the MCLs/HAs.

Exceedances of drinking water criteria for explosive compounds are indicated in four general areas:

- Demo Area 1 (wells 19, 31, 34, 73, 76, 77, 114, and 129);
- Demo Area 2 (wells 16 and 160);
- The Impact Area and CS-19 (wells 58MW0001, 0002, 0009E, 0011D, 0016B, 0016C 0018B; and wells 1, 2, 23, 25, 37, 38, 40, 85, 86, 87, 88, 89, 90, 91, 93, 95, 98, 99, 100, 101, 105, 107, 111, 113, 178, 184, 201, 204, 206, 207, 209, 235, OW-1, OW-2, and OW-6); and
- J Ranges and southeast of the J Ranges (wells 45, 58, 132, 147, 153, 163, 164, 165, 166, 171, 191, 196, 198, 215, 227 and wells 90MW0022, 90MW0054 and 90WT0013).

Exceedances of drinking water criteria were measured for 2,4,6-trinitrotoluene (TNT) at Demo Area 1 (wells 19S, 31S, 31M, and 31D) and Southeast of the Ranges (196S), for 1,3-dinitrobenzene and nitroglycerin at Demo Area 1 (well 19S), and for hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) at all of the locations listed above except at MW-45 and MW-196. Exceedances of drinking water criteria were measured for 2,6-dinitrotoluene (2,6-DNT) at MW-45S.

Demo Area 1 has a single well-defined source area and extent of contamination. The estimated extent of RDX exceeding the HA at Demo Area 1 based on the most recent groundwater measurements is indicated by a magenta concentration contour line on Figure 1 and the inset.

CS-19 is a site located in the Impact Area. Portions of CS-19 are currently under investigation by the Air Force Center for Environmental Excellence (AFCEE) under the Superfund program. Other portions of CS-19, and the remainder of the Impact Area, are under investigation by the National Guard Bureau. RDX has been measured in groundwater emanating from both CS-19 and the Impact Area. A magenta concentration contour line is used in Figure 1 and the inset to show the extent of RDX exceeding the HA in these areas. This extent is based on samples from monitoring wells and samples collected during the drilling process (“profile” samples). This extent also considers non-validated data, where the results have been confirmed using Photo Diode Array (PDA). Additional information regarding PDA is provided below under the heading “Rush (Non-Validated) Data”. Currently it appears there are multiple sources of RDX in the Impact Area, including CS-19.

Concentration contours will be prepared for other areas, and refined for the above areas, when sufficient data are available. Studies are currently underway to better delineate the extent of contaminants in the Impact Area, which may include several separate sources. Studies are also underway at Demo 1 and the J Ranges and southeast of the J Ranges to evaluate the sources and extent of contaminants.

Figure 2: Metals in Groundwater Compared to MCLs/HAs

For data validated in December 2002, one well, MW-57M3 (East of Impact Area) had a first time validated detection of sodium above the MCL/HA. One well, MW-174S (West of Impact Area) had a first time validated detection of chromium below the MCL.

Exceedances of drinking water criteria for metals are scattered throughout the study area. Where two or more rounds of sampling data are available, the exceedances generally have not been replicated in consecutive sampling rounds. The exceedances have been measured for antimony, arsenic, cadmium, chromium, lead, molybdenum, sodium, thallium and zinc. Arsenic (well 7M1), cadmium (52M3), and chromium (7M1) each had one exceedance in a single sampling round in August-September 1999. One of four lead exceedances (ASP well) was repeated in another sampling round and the remaining three lead exceedances (wells 2S, 7M1, and 45S) have not been repeated in previous or subsequent results. The Health Advisory for molybdenum was updated based on the most current state and federal Health Advisories from 10 ppb to 40 ppb. Two of the eight molybdenum exceedances were repeated in consecutive sampling rounds (wells 53M1 and 54S). All of the molybdenum exceedances were observed in year 1998 and 1999 results. Six of the 18 sodium exceedances were repeated in consecutive sampling rounds (wells 2S, 46S, 57M2, 57M1, 145S, and SDW261160). Four wells (57M3, 144S, 145S, and 187D) had sodium exceedances in year 2002 results. Zinc exceeded the HA in seven wells, all of which are constructed of galvanized (zinc-coated) steel.

None of the 12 antimony exceedances were repeated in consecutive sampling rounds, and only one exceedance (well 187D) was measured in year 2002 results. There have been few exceedances since the introduction of the new ICP method for antimony and thallium, discussed in the next paragraph. Eight of the 69 thallium exceedances were repeated in consecutive sampling rounds (wells 7M1, 7M2, 47M2, 52S, 52D, 54S, 54M1, and 94M2). Only two wells (191M1 and 198M2) have had thallium exceedances in the year 2002 results.

In May of 2001, the Guard added a new method to achieve lower detection limits for antimony and thallium. Groundwater samples sent for metals analysis are analyzed for most metals by Inductively Coupled Plasma (ICP) in accordance with the U.S. EPA Contract Laboratory Program Statement of Work ILM04.0. Antimony and thallium are also analyzed by graphite furnace atomic absorption (GFAA) in accordance with EPA Drinking Water Methods 202.4 (antimony) and 200.9 (thallium). These additional methods achieve lower detection limits for these two metals, both of which are subject to false positive results at trace levels by ICP as a result of interferences. These interferences do not affect the GFAA analysis.

The distribution and lack of repeatability of the metals exceedances is not consistent with a contaminant source, nor do the detections appear to be correlated with the presence of explosives or other organic compounds. The Guard has re-evaluated inorganic background concentrations using the expanded groundwater quality database of 1999, and has submitted a draft report describing background conditions. This draft report indicates that of the nine metals exceeding drinking water criteria, only molybdenum is potentially associated with the site. The population characteristics of the remaining eight metals were determined to be consistent with background.

Figure 3: VOCs in Groundwater Compared to MCLs/HAs

For data validated in December 2002, no wells had first time validated detections of volatile organic compounds (VOCs) above an MCL/HA. Nine wells, FH-1, FH-2 (Sandwich Fish Hatchery), MW-18M1, M2 (North of Impact Area), MW-70S (Central Impact Area), MW-71M1 (West of Impact Area), and 00-4, 00-2S, D (Bourne Area) had first time validated detections of various VOCs below the MCLs/HAs.

Exceedances of drinking water criteria for VOCs are indicated in five general areas: Monument Beach Field Well (02-12), CS-10 (wells 03MW0007A, 03MW0014A, and 03MW0020), LF-1 (well 27MW0017B), FS-12 (wells MW-45S, 90MW0003, and ECMWSNP02D), and in the J-1 Range (MW-187D). CS-10, LF-1, and FS-12 are sites located near the southern extent of the Training Ranges that are currently under investigation by AFCEE under the Superfund program. Exceedances of drinking water criteria were measured for tetrachloroethylene (PCE) at CS-10, for vinyl chloride at LF-1, and for toluene, 1,2-dichloroethane, and ethylene dibromide (EDB) at FS-12. These compounds are believed to be associated with the sites under investigation by AFCEE. Detections of benzene, tert-butyl methyl ether, and chloromethane at J-1 Range well 187D and chloromethane at Bourne well 02-12M1 are currently under investigation.

Detections of chloroform are presented separately in Figure 4.

Figure 4: Chloroform in Groundwater Compared to MCLs

Chloroform has been widely detected in groundwater across the Upper Cape as stated in a joint press release from USEPA, MADEP, IRP, and the Joint Programs Office. The Cape Cod Commission (2001) in their review of public water supply wells for 1999 found greater than 75% contained chloroform with an average concentration of 4.7 ug/L. The IRP has concluded chloroform is not the result of Air Force activities. A detailed discussion of the presence of chloroform is provided in the Final Central Impact Area Groundwater Report (06/01). To date, the source of the chloroform in the Upper Cape groundwater has not been identified.

Figure 5: SVOCs in Groundwater Compared to MCLs/HAs

For data validated in December 2002, no wells had first time validated detections of semi-volatile organic compounds (SVOCs) above the MCLs/HAs. Three wells, MW-46M1 (East of Impact Area), MW-63D and MW-70S (Central Impact Area), had first time validated detections of various SVOCs below the MCLs/HAs.

Exceedances of drinking water criteria for SVOCs are scattered throughout the study area. All exceedances of drinking water criteria for SVOCs were measured for bis (2-ethylhexyl) phthalate (BEHP), except for well 41M1 which had an estimated level of 2,6-dinitrotoluene (DNT) that is equal to the HA. Detections of BEHP are presented separately in Figure 6.

The 2,6-DNT detected at well 41M1 is interesting in that the explosives analysis of this sample by EPA Method 8330 did not detect this compound. The reporting limit under Method 8330 is much lower than the limit for the SVOC method. Well 41M1 was installed along the groundwater flow path downgradient from well 2M2, which has had RDX detected above the HA in the explosives analysis as indicated above. The 2,6-DNT detection at well 41M1 was in the second sampling round, and samples from this well did not have 2,6-DNT detected by either the SVOC method or the explosives method in the first, third, fourth, or fifth sampling rounds.

Figure 6: BEHP in Groundwater Compared to MCLs

Exceedances of drinking water criteria for bis (2-ethylhexyl) phthalate (BEHP) are scattered throughout the study area. BEHP is believed to be largely an artifact of the investigation methods, introduced to the samples during collection or analysis. However, the potential that some of the detections of BEHP are the result of activities conducted at MMR has not been ruled out.

A detailed discussion of the presence of BEHP is provided in the Draft Completion of Work Report (7/98) and subsequent responses to comments. The theory that BEHP mostly occurs as an artifact, and is not really present in the aquifer, is supported by the results of subsequent sampling rounds that show much lower levels of the chemical after additional precautions were taken to prevent cross-contamination during sample collection and analysis. Only four locations (out of 82) showed BEHP exceedances in consecutive sampling rounds: 28MW0106 (located near SD-5, a site under investigation by AFCEE), 58MW0006E (located at CS-19), and 90WT0013 (located at FS-12), and 146M1 (located at L Range). Subsequent sampling rounds at all these locations have had results below the MCL. Five wells (27MW0705, 27MW2061, 164M1, 188M1 and 196M1) had BEHP exceedances in the year 2002 results.

Figure 7: Herbicides and Pesticides in Groundwater Compared to MCLs/HAs

For data validated in December 2002, no wells had first time validated detections of herbicides or pesticides.

There has been one exceedance of drinking water criteria for pesticides, at well PPAWSMW-1. A contractor to the United States Air Force installed this monitoring well at the PAVE PAWS radar station in accordance with the Massachusetts Contingency Plan (MCP), in order to evaluate contamination from a fuel spill. The exceedance was for the pesticide dieldrin in a sample collected in June 1999. This well was sampled again in November 1999. The results of the November sample indicate no detectable pesticides although hydrocarbon interference was noted. It appears from the November sample that pesticides identified in the June sample were false positives. However, the June sample results cannot be changed when following the EPA functional guidelines for data validation. The text of the validation report for the June sample has been revised to include an explanation of the hydrocarbon interference and the potential for false positives.

There has been one exceedance of drinking water criteria for herbicides, at well 41M1. This response well was installed downgradient of the Central Impact Area, as indicated above (see discussion for Figure 5). The exceedance was for the herbicide pentachlorophenol in a sample collected in May 2000. There were no detections above the MCL of this compound in the three previous sampling rounds in 1999, nor in the subsequent sampling rounds in 2000, 2001, and 2002.

Figure 8: Perchlorate in Groundwater Compared to EPA MMR Relevant Standard

For data validated in December 2002, three wells, MW-142M2, MW-143M2, and MW-193S (Southeast Ranges), had first time validated detections of perchlorate that exceeded the EPA MMR Relevant Standard of 1.5 ppb. Seven wells, 00-1A (Bourne Area), 58MW0003, MW-235M1 (Central Impact Area), MW-214M2 (Demo Area 1), MW-218M1, and MW-234M1 (Southeast Ranges) had first time validated detections of perchlorate that did not exceed the EPA MMR Relevant Standard.

Sampling and analysis of groundwater for perchlorate was initiated at the end of the year 2000 as part of the groundwater study program at Camp Edwards. EPA established the EPA MMR Relevant Standard for perchlorate of 1.5 parts per billion (ppb) specific to Camp Edwards. At present, there have been exceedances of the limit of 1.5 ppb for perchlorate in 72 wells.

Exceedances of EPA MMR Relevant Standard for perchlorate are indicated in seven general areas:

- Demo Area 1 (wells 19, 31, 32, 33, 34, 35, 73, 75, 76, 77, 78, 114, 129, 139, 162, 165, 172, 210, 211, 225, and 231);
- Central Impact Area and CS-19 (wells 58MW0009C and 58MW0015A and wells 91, 93, 99, 100, 101, 105, 141, OW-1, OW-2 and OW-6);
- J Ranges and southeast of the J Ranges (wells 125, 127, 128, 130, 132, 142, 143,158, 163, 166, 193, 197,198, 227 and 232 and wells 90MW0022 and 90MW0054);
- GP-16 (well 66);
- West of Impact Area (wells 80 and 233);
- LF-1 (27MW0031B and 27MW2134A); and
- CS-18 (well 16MW0001).

Rush (Non-Validated) Data

Rush data are summarized in Table 4. 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 profile samples, are typically conducted in this timeframe. Other types of analyses may be rushed depending on the proposed use of the data. The rush data have not yet been validated, but are provided as an indication of the most recent preliminary results. Table 4 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 4. 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 4, 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 4 includes the following detections:

Bourne Area

- Groundwater samples from 02-01M1; 02-02M1, M2; 02-03M3; 02-04M1; 02-05M1, M2; 02-07M3; 02-08M2, M3; 02-09M1, M2; 02-12M3; 02-13M1, M2, M3; 1-88A, B; 97-5; MW-80M1, M2; MW-213M2, M3; MW-226M2 and MW-233M3 had detections of perchlorate. The results were similar to the previous sampling rounds.

- Groundwater samples from Bourne supply well 4036000-03G had a detection of perchlorate. This is the first detection of perchlorate in this well since October.

- Groundwater samples from Bourne supply well 4036000-04G had a detection of perchlorate. This is the first detection of perchlorate in this well since September.

- Groundwater samples from 02-10M1 had a detection of perchlorate. This is the first detection of perchlorate in this well.

- Groundwater samples from MW-216S had detections of perchlorate and PETN. The PETN detection was not confirmed by PDA spectra. The results were similar to previous sampling rounds except that PETN has never been a validated detection in this well.

- Groundwater samples from 00-2D had detections of 2,6-DNT, acetone and TCE. The detection of 2,6-DNT was not confirmed by PDA spectra. This is the first time acetone and TCE have been detected in this well.

- Groundwater samples from 02-04M1, M2 and M3 had detections of TCE. The results were similar to the previous sampling rounds.

- Groundwater samples from SPRING1and 02-05M2 had detections of acetone and toluene. These are the first detections of acetone and toluene in these wells.

- Groundwater samples from 00-7 had a detection of acetone. This is the first time acetone has been detected in this well.

- Groundwater samples from 02-12M1 had detections of toluene. These are the first detections of toluene in this well.

- Eighty-one groundwater samples and duplicate samples had detections of chloroform.

Central Impact Area and Downgradient

- Groundwater samples from 58MW0001; 58MW0002; 58MW0007B; 58MW0009E; 58MW0011D; 58MW0018A; 58MW0018B; 58MW0020B; MW-98M1, S; MW-100M1; MW-107M1, M2; MW-111M2, M3 and duplicate; MW-112M1, M2; MW-113M1, M2; and MW-141M2 had detections of explosives that were confirmed by PDA spectra. The results were similar to the previous sampling rounds.

- Groundwater samples from MW-101M1 had detections of RDX and HMX that were confirmed by PDA spectra. This is the first detection of HMX in this well; the RDX results were similar to the previous sampling rounds.

- Groundwater samples from MW-141S had a detection of 4A-DNT that was confirmed by PDA spectra. This is the first detection of 4A-DNT in this well. TNT and 2,6-DNT were detected in samples from this well in 2001.

- Groundwater samples from MW-201M3 had a detection of RDX that was confirmed by PDA spectra. This is the first detection of RDX in this well.

- Groundwater samples from MW-224S had a detection of PETN that was not confirmed by PDA spectra. PETN has never been a validated detection in this well.

Southeast Ranges

- Groundwater samples from MW-142M2; MW-143M1, M2, M3; MW-147M1, M2; MW-153M1; MW-157M2; MW-166M1, M2; and MW-198M3, M4 had detections of explosives that were confirmed by PDA spectra. The results were similar to the previous sampling rounds.

- Groundwater samples from MW-132S and MW-136S had detections of RDX, HMX, and PETN. The detections of RDX and HMX were confirmed by PDA spectra and the results were similar to the previous sampling rounds. The detection of PETN was not confirmed by PDA spectra and has never been a validated detection in these wells

- Groundwater samples from MW-131S had a detection of nitroglycerin that was not confirmed by PDA spectra. Nitroglycerin has never been a validated detection in this well.

- Groundwater samples from MW-243M3 had detections of nitroglycerin and picric acid that were not confirmed by PDA spectra. This is the first sampling event and the results were consistent with the profile results.

- Profile samples from MW-251 (J3P-26) had detections of VOCs and perchlorate. Perchlorate was detected in three intervals between 95 and 105 feet and at 125 feet below the water table. Well screens will be set at the depth corresponding to the screen at MW-171M2 (78 to 83 ft bwt), at the depth (93 to 98 ft bwt) of the shallowest perchlorate detection, and at the depth (123 to 128 ft bwt) of the deepest perchlorate detection.

- Profile samples from MW-253 (J1P-18) had detections of explosives and VOCs. None of the detections of explosives were confirmed by PDA spectra. Well screens will be set at the water table (-2 to 8 ft bwt), at the depth (136 to 146 ft bwt) that a forward particle track from MW-164M2 would intercept the MW-253 borehole, and at the depth (176 to 186 ft bwt) of bedrock.

Demo Area 1

- Groundwater samples from MW-31M, S; MW-34M1, M2; MW-76M1, M2; MW-77M2; MW-78M1, M2; MW-114M1, M2; MW-129M1, M2 and duplicate; and MW-165M2 had detections of explosives that were confirmed by PDA spectra. The results were similar to the previous sampling rounds.

- Groundwater samples from MW-76S had detections of HMX, RDX, and PETN. The detections of RDX and HMX were confirmed by PDA spectra and the results were similar to the previous sampling rounds. The detection of PETN was not confirmed by PDA spectra and has never been a validated detection in this well.

- Groundwater samples from MW-78M3 had a detection of PETN that was not confirmed by PDA spectra. PETN has never been a validated detection in this well.

Demo Area 2

- Groundwater samples from MW-160S had a detection of RDX that was confirmed by PDA spectra. The results were similar to the previous sampling rounds.

- Groundwater samples from MW-161S had detections of RDX and PETN. The detection of RDX was confirmed by PDA spectra and the results were similar to the previous sampling rounds. The detection of PETN was not confirmed by PDA spectra. PETN has never been a validated detection in this well.

Other Areas

- Groundwater samples from MW-18M1 (Northeast of Impact Area) had a detection of RDX that was confirmed by PDA spectra. The results were similar to the previous sampling rounds.

- Groundwater samples from the Gallo Ice Skating Rink well (West of Base Boundary) and duplicate had detections of perchlorate, PETN and nitroglycerin. The explosive compounds were not confirmed by PDA spectra. This is the first sampling event for this well.

3. DELIVERABLES SUBMITTED

Deliverables submitted during the reporting period include the following:

Weekly Progress Update for November 18 – November 22, 2002	12/02/2002
Weekly Progress Update for November 25 – November 29, 2002	12/05/2002
Monthly Progress Report for November 2002	12/09/2002
Draft Summary Report – January - March 2002 UXO Detonations	12/09/2002
Draft Final COC List for the Gun and Mortar Firing Positions	12/10/2002
Weekly Progress Report for December 2 – December 6, 2002	12/13/2002
Draft IAGWSP Technical Team Memo 02-5, Site-Wide Perchlorate Characterization Report	12/20/2002
Weekly Progress Update for December 9 – December 13, 2002	12/23/2002
Weekly Progress Update for December 16 – December 20, 2002	12/30/2002

4. SCHEDULED ACTIONS

Figure 9 provides a Gantt chart updated to reflect progress and proposed work. Activities scheduled for January and early February include:

- Finish Demolition Area 1 Groundwater RRA/RAM Plan
- Continue Demolition Area 1 Soil RRA/RAM Plan preparation
- Continue HUTA 1 Revised Draft Final Report revision
- Continue HUTA 2 Revised Draft Final Report revision
- Start J-1/J-3/L Ranges Draft Final Report preparation
- Continue Gun and Mortar Firing Position Draft Final COC Letter Report revision
- Continue Phase II(b) Draft SAR Report revision
- Finish Phase II(b) Draft Final Report
- Continue Revised MSP Phase I Draft Report revision
- Finish MSP2 ASP Final Report
- Finish MSP3 Eastern Test Site Final Report
- Finish MSP Scar Site Draft Report
- Start Demo Area 1 Groundwater Feasibility Study Screening Report preparation
- Finish UXO Final Feasibility Study Screening Report

5. SUMMARY OF ACTIVITIES FOR DEMO 1

Additional delineation of the downgradient portion of the groundwater plume is being conducted prior to finalizing the Feasibility Study for the Groundwater Operable Unit and as the Interim Action for groundwater remediation is being designed. Pumping and treating groundwater at the toe of the Demo 1 plume and at Frank Perkins Road has been selected as an Interim Action to address the Demo 1 Area Groundwater Operable Unit. A Rapid Response Action/Release Abatement Measure (RRA/RAM) is also being planned to address soil contamination at Demo 1. Drilling at D1P-18 commenced and UXO clearance at D1P-19 was completed this month.

TABLE 2
SAMPLING PROGRESS
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
AB1	AB-1	12/24/2002	ANIMAL_TISSUE				
AH1	AH-1	12/24/2002	ANIMAL_TISSUE				
AM1	AM-1	12/24/2002	ANIMAL_TISSUE				
AQ1	AQ-1	12/24/2002	ANIMAL_TISSUE				
AQ1D	AQ-1	12/24/2002	ANIMAL_TISSUE				
AR1	AR-1	12/24/2002	ANIMAL_TISSUE				
AU1	AU-1	12/24/2002	ANIMAL_TISSUE				
BB1	BB-1	12/24/2002	ANIMAL_TISSUE				
CONTROL-TA	CONTROL-TA	12/24/2002	ANIMAL_TISSUE				
Y1	Y-1	12/24/2002	ANIMAL_TISSUE				
J2.A.T1A.021.1.0	J2.A.T1A.021	12/18/2002	CRATER GRAB				
J2.A.T1A.021.1.	J2.A.T1A.021	12/18/2002	CRATER GRAB				
J2.A.T1A.021.2.0	J2.A.T1A.021	12/19/2002	CRATER GRAB				
J2.A.T1A.021.3.0	J2.T1A.021.R	12/19/2002	CRATER GRAB				
J2.A.T1A.022.1.0	J2.A.T1A.022	12/18/2002	CRATER GRAB				
J2.A.T1A.022.2.0	J2.A.T1A.022	12/19/2002	CRATER GRAB				
J2.A.T1A.022.3.0	J2.T1A.022.R	12/19/2002	CRATER GRAB				
J2.A.T1A.022.3.	J2.T1A.022.R	12/19/2002	CRATER GRAB				
UR.A.L1A.1.0	UR.A.L1A	12/18/2002	CRATER GRAB				
UR.A.L1A.2.0	UR.A.L1A	12/19/2002	CRATER GRAB				
UR.A.L1A.3.0	UR.A.L1A	12/19/2002	CRATER GRAB				
UR.A.L1B.1.0	UR.A.L1B	12/18/2002	CRATER GRAB				
UR.A.L1B.2.0	UR.A.L1B	12/19/2002	CRATER GRAB				
UR.A.L1B.3.0	UR.A.L1B	12/19/2002	CRATER GRAB				
UR.A.L1C.1.0	UR.A.L1C	12/18/2002	CRATER GRAB				
UR.A.L1C.2.0	UR.A.L1C	12/19/2002	CRATER GRAB				
UR.A.L1C.3.0	UR.A.L1C	12/19/2002	CRATER GRAB				
UR.A.L1D.1.0	UR.A.L1D	12/18/2002	CRATER GRAB				
UR.A.L1D.1.D	UR.A.L1D	12/18/2002	CRATER GRAB				
UR.A.L1D.2.0	UR.A.L1D	12/19/2002	CRATER GRAB				
UR.A.L1D.3.0	UR.A.L1D	12/19/2002	CRATER GRAB				
UR.A.L1E.1.0	UR.A.L1E	12/18/2002	CRATER GRAB				
UR.A.L1E.2.0	UR.A.L1E	12/19/2002	CRATER GRAB				
UR.A.L1E.3.0	UR.A.L1E	12/19/2002	CRATER GRAB				

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
UR.A.L1F.1.0	UR.A.L1F	12/18/2002	CRATER GRAB				
UR.A.L1F.2.0	UR.A.L1F	12/19/2002	CRATER GRAB				
UR.A.L1F.3.0	UR.A.L1F	12/19/2002	CRATER GRAB				
UR.A.L1G.1.0	UR.A.L1G	12/18/2002	CRATER GRAB				
UR.A.L1G.2.0	UR.A.L1G	12/19/2002	CRATER GRAB				
UR.A.L1G.3.0	UR.A.L1G	12/19/2002	CRATER GRAB				
UR.A.L1H.1.0	UR.A.L1H	12/18/2002	CRATER GRAB				
UR.A.L1H.1.D	UR.A.L1H	12/18/2002	CRATER GRAB				
UR.A.L1H.2.0	UR.A.L1H	12/19/2002	CRATER GRAB				
UR.A.L1H.3.0	UR.A.L1H	12/19/2002	CRATER GRAB				
UR.A.L1J.1.0	UR.A.L1J	12/18/2002	CRATER GRAB				
UR.A.L1J.2.0	UR.A.L1J	12/19/2002	CRATER GRAB				
UR.A.L1J.3.0	UR.A.L1J	12/19/2002	CRATER GRAB				
J2.A.T2P.015.1.0	J2.T2P.015.R	11/25/2002	CRATER GRID				
J2.A.T2P.015.2.0	J2.T2P.015.R	11/26/2002	CRATER GRID				
J2.A.T2P.015.3.0	J2.T2P.015.R	11/26/2002	CRATER GRID				
0.G.0.0UR12.0.E	FIELDQC	12/18/2002	FIELDQC	0	0		
0.G.0.0UR13.0.E	FIELDQC	12/20/2002	FIELDQC	0	0		
0.G.0.AMETT.0.	FIELDQC	12/18/2002	FIELDQC	0	0		
58MW0007C-E	FIELDQC	12/06/2002	FIELDQC	0	0		
58MW0007C-E	FIELDQC	12/06/2002	FIELDQC	0	0		
58MW0011D-E	FIELDQC	12/09/2002	FIELDQC	0	0		
58MW0011D-E	FIELDQC	12/09/2002	FIELDQC	0	0		
58MW0016A-E	FIELDQC	12/11/2002	FIELDQC	0	0		
58MW0016A-E	FIELDQC	12/11/2002	FIELDQC	0	0		
95-6B-E	FIELDQC	12/04/2002	FIELDQC	0	0		
95-6B-E	FIELDQC	12/04/2002	FIELDQC	0	0		
97-2B-E	FIELDQC	12/12/2002	FIELDQC	0	0		
G251DAT	FIELDQC	12/05/2002	FIELDQC	0	0		
G251DHE	FIELDQC	12/06/2002	FIELDQC	0	0		
G251DHE	FIELDQC	12/06/2002	FIELDQC	0	0		
G251DJT	FIELDQC	12/06/2002	FIELDQC	0	0		
G251DOE	FIELDQC	12/09/2002	FIELDQC	0	0		
G251DOE	FIELDQC	12/09/2002	FIELDQC	0	0		

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
G251DOT	FIELDQC	12/09/2002	FIELDQC	0	0		
G252DAE	FIELDQC	12/12/2002	FIELDQC	0	0		
G252DAE	FIELDQC	12/12/2002	FIELDQC	0	0		
G252DDE	FIELDQC	12/13/2002	FIELDQC	0	0		
G252DDE	FIELDQC	12/13/2002	FIELDQC	0	0		
G252DEE	FIELDQC	12/17/2002	FIELDQC	0	0		
G252DEE	FIELDQC	12/17/2002	FIELDQC	0	0		
G253DAE	FIELDQC	12/18/2002	FIELDQC	0	0		
G253DAE	FIELDQC	12/18/2002	FIELDQC	0	0		
G253DIE	FIELDQC	12/19/2002	FIELDQC	0	0		
G253DIE	FIELDQC	12/19/2002	FIELDQC	0	0		
M-1B-E	FIELDQC	12/18/2002	FIELDQC	0	0		
M-1B-E	FIELDQC	12/18/2002	FIELDQC	0	0		
M-3D-E	FIELDQC	12/16/2002	FIELDQC	0	0		
M-3D-E	FIELDQC	12/16/2002	FIELDQC	0	0		
M-3D-T	FIELDQC	12/16/2002	FIELDQC	0	0		
M-7B-E	FIELDQC	12/17/2002	FIELDQC	0	0		
M-7B-E	FIELDQC	12/17/2002	FIELDQC	0	0		
OW00-1D-E	FIELDQC	12/31/2002	FIELDQC	0	0		
OW00-1D-E	FIELDQC	12/31/2002	FIELDQC	0	0		
TW00-1D-T	FIELDQC	12/23/2002	FIELDQC	0	0		
TW00-4DB-T	FIELDQC	12/13/2002	FIELDQC	0	0		
TW1-88A-E	FIELDQC	12/10/2002	FIELDQC	0	0		
TW1-88A-E	FIELDQC	12/30/2002	FIELDQC	0	0		
TW1-88B-E	FIELDQC	12/13/2002	FIELDQC	0	0		
TW1-88B-E	FIELDQC	12/13/2002	FIELDQC	0	0		
W02-07M2T	FIELDQC	12/11/2002	FIELDQC	0	0		
W02-10M2T	FIELDQC	12/20/2002	FIELDQC	0	0		
W02-12M1T	FIELDQC	12/30/2002	FIELDQC	0	0		
W02-12M1T	FIELDQC	12/10/2002	FIELDQC	0	0		
W02-12M1T	FIELDQC	12/17/2002	FIELDQC	0	0		
W02-12M1T	FIELDQC	12/04/2002	FIELDQC	0	0		
W02-13M2F	FIELDQC	12/10/2002	FIELDQC	0	0		
W02-13M2F	FIELDQC	12/10/2002	FIELDQC	0	0		

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
W02-13M2F	FIELDQC	12/10/2002	FIELDQC	0	0		
W02-13M2F	FIELDQC	12/10/2002	FIELDQC	0	0		
W02-13M2F	FIELDQC	12/10/2002	FIELDQC	0	0		
W02-15M1T	FIELDQC	12/12/2002	FIELDQC	0	0		
W198M3E	FIELDQC	12/05/2002	FIELDQC	0	0		
W198M3E	FIELDQC	12/05/2002	FIELDQC	0	0		
W213M1T	FIELDQC	12/18/2002	FIELDQC	0	0		
WS-4AD-E	FIELDQC	12/19/2002	FIELDQC	0	0		
WS-4AD-E	FIELDQC	12/19/2002	FIELDQC	0	0		
WS-4SD-T	FIELDQC	12/19/2002	FIELDQC	0	0		
XX956-E	FIELDQC	12/02/2002	FIELDQC	0	0		
XXM973-E	FIELDQC	12/23/2002	FIELDQC	0	0		
XXM973-E	FIELDQC	12/19/2002	FIELDQC	0	0		
4036000-01G-A	4036000-01G	12/04/2002	GROUNDWATER			6	12
4036000-01G-A	4036000-01G	12/10/2002	GROUNDWATER			6	12
4036000-01G-A	4036000-01G	12/24/2002	GROUNDWATER			6	12
4036000-01G-A	4036000-01G	12/31/2002	GROUNDWATER			6	12
4036000-01G-A	4036000-01G	12/17/2002	GROUNDWATER			6	12
4036000-03G-A	4036000-03G	12/04/2002	GROUNDWATER	50	60	6	12
4036000-03G-A	4036000-03G	12/10/2002	GROUNDWATER	50	60	6	12
4036000-03G-A	4036000-03G	12/24/2002	GROUNDWATER	50	60	6	12
4036000-03G-A	4036000-03G	12/31/2002	GROUNDWATER	50	60	6	12
4036000-03G-A	4036000-03G	12/17/2002	GROUNDWATER	50	60	6	12
4036000-04G-A	4036000-04G	12/04/2002	GROUNDWATER			6	12
4036000-04G-A	4036000-04G	12/10/2002	GROUNDWATER			6	12
4036000-04G-A	4036000-04G	12/24/2002	GROUNDWATER			6	12
4036000-04G-A	4036000-04G	12/31/2002	GROUNDWATER			6	12
4036000-04G-A	4036000-04G	12/17/2002	GROUNDWATER			6	12
4036000-06G-A	4036000-06G	12/04/2002	GROUNDWATER			6	12
4036000-06G-A	4036000-06G	12/10/2002	GROUNDWATER			6	12
4036000-06G-A	4036000-06G	12/24/2002	GROUNDWATER			6	12
4036000-06G-A	4036000-06G	12/31/2002	GROUNDWATER			6	12
4036000-06G-A	4036000-06G	12/17/2002	GROUNDWATER			6	12
58MW0001-A	58MW0001	12/06/2002	GROUNDWATER	121.8	126.8	0	5

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
58MW0002-A	58MW0002	12/05/2002	GROUNDWATER	121.2	126.2	0	5
58MW0002-A	58MW0002	12/05/2002	GROUNDWATER	121.2	126.2	0	5
58MW0007B-A	58MW0007B	12/04/2002	GROUNDWATER	187.7	192.7	49	54
58MW0007B-A	58MW0007B	12/04/2002	GROUNDWATER	187.7	192.7	49	54
58MW0007C-A	58MW0007C	12/06/2002	GROUNDWATER	152.78	157.78	24	29
58MW0007C-A	58MW0007C	12/06/2002	GROUNDWATER	152.78	157.78	24	29
58MW0009C-A	58MW0009C	12/09/2002	GROUNDWATER	168.21	173.21	41	47
58MW0009C-A	58MW0009C	12/09/2002	GROUNDWATER	168.21	173.21	41	47
58MW0009E-A	58MW0009E	12/09/2002	GROUNDWATER	133.4	138.4	6.5	11.5
58MW0009E-A	58MW0009E	12/09/2002	GROUNDWATER	133.4	138.4	6.5	11.5
58MW0011D-A	58MW0011D	12/09/2002	GROUNDWATER	175.4	180.4	49.5	54.5
58MW0011D-A	58MW0011D	12/09/2002	GROUNDWATER	175.4	180.4	49.5	54.5
58MW0011E-A	58MW0011E	12/09/2002	GROUNDWATER	145	150	15.7	20.7
58MW0011E-A	58MW0011E	12/09/2002	GROUNDWATER	145	150	15.7	20.7
58MW0011E-D	58MW0011E	12/09/2002	GROUNDWATER	145	150	15.7	20.7
58MW0011E-D	58MW0011E	12/09/2002	GROUNDWATER	145	150	15.7	20.7
58MW0016A-A	58MW0016A	12/11/2002	GROUNDWATER	175.9	185.05	54.22	63.22
58MW0016A-A	58MW0016A	12/11/2002	GROUNDWATER	175.9	185.05	54.22	63.22
58MW0016B-A	58MW0016B	12/11/2002	GROUNDWATER	151.09	160.74	28.5	38.5
58MW0016B-A	58MW0016B	12/11/2002	GROUNDWATER	151.09	160.74	28.5	38.5
58MW0018A-A	58MW0018A	12/11/2002	GROUNDWATER	202.7	211.7	60.85	69.85
58MW0018A-A	58MW0018A	12/11/2002	GROUNDWATER	202.7	211.7	60.85	69.85
58MW0018B-A	58MW0018B	12/10/2002	GROUNDWATER	175.9	185.58	34.55	44.55
58MW0018B-A	58MW0018B	12/10/2002	GROUNDWATER	175.9	185.58	34.55	44.55
58MW0020A-A	58MW0020A	12/10/2002	GROUNDWATER		248	0	88
58MW0020A-A	58MW0020A	12/10/2002	GROUNDWATER		248	0	88
58MW0020B-A	58MW0020B	12/10/2002	GROUNDWATER		205	0	43
58MW0020B-A	58MW0020B	12/10/2002	GROUNDWATER		205	0	43
90MW0003-A	90MW0003	12/31/2002	GROUNDWATER	144	149	52.11	57.11
90MW0005-A	90MW0005	12/31/2002	GROUNDWATER	184	189	89.03	94.03
90MW0054-A	90MW0054	12/30/2002	GROUNDWATER	107	112	91.83	96.83
90MW0054-A	90MW0054	12/30/2002	GROUNDWATER	107	112	91.83	96.83
95-6B-A	95-6B	12/04/2002	GROUNDWATER	119	129	94	104
95-6B-A	95-6B	12/04/2002	GROUNDWATER	119	129	94	104

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
97-2B-A	97-2B	12/12/2002	GROUNDWATER		121.7	0	75.4
97-2B-D	97-2B	12/12/2002	GROUNDWATER		121.7	0	75.4
97-2C-A	97-2C	12/10/2002	GROUNDWATER		132	0	68
97-2D-A	97-2D	12/11/2002	GROUNDWATER		115.4	0	82.9
97-2E-A	97-2E	12/12/2002	GROUNDWATER		94.5	0	49.8
97-2F-A	97-2F	12/11/2002	GROUNDWATER		120	0	76.7
97-2G-A	97-2G	12/11/2002	GROUNDWATER		126.8	0	73.7
GLSKRNK-A	GLSKRNK	12/20/2002	GROUNDWATER				
GLSKRNK-A	GLSKRNK	12/20/2002	GROUNDWATER				
GLSKRNK-D	GLSKRNK	12/20/2002	GROUNDWATER				
GLSKRNK-D	GLSKRNK	12/20/2002	GROUNDWATER				
M-1B-A	M-1	12/18/2002	GROUNDWATER		45		
M-1B-A	M-1	12/18/2002	GROUNDWATER		45		
M-1C-A	M-1	12/18/2002	GROUNDWATER		55		
M-1C-A	M-1	12/18/2002	GROUNDWATER		55		
M-1D-A	M-1	12/18/2002	GROUNDWATER		65		
M-1D-A	M-1	12/18/2002	GROUNDWATER		65		
M-1D-D	M-1	12/18/2002	GROUNDWATER		65		
M-1D-D	M-1	12/18/2002	GROUNDWATER		65		
M-2B-A	M-2	12/16/2002	GROUNDWATER		65		
M-2B-A	M-2	12/16/2002	GROUNDWATER		65		
M-2C-A	M-2	12/16/2002	GROUNDWATER		75		
M-2C-A	M-2	12/16/2002	GROUNDWATER		75		
M-2D-A	M-2	12/16/2002	GROUNDWATER		85		
M-2D-A	M-2	12/16/2002	GROUNDWATER		85		
M-3B-A	M-3	12/16/2002	GROUNDWATER		65		
M-3B-A	M-3	12/16/2002	GROUNDWATER		65		
M-3C-A	M-3	12/16/2002	GROUNDWATER		75		
M-3C-A	M-3	12/16/2002	GROUNDWATER		75		
M-3D-A	M-3	12/16/2002	GROUNDWATER		85		
M-3D-A	M-3	12/16/2002	GROUNDWATER		85		
M-4B-A	M-4	12/18/2002	GROUNDWATER		69		
M-4B-A	M-4	12/18/2002	GROUNDWATER		69		
M-4C-A	M-4	12/18/2002	GROUNDWATER		79		

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
M-4C-A	M-4	12/18/2002	GROUNDWATER		79		
M-4D-A	M-4	12/18/2002	GROUNDWATER		89		
M-4D-A	M-4	12/18/2002	GROUNDWATER		89		
M-5B-A	M-5	12/18/2002	GROUNDWATER		65		
M-5B-A	M-5	12/18/2002	GROUNDWATER		65		
M-5C-A	M-5	12/18/2002	GROUNDWATER		75		
M-5C-A	M-5	12/18/2002	GROUNDWATER		75		
M-5D-A	M-5	12/18/2002	GROUNDWATER		85		
M-5D-A	M-5	12/18/2002	GROUNDWATER		85		
M-6B-A	M-6	12/17/2002	GROUNDWATER		59		
M-6B-A	M-6	12/17/2002	GROUNDWATER		59		
M-6C-A	M-6	12/17/2002	GROUNDWATER		69		
M-6C-A	M-6	12/17/2002	GROUNDWATER		69		
M-6D-A	M-6	12/17/2002	GROUNDWATER		79		
M-6D-A	M-6	12/17/2002	GROUNDWATER		79		
M-7B-A	M-7	12/17/2002	GROUNDWATER		59		
M-7B-A	M-7	12/17/2002	GROUNDWATER		59		
M-7C-A	M-7	12/17/2002	GROUNDWATER		65		
M-7C-A	M-7	12/17/2002	GROUNDWATER		65		
M-7D-A	M-7	12/17/2002	GROUNDWATER		75		
M-7D-A	M-7	12/17/2002	GROUNDWATER		75		
MW00-4-A	00-4	12/17/2002	GROUNDWATER	64	70	38	44
MW00-4-A	00-4	12/17/2002	GROUNDWATER	64	70	38	44
OW00-1D-A	00-1D	12/31/2002	GROUNDWATER	91	97	48.3	54.3
OW00-1D-A	00-1D	12/31/2002	GROUNDWATER	91	97	48.3	54.3
SPRING1-A	SPRING1	12/10/2002	GROUNDWATER			0	0
SPRING1-A	SPRING1	12/10/2002	GROUNDWATER			0	0
TW00-1-A	00-1	12/19/2002	GROUNDWATER	64	70	52.1	58.1
TW00-1-A	00-1	12/19/2002	GROUNDWATER	64	70	52.1	58.1
TW00-2D-A	00-2	12/19/2002	GROUNDWATER	71	77	43.95	49.95
TW00-2D-A	00-2	12/19/2002	GROUNDWATER	71	77	43.95	49.95
TW00-4DA-A	00-4D	12/13/2002	GROUNDWATER			0	0
TW00-4DA-A	00-4D	12/13/2002	GROUNDWATER			0	0
TW00-4DA-D	00-4D	12/13/2002	GROUNDWATER			0	0

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
TW00-4DA-D	00-4D	12/13/2002	GROUNDWATER			0	0
TW00-4DB-A	00-4D	12/13/2002	GROUNDWATER			0	0
TW00-4DB-A	00-4D	12/13/2002	GROUNDWATER			0	0
TW00-5-A	00-5	12/16/2002	GROUNDWATER	50	56	15.5	21.5
TW00-5-A	00-5	12/16/2002	GROUNDWATER	50	56	15.5	21.5
TW00-6-A	00-6	12/13/2002	GROUNDWATER	36	42	9.6	15.6
TW00-6-A	00-6	12/13/2002	GROUNDWATER	36	42	9.6	15.6
TW00-7-A	00-7	12/16/2002	GROUNDWATER	57	63	25.5	31.5
TW00-7-A	00-7	12/16/2002	GROUNDWATER	57	63	25.5	31.5
TW01-1-A	01-1	12/16/2002	GROUNDWATER	62	67	55.21	60.21
TW01-2-A	01-2	12/13/2002	GROUNDWATER	50	56	24.5	30.5
TW1-88A-A	1-88	12/03/2002	GROUNDWATER		102.9	0	67.4
TW1-88A-A	1-88	12/10/2002	GROUNDWATER		102.9	0	67.4
TW1-88A-A	1-88A	12/24/2002	GROUNDWATER		102.9	0	67.4
TW1-88A-A	1-88A	12/30/2002	GROUNDWATER		102.9	0	67.4
TW1-88A-A	1-88	12/17/2002	GROUNDWATER		102.9	0	67.4
TW1-88B-A	1-88	12/13/2002	GROUNDWATER		105.5	0	69.6
W02-01M1A	02-01	12/10/2002	GROUNDWATER	95	105	42.9	52.9
W02-01M1A	02-01	12/10/2002	GROUNDWATER	94.5	104.5	42.65	52.65
W02-01M1A	02-01	12/10/2002	GROUNDWATER	95	105	42.9	52.9
W02-01M2A	02-01	12/11/2002	GROUNDWATER	83	93	30.9	40.9
W02-01M2A	02-01	12/11/2002	GROUNDWATER	83	93	30.9	40.9
W02-01M2A	02-01	12/11/2002	GROUNDWATER	49.5	59.5	0	10
W02-02M1A	02-02	12/11/2002	GROUNDWATER	114.5	124.5	63.5	73.5
W02-02M1A	02-02	12/11/2002	GROUNDWATER	114.5	124.5	63.5	73.5
W02-02M1A	02-02	12/11/2002	GROUNDWATER	114.5	124.5	63.5	73.5
W02-02M2A	02-02	12/11/2002	GROUNDWATER	94.5	104.5	42.65	52.65
W02-02M2A	02-02	12/11/2002	GROUNDWATER	94.5	104.5	42.65	52.65
W02-02M2D	02-02	12/11/2002	GROUNDWATER	94.5	104.5	42.65	52.65
W02-02M2D	02-02	12/11/2002	GROUNDWATER	94.5	104.5	42.65	52.65
W02-02SSA	02-02	12/11/2002	GROUNDWATER	49.5	59.5	0	10
W02-02SSA	02-02	12/11/2002	GROUNDWATER	49.5	59.5	0	10
W02-03M1A	02-03	12/16/2002	GROUNDWATER	130	140	86.1	96.1
W02-03M1A	02-03	12/16/2002	GROUNDWATER	130	140	86.1	96.1

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
W02-03M2A	02-03	12/16/2002	GROUNDWATER	92	102	48.15	58.15
W02-03M2A	02-03	12/16/2002	GROUNDWATER	92	102	48.15	58.15
W02-03M3A	02-03	12/16/2002	GROUNDWATER	75	85	31.05	41.05
W02-03M3A	02-03	12/16/2002	GROUNDWATER	75	85	31.05	41.05
W02-04M1A	02-04	12/16/2002	GROUNDWATER	123	133	73.97	83.97
W02-04M1A	02-04	12/16/2002	GROUNDWATER	123	133	73.97	83.97
W02-04M2A	02-04	12/16/2002	GROUNDWATER	98	108	48.93	58.93
W02-04M2A	02-04	12/16/2002	GROUNDWATER	98	108	48.93	58.93
W02-04M3A	02-04	12/16/2002	GROUNDWATER	83	93	34.01	44.01
W02-04M3A	02-04	12/16/2002	GROUNDWATER	83	93	34.01	44.01
W02-05M1A	02-05	12/12/2002	GROUNDWATER	110	120	81.44	91.44
W02-05M1A	02-05	12/12/2002	GROUNDWATER	110	120	81.44	91.44
W02-05M2A	02-05	12/13/2002	GROUNDWATER	92	102	63.41	73.41
W02-05M2A	02-05	12/13/2002	GROUNDWATER	92	102	63.41	73.41
W02-05M3A	02-05	12/13/2002	GROUNDWATER	70	80	41.37	51.37
W02-05M3A	02-05	12/13/2002	GROUNDWATER	70	80	41.37	51.37
W02-07M1A	02-07	12/11/2002	GROUNDWATER	135	145	101.14	111.14
W02-07M1A	02-07	12/11/2002	GROUNDWATER	135	145	101.14	111.14
W02-07M2A	02-07	12/11/2002	GROUNDWATER	107	117	72.86	82.86
W02-07M2A	02-07	12/11/2002	GROUNDWATER	107	117	72.86	82.86
W02-07M3A	02-07	12/11/2002	GROUNDWATER	47	57	13	23
W02-07M3A	02-07	12/11/2002	GROUNDWATER	47	57	13	23
W02-08M1A	02-08	12/16/2002	GROUNDWATER	108	113	86.56	91.56
W02-08M2A	02-08	12/16/2002	GROUNDWATER	82	87	60.65	65.65
W02-08M3A	02-08	12/19/2002	GROUNDWATER	62	67	40.58	45.58
W02-09M1A	02-09	12/20/2002	GROUNDWATER	74	84	65.26	75.26
W02-09M2A	02-09	12/20/2002	GROUNDWATER	59	69	50.3	60.3
W02-09SSA	02-09	12/20/2002	GROUNDWATER	7	17	0	10
W02-10M1A	02-10	12/20/2002	GROUNDWATER	135	145	94	104
W02-10M1A	02-10	12/20/2002	GROUNDWATER	135	145	94	104
W02-10M2A	02-10	12/20/2002	GROUNDWATER	110	120	68.61	78.61
W02-10M2A	02-10	12/20/2002	GROUNDWATER	110	120	68.61	78.61
W02-10M3A	02-10	12/20/2002	GROUNDWATER	85	95	43.65	53.65
W02-10M3A	02-10	12/20/2002	GROUNDWATER	85	95	43.65	53.65

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
W02-10M3D	02-10	12/20/2002	GROUNDWATER	85	95	43.65	53.65
W02-10M3D	02-10	12/20/2002	GROUNDWATER	85	95	43.65	53.65
W02-12M1A	02-12	12/03/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M1A	02-12	12/03/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M1A	02-12	12/10/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M1A	02-12	12/10/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M1A	02-12	12/23/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M1A	02-12	12/23/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M1A	02-12	12/30/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M1A	02-12	12/30/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M1A	02-12	12/17/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M1A	02-12	12/17/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M1D	02-12	12/30/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M1D	02-12	12/30/2002	GROUNDWATER	109	119	58.35	68.35
W02-12M2A	02-12	12/04/2002	GROUNDWATER	94	104	43.21	53.21
W02-12M2A	02-12	12/10/2002	GROUNDWATER	94	104	43.21	53.21
W02-12M2A	02-12	12/30/2002	GROUNDWATER	94	104	43.21	53.21
W02-12M2A	02-12	12/23/2002	GROUNDWATER	94	104	43.21	53.21
W02-12M2A	02-12	12/17/2002	GROUNDWATER	94	104	43.21	53.21
W02-12M3A	02-12	12/04/2002	GROUNDWATER	79	89	28.22	38.22
W02-12M3A	02-12	12/11/2002	GROUNDWATER	79	89	28.22	38.22
W02-12M3A	02-12	12/23/2002	GROUNDWATER	79	89	28.22	38.22
W02-12M3A	02-12	12/30/2002	GROUNDWATER	79	89	28.22	38.22
W02-12M3A	02-12	12/17/2002	GROUNDWATER	79	89	28.22	38.22
W02-12M3D	02-12	12/11/2002	GROUNDWATER	79	89	28.22	38.22
W02-12M3D	02-12	12/17/2002	GROUNDWATER	79	89	28.22	38.22
W02-13M1A	02-13	12/05/2002	GROUNDWATER	98	108	58.33	68.33
W02-13M1A	02-13	12/10/2002	GROUNDWATER	98	108	58.33	68.33
W02-13M1A	02-13	12/24/2002	GROUNDWATER	98	108	58.33	68.33
W02-13M1A	02-13	12/30/2002	GROUNDWATER	98	108	58.33	68.33
W02-13M1A	02-13	12/17/2002	GROUNDWATER	98	108	58.33	68.33
W02-13M2A	02-13	12/05/2002	GROUNDWATER	83	93	44.2	54.2
W02-13M2A	02-13	12/10/2002	GROUNDWATER	83	93	44.2	54.2
W02-13M2A	02-13	12/24/2002	GROUNDWATER	83	93	44.2	54.2

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
W02-13M2A	02-13	12/30/2002	GROUNDWATER	83	93	44.2	54.2
W02-13M2A	02-13	12/17/2002	GROUNDWATER	83	93	44.2	54.2
W02-13M3A	02-13	12/06/2002	GROUNDWATER	68	78	28.3	38.3
W02-13M3A	02-13	12/10/2002	GROUNDWATER	68	78	28.3	38.3
W02-13M3A	02-13	12/24/2002	GROUNDWATER	68	78	28.3	38.3
W02-13M3A	02-13	12/30/2002	GROUNDWATER	68	78	28.3	38.3
W02-13M3A	02-13	12/17/2002	GROUNDWATER	68	78	28.3	38.3
W02-13M3D	02-13	12/06/2002	GROUNDWATER	68	78	28.3	38.3
W02-15M1A	02-15	12/12/2002	GROUNDWATER	125	135	75.63	85.63
W02-15M1A	02-15	12/12/2002	GROUNDWATER	125	135	75.63	85.63
W02-15M2A	02-15	12/12/2002	GROUNDWATER	101	111	51.5	61.5
W02-15M2A	02-15	12/12/2002	GROUNDWATER	101	111	51.5	61.5
W02-15M3A	02-15	12/12/2002	GROUNDWATER	81	91	31.4	41.4
W02-15M3A	02-15	12/12/2002	GROUNDWATER	81	91	31.4	41.4
W112M1A	MW-112	12/06/2002	GROUNDWATER	195	205	56	66
W112M2A	MW-112	12/06/2002	GROUNDWATER	165	175	26	36
W125M1A	MW-125	12/09/2002	GROUNDWATER	232	242	182	192
W125SSA	MW-125	12/09/2002	GROUNDWATER	50	60	0	10
W128M2A	MW-128	12/09/2002	GROUNDWATER	104	114	17	27
W128M2D	MW-128	12/09/2002	GROUNDWATER	104	114	17	27
W128SSA	MW-128	12/09/2002	GROUNDWATER	87	97	0	10
W131M1A	MW-131	12/05/2002	GROUNDWATER	300	310	204	214
W131M2A	MW-131	12/05/2002	GROUNDWATER	195	205	99	109
W131SSA	MW-131	12/06/2002	GROUNDWATER	96	106	0	10
W131SSA	MW-131	12/06/2002	GROUNDWATER	96	106	0	10
W132M1A	MW-132	12/10/2002	GROUNDWATER	224	234	187	197
W132SSA	MW-132	12/10/2002	GROUNDWATER	37	47	0	10
W132SSA	MW-132	12/10/2002	GROUNDWATER	37	47	0	10
W136M1A	MW-136	12/06/2002	GROUNDWATER	124	134	17	27
W136M1D	MW-136	12/06/2002	GROUNDWATER	124	134	17	27
W136SSA	MW-136	12/06/2002	GROUNDWATER	107	117	0	10
W145M1A	MW-145	12/02/2002	GROUNDWATER	125	135	97	107
W145M1A	MW-145	12/02/2002	GROUNDWATER	125	135	97	107
W145M1A	MW-145	12/02/2002	GROUNDWATER	125	135	97	107

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
W145SSA	MW-145	12/02/2002	GROUNDWATER	30	40	0	10
W145SSA	MW-145	12/02/2002	GROUNDWATER	30	40	0	10
W145SSA	MW-145	12/02/2002	GROUNDWATER	30	40	0	10
W145SSA	MW-145	12/02/2002	GROUNDWATER	30	40	0	10
W147M1A	MW-147	12/03/2002	GROUNDWATER	167	177	94	104
W147M2A	MW-147	12/03/2002	GROUNDWATER	150	160	77	87
W147M3A	MW-147	12/03/2002	GROUNDWATER	82	92	9	19
W148M1A	MW-148	12/02/2002	GROUNDWATER	90	100	29	39
W148SSA	MW-148	12/02/2002	GROUNDWATER	61	71	0	10
W148SSA	MW-148	12/02/2002	GROUNDWATER	61	71	0	10
W148SSA	MW-148	12/02/2002	GROUNDWATER	61	71	0	10
W153M1A	MW-153	12/02/2002	GROUNDWATER	199	209	108	118
W153M2A	MW-153	12/02/2002	GROUNDWATER	144	154	53	63
W153M3A	MW-153	12/02/2002	GROUNDWATER	124	134	33	43
W155M1A	MW-155	12/03/2002	GROUNDWATER	124	134	99	109
W155M2A	MW-155	12/03/2002	GROUNDWATER	45	55	20	30
W157DDA	MW-157	12/03/2002	GROUNDWATER	209	219	199	209
W157DDA	MW-157	12/03/2002	GROUNDWATER	209	219	199	209
W157M1A	MW-157	12/04/2002	GROUNDWATER	154	164	144	154
W157M1A	MW-157	12/04/2002	GROUNDWATER	154	164	144	154
W157M2A	MW-157	12/04/2002	GROUNDWATER	110	120	100	110
W157M2A	MW-157	12/04/2002	GROUNDWATER	110	120	100	110
W166M1A	MW-166	12/06/2002	GROUNDWATER	218	223	112	117
W166M2A	MW-166	12/09/2002	GROUNDWATER	150	160	44	54
W166M3A	MW-166	12/09/2002	GROUNDWATER	125	135	19	29
W198M3A	MW-198	12/05/2002	GROUNDWATER	100	105	78.5	83.5
W198M3A	MW-198	12/05/2002	GROUNDWATER	100	105	78.5	83.5
W198M4A	MW-198	12/05/2002	GROUNDWATER	70	75	48.4	53.4
W198M4A	MW-198	12/05/2002	GROUNDWATER	70	75	48.4	53.4
W201M3A	MW-201	12/06/2002	GROUNDWATER	266	276	66.5	76.5
W213M1A	MW-213	12/18/2002	GROUNDWATER	133	143	85.01	95.01
W213M1A	MW-213	12/18/2002	GROUNDWATER	133	143	85.01	95.01
W213M2A	MW-213	12/18/2002	GROUNDWATER	89	99	41.15	51.15
W213M2A	MW-213	12/18/2002	GROUNDWATER	89	99	41.15	51.15

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
W213M3A	MW-213	12/18/2002	GROUNDWATER	77	82	29.38	34.38
W213M3A	MW-213	12/18/2002	GROUNDWATER	77	82	29.38	34.38
W216M1A	MW-216	12/18/2002	GROUNDWATER	253	263	51.19	61.19
W216M1A	MW-216	12/18/2002	GROUNDWATER	253	263	51.19	61.19
W216M2A	MW-216	12/18/2002	GROUNDWATER	236	246	34.17	44.17
W216M2A	MW-216	12/18/2002	GROUNDWATER	236	246	34.17	44.17
W216M2D	MW-216	12/18/2002	GROUNDWATER	236	246	34.17	44.17
W216M2D	MW-216	12/18/2002	GROUNDWATER	236	246	34.17	44.17
W216SSA	MW-216	12/18/2002	GROUNDWATER	199	209	0	7.13
W216SSA	MW-216	12/18/2002	GROUNDWATER	199	209	0	7.13
W219M1A	MW-219	12/17/2002	GROUNDWATER	357	367	178	188
W219M1A	MW-219	12/17/2002	GROUNDWATER	357	367	178	188
W219M2A	MW-219	12/17/2002	GROUNDWATER	332	342	153.05	163.05
W219M2A	MW-219	12/17/2002	GROUNDWATER	332	342	153.05	163.05
W219M3A	MW-219	12/17/2002	GROUNDWATER	315	325	135.8	145.8
W219M3A	MW-219	12/17/2002	GROUNDWATER	315	325	135.8	145.8
W219M4A	MW-219	12/17/2002	GROUNDWATER	225	235	45.7	55.7
W219M4A	MW-219	12/17/2002	GROUNDWATER	225	235	45.7	55.7
W220DDA	MW-220	12/05/2002	GROUNDWATER	299	309	171.83	181.83
W220DDD	MW-220	12/05/2002	GROUNDWATER	299	309	171.83	181.83
W224M1A	MW-224	12/06/2002	GROUNDWATER	142	152	24.71	34.71
W224SSA	MW-224	12/06/2002	GROUNDWATER	115	125	0	10
W226M1A	MW-226	12/19/2002	GROUNDWATER	285	295	172	182
W226M1A	MW-226	12/19/2002	GROUNDWATER	285	295	172	182
W226M2A	MW-226	12/19/2002	GROUNDWATER	175	185	61.7	71.7
W226M2A	MW-226	12/19/2002	GROUNDWATER	175	185	61.7	71.7
W226M3A	MW-226	12/19/2002	GROUNDWATER	135	145	21.53	31.53
W226M3A	MW-226	12/19/2002	GROUNDWATER	135	145	21.53	31.53
W233M1A	MW-233	12/19/2002	GROUNDWATER	356	366	157.8	167.8
W233M1A	MW-233	12/19/2002	GROUNDWATER	356	366	157.8	167.8
W233M2A	MW-233	12/19/2002	GROUNDWATER	331	341	132.8	142.8
W233M2A	MW-233	12/19/2002	GROUNDWATER	331	341	132.8	142.8
W233M3A	MW-233	12/19/2002	GROUNDWATER	231	241	32.8	42.8
W233M3A	MW-233	12/19/2002	GROUNDWATER	231	241	32.8	42.8

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
W44M2A	MW-44	12/02/2002	GROUNDWATER	142	152	13	23
W45M2A	MW-45	12/09/2002	GROUNDWATER	110	120	18	28
W57M2A	MW-57	12/03/2002	GROUNDWATER	148	158	62	72
W57M3A	MW-57	12/04/2002	GROUNDWATER	117	127	31	41
W59M2A	MW-59	12/02/2002	GROUNDWATER	150	160	18	28
W59M2D	MW-59	12/02/2002	GROUNDWATER	150	160	18	28
W80DDA	MW-80	12/12/2002	GROUNDWATER	158	168	114	124
W80M1A	MW-80	12/12/2002	GROUNDWATER	130	140	86	96
W80M2A	MW-80	12/12/2002	GROUNDWATER	100	110	56	66
W80M3A	MW-80	12/12/2002	GROUNDWATER	70	80	26	36
W80SSA	MW-80	12/12/2002	GROUNDWATER	43	53	0	10
W81DDA	MW-81	12/12/2002	GROUNDWATER	184	194	156	166
W81M1A	MW-81	12/12/2002	GROUNDWATER	128	138	100	110
W81M2A	MW-81	12/12/2002	GROUNDWATER	83	93	55	65
W81M3A	MW-81	12/12/2002	GROUNDWATER	53	58	25	30
W82DDA	MW-82	12/18/2002	GROUNDWATER	125	135	97	107
W82M1A	MW-82	12/13/2002	GROUNDWATER	104	114	76	86
W82M2A	MW-82	12/18/2002	GROUNDWATER	78	88	50	60
W82M3A	MW-82	12/18/2002	GROUNDWATER	54	64	26	36
W98M1A	MW-98	12/02/2002	GROUNDWATER	164	174	26	36
W98M1A	MW-98	12/02/2002	GROUNDWATER	164	174	26	36
W98SSA	MW-98	12/02/2002	GROUNDWATER	137	147	0	10
W98SSA	MW-98	12/02/2002	GROUNDWATER	137	147	0	10
WS-4AD-A	WS-4A	12/19/2002	GROUNDWATER	218	228	148.5	158.5
WS-4AD-A	WS-4A	12/19/2002	GROUNDWATER	218	228	148.5	158.5
WS-4AD-D	WS-4A	12/19/2002	GROUNDWATER	218	228	148.5	158.5
WS-4AD-D	WS-4A	12/19/2002	GROUNDWATER	155	165	85.5	95.5
WS-4AS-A	WS-4A	12/19/2002	GROUNDWATER	155	165	85.5	95.5
WS-4AS-A	WS-4A	12/19/2002	GROUNDWATER	155	165	85.5	95.5
XX956-A	95-6	12/02/2002	GROUNDWATER	119	129	94	104
XXM971-A	97-1	12/20/2002	GROUNDWATER	83	93	62	72
XXM972-A	97-2	12/20/2002	GROUNDWATER	75	85	53	63
XXM973-A	97-3	12/23/2002	GROUNDWATER	75	85	36	46
XXM975-A	97-5	12/20/2002	GROUNDWATER	84	94	76	86

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
DW120202-NV	GAC WATER	12/02/2002	IDW	0	0		
DW120202-NV	GAC WATER	12/02/2002	IDW	0	0		
DW120502-NV	GAC WATER	12/05/2002	IDW	0	0		
DW120502-NV	GAC WATER	12/05/2002	IDW	0	0		
DW120602-NV	GAC WATER	12/06/2002	IDW	0	0		
DW120602-NV	GAC WATER	12/06/2002	IDW	0	0		
DW120602-NV	GAC WATER	12/06/2002	IDW	0	0		
DW121002-NV	GAC WATER	12/10/2002	IDW	0	0		
DW121002-NV	GAC WATER	12/10/2002	IDW	0	0		
DW121202-NV	GAC WATER	12/12/2002	IDW	0	0		
DW121202-NV	GAC WATER	12/12/2002	IDW	0	0		
DW121302-NV	GAC WATER	12/13/2002	IDW	0	0		
DW121302-NV	GAC WATER	12/13/2002	IDW	0	0		
DW121302-NV	GAC WATER	12/13/2002	IDW	0	0		
DW121702-NV	GAC WATER	12/17/2002	IDW				
DW121702-NV	GAC WATER	12/17/2002	IDW				
DW121902-NV	GACWATER	12/19/2002	IDW				
DW121902-NV	GACWATER	12/23/2002	IDW				
G251DAA	MW-251	12/05/2002	PROFILE	10	10	4.95	4.95
G251DAA	MW-251	12/05/2002	PROFILE	10	10	4.95	4.95
G251DBA	MW-251	12/05/2002	PROFILE	20	20	14.95	14.95
G251DBA	MW-251	12/05/2002	PROFILE	20	20	14.95	14.95
G251DCA	MW-251	12/05/2002	PROFILE	30	30	24.95	24.95
G251DCA	MW-251	12/05/2002	PROFILE	30	30	24.95	24.95
G251DDA	MW-251	12/05/2002	PROFILE	40	40	34.95	34.95
G251DDA	MW-251	12/05/2002	PROFILE	40	40	34.95	34.95
G251DEA	MW-251	12/05/2002	PROFILE	50	50	44.95	44.95
G251DEA	MW-251	12/05/2002	PROFILE	50	50	44.95	44.95
G251DFA	MW-251	12/05/2002	PROFILE	60	60	54.95	54.95
G251DFA	MW-251	12/05/2002	PROFILE	60	60	54.95	54.95
G251DGA	MW-251	12/05/2002	PROFILE	70	70	64.95	64.95
G251DGA	MW-251	12/05/2002	PROFILE	70	70	64.95	64.95
G251DHA	MW-251	12/06/2002	PROFILE	80	80	74.95	74.95
G251DHA	MW-251	12/06/2002	PROFILE	80	80	74.95	74.95

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
G251DIA	MW-251	12/06/2002	PROFILE	90	90	84.95	84.95
G251DIA	MW-251	12/06/2002	PROFILE	90	90	84.95	84.95
G251DJA	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95
G251DJA	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95
G251DJD	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95
G251DJD	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95
G251DKA	MW-251	12/06/2002	PROFILE	110	110	104.95	104.95
G251DKA	MW-251	12/06/2002	PROFILE	110	110	104.95	104.95
G251DLA	MW-251	12/06/2002	PROFILE	120	120	114.95	114.95
G251DLA	MW-251	12/06/2002	PROFILE	120	120	114.95	114.95
G251DMA	MW-251	12/06/2002	PROFILE	130	130	124.95	124.95
G251DMA	MW-251	12/06/2002	PROFILE	130	130	124.95	124.95
G251DNA	MW-251	12/06/2002	PROFILE	140	140	134.95	134.95
G251DNA	MW-251	12/06/2002	PROFILE	140	140	134.95	134.95
G251DOA	MW-251	12/09/2002	PROFILE	150	150	144.95	144.95
G251DOA	MW-251	12/09/2002	PROFILE	150	150	144.95	144.95
G251DPA	MW-251	12/09/2002	PROFILE	160	160	154.95	154.95
G251DPA	MW-251	12/09/2002	PROFILE	160	160	154.95	154.95
G251DQA	MW-251	12/09/2002	PROFILE	170	170	164.95	164.95
G251DQA	MW-251	12/09/2002	PROFILE	170	170	164.95	164.95
G252DAA	MW-252	12/12/2002	PROFILE	120	120	6.5	6.5
G252DAA	MW-252	12/12/2002	PROFILE	120	120	6.5	6.5
G252DBA	MW-252	12/12/2002	PROFILE	130	130	16.5	16.5
G252DBA	MW-252	12/12/2002	PROFILE	130	130	16.5	16.5
G252DCA	MW-252	12/13/2002	PROFILE	140	140	26.5	26.5
G252DCA	MW-252	12/13/2002	PROFILE	140	140	26.5	26.5
G252DCD	MW-252	12/13/2002	PROFILE	140	140	26.5	26.5
G252DCD	MW-252	12/13/2002	PROFILE	140	140	26.5	26.5
G252DDA	MW-252	12/13/2002	PROFILE	150	150	36.5	36.5
G252DDA	MW-252	12/13/2002	PROFILE	150	150	36.5	36.5
G252DEA	MW-252	12/17/2002	PROFILE	160	160	46.5	46.5
G252DEA	MW-252	12/17/2002	PROFILE	160	160	46.5	46.5
G252DFA	MW-252	12/17/2002	PROFILE	170	170	56.5	56.5
G252DFA	MW-252	12/17/2002	PROFILE	170	170	56.5	56.5

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
G252DGA	MW-252	12/18/2002	PROFILE	180	180	66.5	66.5
G252DGA	MW-252	12/18/2002	PROFILE	180	180	66.5	66.5
G252DHA	MW-252	12/18/2002	PROFILE	190	190	76.5	76.5
G252DHA	MW-252	12/18/2002	PROFILE	190	190	76.5	76.5
G252DIA	MW-252	12/19/2002	PROFILE	200	200	86.5	86.5
G252DIA	MW-252	12/19/2002	PROFILE	200	200	86.5	86.5
G252DJA	MW-252	12/19/2002	PROFILE	210	210	96.5	96.5
G252DJA	MW-252	12/19/2002	PROFILE	210	210	96.5	96.5
G252DKA	MW-252	12/19/2002	PROFILE	220	220	106.5	106.5
G252DKA	MW-252	12/19/2002	PROFILE	220	220	106.5	106.5
G252DLA	MW-252	12/19/2002	PROFILE	230	230	116.5	116.5
G252DLA	MW-252	12/19/2002	PROFILE	230	230	116.5	116.5
G252DMA	MW-252	12/19/2002	PROFILE	240	240	126.5	126.5
G252DMA	MW-252	12/19/2002	PROFILE	240	240	126.5	126.5
G252DNA	MW-252	12/19/2002	PROFILE	250	250	136.5	136.5
G252DNA	MW-252	12/19/2002	PROFILE	250	250	136.5	136.5
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6
G253DBA	MW-253	12/18/2002	PROFILE	140	140	10.6	10.6
G253DBA	MW-253	12/18/2002	PROFILE	140	140	10.6	10.6
G253DCA	MW-253	12/18/2002	PROFILE	150	150	20.6	20.6
G253DCA	MW-253	12/18/2002	PROFILE	150	150	20.6	20.6
G253DDA	MW-253	12/18/2002	PROFILE	160	160	30.6	30.6
G253DDA	MW-253	12/18/2002	PROFILE	160	160	30.6	30.6
G253DEA	MW-253	12/18/2002	PROFILE	170	170	40.6	40.6
G253DEA	MW-253	12/18/2002	PROFILE	170	170	40.6	40.6
G253DFA	MW-253	12/18/2002	PROFILE	180	180	50.6	50.6
G253DFA	MW-253	12/18/2002	PROFILE	180	180	50.6	50.6
G253DFD	MW-253	12/18/2002	PROFILE	180	180	50.6	50.6
G253DFD	MW-253	12/18/2002	PROFILE	180	180	50.6	50.6
G253DGA	MW-253	12/18/2002	PROFILE	190	190	60.6	60.6
G253DGA	MW-253	12/18/2002	PROFILE	190	190	60.6	60.6
G253DHA	MW-253	12/18/2002	PROFILE	200	200	70.6	70.6
G253DHA	MW-253	12/18/2002	PROFILE	200	200	70.6	70.6

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
G253DIA	MW-253	12/19/2002	PROFILE	210	210	80.6	80.6
G253DIA	MW-253	12/19/2002	PROFILE	210	210	80.6	80.6
G253DJA	MW-253	12/19/2002	PROFILE	220	220	90.6	90.6
G253DJA	MW-253	12/19/2002	PROFILE	220	220	90.6	90.6
G253DKA	MW-253	12/19/2002	PROFILE	230	230	100.6	100.6
G253DKA	MW-253	12/19/2002	PROFILE	230	230	100.6	100.6
G253DLA	MW-253	12/19/2002	PROFILE	240	240	110.6	110.6
G253DLA	MW-253	12/19/2002	PROFILE	240	240	110.6	110.6
G253DMA	MW-253	12/19/2002	PROFILE	250	250	120.6	120.6
G253DMA	MW-253	12/19/2002	PROFILE	250	250	120.6	120.6
G253DNA	MW-253	12/19/2002	PROFILE	260	260	130.6	130.6
G253DNA	MW-253	12/19/2002	PROFILE	260	260	130.6	130.6
G253DOA	MW-253	12/19/2002	PROFILE	270	270	140.6	140.6
G253DOA	MW-253	12/19/2002	PROFILE	270	270	140.6	140.6
G253DPA	MW-253	12/19/2002	PROFILE	280	280	150.6	150.6
G253DPA	MW-253	12/19/2002	PROFILE	280	280	150.6	150.6
G253DQA	MW-253	12/19/2002	PROFILE	290	290	160.6	160.6
G253DQA	MW-253	12/19/2002	PROFILE	290	290	160.6	160.6
G253DRA	MW-253	12/19/2002	PROFILE	300	300	170.6	170.6
G253DRA	MW-253	12/19/2002	PROFILE	300	300	170.6	170.6
G253DSA	MW-253	12/19/2002	PROFILE	310	310	180.6	180.6
G253DSA	MW-253	12/19/2002	PROFILE	310	310	180.6	180.6
G253DTA	MW-253	12/19/2002	PROFILE	317	317	187.6	187.6
G253DTA	MW-253	12/19/2002	PROFILE	317	317	187.6	187.6
G254DAA	MW-254	12/19/2002	PROFILE	70	70		
G254DBA	MW-254	12/19/2002	PROFILE	80	80		
G254DCA	MW-254	12/19/2002	PROFILE	90	90		
G254DCD	MW-254	12/19/2002	PROFILE	90	90		
G254DDA	MW-254	12/19/2002	PROFILE	100	100		
G254DEA	MW-254	12/19/2002	PROFILE	110	110		
G254DFA	MW-254	12/19/2002	PROFILE	120	120		
J2.F.T1A.XC1.1.	J2 TARGET 1A	12/11/2002	SOIL				
J2.F.T1A.XC1.2.	J2 TARGET 1A	12/11/2002	SOIL				
J2.F.T1A.XC1.3.	J2 TARGET 1A	12/11/2002	SOIL				

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
11/25/2002 - 12/31/2002

OGDEN_ID	GIS_LOCID	LOGDATE	SAMP_TYPE	SBD	SED	BWTS	BWTE
J2.F.T1B.XC1.1.	J2 TARGET 1B	12/19/2002	SOIL				
J2.F.T1B.XC1.2.	J2 TARGET 1B	12/19/2002	SOIL				
J2.F.T1B.XC1.3.	J2 TARGET 1B	12/19/2002	SOIL				
J2.F.T1C.XC1.1.	J2 TARGET 1C	12/19/2002	SOIL				
J2.F.T1C.XC1.2.	J2 TARGET 1C	12/19/2002	SOIL				
J2.F.T1C.XC1.2.	J2 TARGET 1C	12/19/2002	SOIL				
J2.F.T2B.XC1.1.	J2 TARGET 2B	12/10/2002	SOIL				
J2.F.T2B.XC1.2.	J2 TARGET 2B	12/10/2002	SOIL				
J2.F.T2B.XC1.2.	J2 TARGET 2B	12/10/2002	SOIL				
J2.F.T2B.XC1.3.	J2 TARGET 2B	12/10/2002	SOIL				
J2.F.T2E.XC1.1.	J2 TARGET 2E	12/09/2002	SOIL				
J2.F.T2E.XC1.2.	J2 TARGET 2E	12/09/2002	SOIL				
J2.F.T2E.XC1.3.	J2 TARGET 2E	12/09/2002	SOIL				
J2.F.T2P.XC1.1.	J2 TARGET 2 P	11/25/2002	SOIL				
J2.F.T2P.XC1.1.	J2 TARGET 2 P	11/25/2002	SOIL				
J2.F.T2P.XC1.2.	J2 TARGET 2 P	11/25/2002	SOIL				
J2.F.T2P.XC1.3.	J2 TARGET 2 P	11/25/2002	SOIL				

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
4036000-03G-A	4036000-03G	12/04/2002	GROUNDWATER	50	60	6	12	E314.0	PERCHLORATE	
4036000-04G-A	4036000-04G	12/04/2002	GROUNDWATER			6	12	E314.0	PERCHLORATE	
58MW0001-A	58MW0001	12/06/2002	GROUNDWATER	121.8	126.8	0	5	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
58MW0001-A	58MW0001	12/06/2002	GROUNDWATER	121.8	126.8	0	5	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
58MW0002-A	58MW0002	12/05/2002	GROUNDWATER	121.2	126.2	0	5	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
58MW0002-A	58MW0002	12/05/2002	GROUNDWATER	121.2	126.2	0	5	8330N	2-AMINO-4,6-DINITROTOLUENE	YES
58MW0002-A	58MW0002	12/05/2002	GROUNDWATER	121.2	126.2	0	5	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
58MW0002-A	58MW0002	12/05/2002	GROUNDWATER	121.2	126.2	0	5	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
58MW0007B-A	58MW0007B	12/04/2002	GROUNDWATER	187.7	192.7	49	54	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
58MW0009E-A	58MW0009E	12/09/2002	GROUNDWATER	133.4	138.4	6.5	11.5	8330N	2-AMINO-4,6-DINITROTOLUENE	YES
58MW0009E-A	58MW0009E	12/09/2002	GROUNDWATER	133.4	138.4	6.5	11.5	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
58MW0009E-A	58MW0009E	12/09/2002	GROUNDWATER	133.4	138.4	6.5	11.5	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
58MW0009E-A	58MW0009E	12/09/2002	GROUNDWATER	133.4	138.4	6.5	11.5	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
58MW0011D-A	58MW0011D	12/09/2002	GROUNDWATER	175.4	180.4	49.5	54.5	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
58MW0018A-A	58MW0018A	12/11/2002	GROUNDWATER	202.7	211.7	60.85	69.85	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
58MW0018B-A	58MW0018B	12/10/2002	GROUNDWATER	175.9	185.58	34.55	44.55	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
58MW0020B-A	58MW0020B	12/10/2002	GROUNDWATER		205	0	43	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
GLSKRNK-A	GLSKRNK	12/20/2002	GROUNDWATER					E314.0	PERCHLORATE	
GLSKRNK-A	GLSKRNK	12/20/2002	GROUNDWATER					8330N	PENTAERYTHRITOL TETRANITRATE	NO
GLSKRNK-A	GLSKRNK	12/20/2002	GROUNDWATER					8330N	NITROGLYCERIN	NO
GLSKRNK-D	GLSKRNK	12/20/2002	GROUNDWATER					8330N	NITROGLYCERIN	NO
GLSKRNK-D	GLSKRNK	12/20/2002	GROUNDWATER					E314.0	PERCHLORATE	

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
GLSKRNK-D	GLSKRNK	12/20/2002	GROUNDWATER					8330N	PENTAERYTHRITOL TETRANITRATE	NO
M-1B-A	M-1	12/18/2002	GROUNDWATER		45			OC21V	CHLOROFORM	
M-1C-A	M-1	12/18/2002	GROUNDWATER		55			OC21V	CHLOROFORM	
M-1D-A	M-1	12/18/2002	GROUNDWATER		65			OC21V	CHLOROFORM	
M-1D-D	M-1	12/18/2002	GROUNDWATER		65			OC21V	CHLOROFORM	
M-2B-A	M-2	12/16/2002	GROUNDWATER		65			OC21V	CHLOROFORM	
M-2C-A	M-2	12/16/2002	GROUNDWATER		75			OC21V	CHLOROFORM	
M-2D-A	M-2	12/16/2002	GROUNDWATER		85			OC21V	CHLOROFORM	
M-3B-A	M-3	12/16/2002	GROUNDWATER		65			OC21V	CHLOROFORM	
M-3C-A	M-3	12/16/2002	GROUNDWATER		75			OC21V	CHLOROFORM	
M-3D-A	M-3	12/16/2002	GROUNDWATER		85			OC21V	CHLOROFORM	
M-4B-A	M-4	12/18/2002	GROUNDWATER		69			OC21V	CHLOROFORM	
M-4C-A	M-4	12/18/2002	GROUNDWATER		79			OC21V	CHLOROFORM	
M-4D-A	M-4	12/18/2002	GROUNDWATER		89			OC21V	CHLOROFORM	
M-5B-A	M-5	12/18/2002	GROUNDWATER		65			OC21V	CHLOROFORM	
M-5C-A	M-5	12/18/2002	GROUNDWATER		75			OC21V	CHLOROFORM	
M-5D-A	M-5	12/18/2002	GROUNDWATER		85			OC21V	CHLOROFORM	
M-6B-A	M-6	12/17/2002	GROUNDWATER		59			OC21V	CHLOROFORM	
M-6C-A	M-6	12/17/2002	GROUNDWATER		69			OC21V	CHLOROFORM	
M-6D-A	M-6	12/17/2002	GROUNDWATER		79			OC21V	CHLOROFORM	
M-7B-A	M-7	12/17/2002	GROUNDWATER		59			OC21V	CHLOROFORM	
M-7C-A	M-7	12/17/2002	GROUNDWATER		65			OC21V	CHLOROFORM	

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
M-7D-A	M-7	12/17/2002	GROUNDWATER		75			OC21V	CHLOROFORM	
MW00-4-A	00-4	12/17/2002	GROUNDWATER	64	70	38	44	OC21V	CHLOROFORM	
SPRING1-A	SPRING1	12/10/2002	GROUNDWATER			0	0	OC21V	ACETONE	
SPRING1-A	SPRING1	12/10/2002	GROUNDWATER			0	0	OC21V	CHLOROFORM	
SPRING1-A	SPRING1	12/10/2002	GROUNDWATER			0	0	OC21V	TOLUENE	
TW00-1-A	00-1	12/19/2002	GROUNDWATER	64	70	52.1	58.1	OC21V	CHLOROFORM	
TW00-2D-A	00-2	12/19/2002	GROUNDWATER	71	77	43.95	49.95	OC21V	TRICHLOROETHYLENE (TCE)	
TW00-2D-A	00-2	12/19/2002	GROUNDWATER	71	77	43.95	49.95	8330N	2,6-DINITROTOLUENE	NO
TW00-2D-A	00-2	12/19/2002	GROUNDWATER	71	77	43.95	49.95	OC21V	CHLOROFORM	
TW00-2D-A	00-2	12/19/2002	GROUNDWATER	71	77	43.95	49.95	OC21V	ACETONE	
TW00-4DA-A	00-4D	12/13/2002	GROUNDWATER			0	0	OC21V	CHLOROFORM	
TW00-4DA-D	00-4D	12/13/2002	GROUNDWATER			0	0	OC21V	CHLOROFORM	
TW00-4DB-A	00-4D	12/13/2002	GROUNDWATER			0	0	OC21V	CHLOROFORM	
TW00-5-A	00-5	12/16/2002	GROUNDWATER	50	56	15.5	21.5	OC21V	CHLOROFORM	
TW00-6-A	00-6	12/13/2002	GROUNDWATER	36	42	9.6	15.6	OC21V	CHLOROFORM	
TW00-7-A	00-7	12/16/2002	GROUNDWATER	57	63	25.5	31.5	OC21V	CHLOROFORM	
TW00-7-A	00-7	12/16/2002	GROUNDWATER	57	63	25.5	31.5	OC21V	ACETONE	
TW1-88A-A	1-88	12/17/2002	GROUNDWATER		102.9	0	67.4	E314.0	PERCHLORATE	
TW1-88A-A	1-88	12/10/2002	GROUNDWATER		102.9	0	67.4	E314.0	PERCHLORATE	
TW1-88A-A	1-88	12/03/2002	GROUNDWATER		102.9	0	67.4	E314.0	PERCHLORATE	
TW1-88A-A	1-88A	12/24/2002	GROUNDWATER		102.9	0	67.4	E314.0	PERCHLORATE	
TW1-88B-A	1-88	12/13/2002	GROUNDWATER		105.5	0	69.6	E314.0	PERCHLORATE	

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W02-01M1A	02-01	12/10/2002	GROUNDWATER	95	105	42.9	52.9	OC21V	CHLOROFORM	
W02-01M1A	02-01	12/10/2002	GROUNDWATER	95	105	42.9	52.9	E314.0	PERCHLORATE	
W02-01M2A	02-01	12/11/2002	GROUNDWATER	83	93	30.9	40.9	OC21V	CHLOROFORM	
W02-02M1A	02-02	12/11/2002	GROUNDWATER	114.5	124.5	63.5	73.5	E314.0	PERCHLORATE	
W02-02M1A	02-02	12/11/2002	GROUNDWATER	114.5	124.5	63.5	73.5	OC21V	CHLOROFORM	
W02-02M2A	02-02	12/11/2002	GROUNDWATER	94.5	104.5	42.65	52.65	OC21V	CHLOROFORM	
W02-02M2D	02-02	12/11/2002	GROUNDWATER	94.5	104.5	42.65	52.65	OC21V	CHLOROFORM	
W02-02M2D	02-02	12/11/2002	GROUNDWATER	94.5	104.5	42.65	52.65	E314.0	PERCHLORATE	
W02-02SSA	02-02	12/11/2002	GROUNDWATER	49.5	59.5	0	10	OC21V	CHLOROFORM	
W02-03M1A	02-03	12/16/2002	GROUNDWATER	130	140	86.1	96.1	OC21V	CHLOROFORM	
W02-03M2A	02-03	12/16/2002	GROUNDWATER	92	102	48.15	58.15	OC21V	CHLOROFORM	
W02-03M3A	02-03	12/16/2002	GROUNDWATER	75	85	31.05	41.05	E314.0	PERCHLORATE	
W02-03M3A	02-03	12/16/2002	GROUNDWATER	75	85	31.05	41.05	OC21V	CHLOROFORM	
W02-04M1A	02-04	12/16/2002	GROUNDWATER	123	133	73.97	83.97	E314.0	PERCHLORATE	
W02-04M1A	02-04	12/16/2002	GROUNDWATER	123	133	73.97	83.97	OC21V	CHLOROFORM	
W02-04M1A	02-04	12/16/2002	GROUNDWATER	123	133	73.97	83.97	OC21V	TRICHLOROETHYLENE (TCE)	
W02-04M2A	02-04	12/16/2002	GROUNDWATER	98	108	48.93	58.93	OC21V	TRICHLOROETHYLENE (TCE)	
W02-04M2A	02-04	12/16/2002	GROUNDWATER	98	108	48.93	58.93	OC21V	CHLOROFORM	
W02-04M3A	02-04	12/16/2002	GROUNDWATER	83	93	34.01	44.01	OC21V	CHLOROFORM	
W02-04M3A	02-04	12/16/2002	GROUNDWATER	83	93	34.01	44.01	OC21V	TRICHLOROETHYLENE (TCE)	
W02-05M1A	02-05	12/12/2002	GROUNDWATER	110	120	81.44	91.44	OC21V	CHLOROFORM	
W02-05M1A	02-05	12/12/2002	GROUNDWATER	110	120	81.44	91.44	E314.0	PERCHLORATE	

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W02-05M2A	02-05	12/13/2002	GROUNDWATER	92	102	63.41	73.41	OC21V	TOLUENE	
W02-05M2A	02-05	12/13/2002	GROUNDWATER	92	102	63.41	73.41	OC21V	CHLOROFORM	
W02-05M2A	02-05	12/13/2002	GROUNDWATER	92	102	63.41	73.41	OC21V	ACETONE	
W02-05M2A	02-05	12/13/2002	GROUNDWATER	92	102	63.41	73.41	E314.0	PERCHLORATE	
W02-05M3A	02-05	12/13/2002	GROUNDWATER	70	80	41.37	51.37	OC21V	CHLOROFORM	
W02-07M1A	02-07	12/11/2002	GROUNDWATER	135	145	101.14	111.14	OC21V	CHLOROFORM	
W02-07M2A	02-07	12/11/2002	GROUNDWATER	107	117	72.86	82.86	OC21V	CHLOROFORM	
W02-07M3A	02-07	12/11/2002	GROUNDWATER	47	57	13	23	E314.0	PERCHLORATE	
W02-07M3A	02-07	12/11/2002	GROUNDWATER	47	57	13	23	OC21V	CHLOROFORM	
W02-08M2A	02-08	12/16/2002	GROUNDWATER	82	87	60.65	65.65	E314.0	PERCHLORATE	
W02-08M3A	02-08	12/19/2002	GROUNDWATER	62	67	40.58	45.58	E314.0	PERCHLORATE	
W02-09M1A	02-09	12/20/2002	GROUNDWATER	74	84	65.26	75.26	E314.0	PERCHLORATE	
W02-09M2A	02-09	12/20/2002	GROUNDWATER	59	69	50.3	60.3	E314.0	PERCHLORATE	
W02-10M1A	02-10	12/20/2002	GROUNDWATER	135	145	94	104	E314.0	PERCHLORATE	
W02-10M1A	02-10	12/20/2002	GROUNDWATER	135	145	94	104	OC21V	CHLOROFORM	
W02-10M2A	02-10	12/20/2002	GROUNDWATER	110	120	68.61	78.61	OC21V	CHLOROFORM	
W02-10M3A	02-10	12/20/2002	GROUNDWATER	85	95	43.65	53.65	OC21V	CHLOROFORM	
W02-10M3D	02-10	12/20/2002	GROUNDWATER	85	95	43.65	53.65	OC21V	CHLOROFORM	
W02-12M1A	02-12	12/17/2002	GROUNDWATER	109	119	58.35	68.35	OC21V	CHLOROFORM	
W02-12M1A	02-12	12/10/2002	GROUNDWATER	109	119	58.35	68.35	OC21V	TOLUENE	
W02-12M1A	02-12	12/10/2002	GROUNDWATER	109	119	58.35	68.35	OC21V	CHLOROFORM	
W02-12M1A	02-12	12/23/2002	GROUNDWATER	109	119	58.35	68.35	OC21V	CHLOROFORM	

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W02-12M1A	02-12	12/03/2002	GROUNDWATER	109	119	58.35	68.35	OC21V	TOLUENE	
W02-12M1A	02-12	12/03/2002	GROUNDWATER	109	119	58.35	68.35	OC21V	CHLOROFORM	
W02-12M1A	02-12	12/30/2002	GROUNDWATER	109	119	58.35	68.35	OC21V	CHLOROFORM	
W02-12M1D	02-12	12/30/2002	GROUNDWATER	109	119	58.35	68.35	OC21V	CHLOROFORM	
W02-12M3D	02-12	12/17/2002	GROUNDWATER	79	89	28.22	38.22	E314.0	PERCHLORATE	
W02-13M1A	02-13	12/05/2002	GROUNDWATER	98	108	58.33	68.33	E314.0	PERCHLORATE	
W02-13M2A	02-13	12/17/2002	GROUNDWATER	83	93	44.2	54.2	E314.0	PERCHLORATE	
W02-13M2A	02-13	12/24/2002	GROUNDWATER	83	93	44.2	54.2	E314.0	PERCHLORATE	
W02-13M2A	02-13	11/27/2002	GROUNDWATER	83	93	44.2	54.2	E314.0	PERCHLORATE	
W02-13M3A	02-13	12/10/2002	GROUNDWATER	68	78	28.3	38.3	E314.0	PERCHLORATE	
W02-15M1A	02-15	12/12/2002	GROUNDWATER	125	135	75.63	85.63	OC21V	CHLOROFORM	
W02-15M2A	02-15	12/12/2002	GROUNDWATER	101	111	51.5	61.5	OC21V	CHLOROFORM	
W02-15M3A	02-15	12/12/2002	GROUNDWATER	81	91	31.4	41.4	OC21V	CHLOROFORM	
W100M1A	MW-100	11/21/2002	GROUNDWATER	179	189	45	55	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W100M1A	MW-100	11/21/2002	GROUNDWATER	179	189	45	55	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W101M1A	MW-101	11/21/2002	GROUNDWATER	158	168	27	37	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W101M1A	MW-101	11/21/2002	GROUNDWATER	158	168	27	37	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W107M1A	MW-107	11/22/2002	GROUNDWATER	155	165	35	45	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W107M2A	MW-107	11/22/2002	GROUNDWATER	125	135	5	15	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W107M2A	MW-107	11/22/2002	GROUNDWATER	125	135	5	15	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W111M2A	MW-111	11/21/2002	GROUNDWATER	182	192	50	60	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W111M3A	MW-111	11/25/2002	GROUNDWATER	165	175	33	43	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W111M3D	MW-111	11/25/2002	GROUNDWATER	165	175	33	43	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W112M1A	MW-112	12/06/2002	GROUNDWATER	195	205	56	66	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W112M2A	MW-112	12/06/2002	GROUNDWATER	165	175	26	36	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W113M1A	MW-113	11/26/2002	GROUNDWATER	240	250	98	108	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W113M2A	MW-113	11/26/2002	GROUNDWATER	190	200	48	58	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W113M2A	MW-113	11/26/2002	GROUNDWATER	190	200	48	58	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W114M1A	MW-114	11/13/2002	GROUNDWATER	177	187	96	106	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W114M2A	MW-114	11/13/2002	GROUNDWATER	120	130	39	49	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W114M2A	MW-114	11/13/2002	GROUNDWATER	120	130	39	49	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W114M2A	MW-114	11/13/2002	GROUNDWATER	120	130	39	49	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
W129M1A	MW-129	11/13/2002	GROUNDWATER	136	146	66	76	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W129M2A	MW-129	11/13/2002	GROUNDWATER	116	126	46	56	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W129M2A	MW-129	11/13/2002	GROUNDWATER	116	126	46	56	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W129M2D	MW-129	11/13/2002	GROUNDWATER	116	126	46	56	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W129M2D	MW-129	11/13/2002	GROUNDWATER	116	126	46	56	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W131SSA	MW-131	12/06/2002	GROUNDWATER	96	106	0	10	8330N	NITROGLYCERIN	NO
W132SSA	MW-132	12/10/2002	GROUNDWATER	37	47	0	10	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W132SSA	MW-132	12/10/2002	GROUNDWATER	37	47	0	10	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W132SSA	MW-132	12/10/2002	GROUNDWATER	37	47	0	10	8330N	PENTAERYTHRITOL TETRANITRATE	NO
W136SSA	MW-136	12/06/2002	GROUNDWATER	107	117	0	10	8330N	PENTAERYTHRITOL TETRANITRATE	NO
W136SSA	MW-136	12/06/2002	GROUNDWATER	107	117	0	10	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W136SSA	MW-136	12/06/2002	GROUNDWATER	107	117	0	10	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W141M2A	MW-141	11/25/2002	GROUNDWATER	162	172	34	44	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W141SSA	MW-141	11/25/2002	GROUNDWATER	128	138	0	10	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
W142M2A	MW-142	11/22/2002	GROUNDWATER	140	150	100	110	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W143M1A	MW-143	11/22/2002	GROUNDWATER	144	154	114	124	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W143M1A	MW-143	11/22/2002	GROUNDWATER	144	154	114	124	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W143M2A	MW-143	11/22/2002	GROUNDWATER	117	122	87	92	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W143M3A	MW-143	11/25/2002	GROUNDWATER	107	112	77	82	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W147M1A	MW-147	12/03/2002	GROUNDWATER	167	177	94	104	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W147M1A	MW-147	12/03/2002	GROUNDWATER	167	177	94	104	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W147M2A	MW-147	12/03/2002	GROUNDWATER	150	160	77	87	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W147M2A	MW-147	12/03/2002	GROUNDWATER	150	160	77	87	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W153M1A	MW-153	12/02/2002	GROUNDWATER	199	209	108	118	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W157M2A	MW-157	12/04/2002	GROUNDWATER	110	120	100	110	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W160SSA	MW-160	11/21/2002	GROUNDWATER	137.5	147.5	5	15	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W161SSA	MW-161	11/20/2002	GROUNDWATER	145.5	155.5	6	16	8330N	PENTAERYTHRITOL TETRANITRATE	NO
W161SSA	MW-161	11/20/2002	GROUNDWATER	145.5	155.5	6	16	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W165M2A	MW-165	11/26/2002	GROUNDWATER	124.5	134.5	46	56	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W165M2A	MW-165	11/26/2002	GROUNDWATER	124.5	134.5	46	56	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W166M1A	MW-166	12/06/2002	GROUNDWATER	218	223	112	117	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W166M2A	MW-166	12/09/2002	GROUNDWATER	150	160	44	54	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W18M1A	MW-18	11/20/2002	GROUNDWATER	171	176	128	133	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W198M3A	MW-198	12/05/2002	GROUNDWATER	100	105	78.5	83.5	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W198M3A	MW-198	12/05/2002	GROUNDWATER	100	105	78.5	83.5	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W198M4A	MW-198	12/05/2002	GROUNDWATER	70	75	48.4	53.4	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W198M4A	MW-198	12/05/2002	GROUNDWATER	70	75	48.4	53.4	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W201M3A	MW-201	12/06/2002	GROUNDWATER	266	276	66.5	76.5	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W213M1A	MW-213	12/18/2002	GROUNDWATER	133	143	85.01	95.01	OC21V	CHLOROFORM	
W213M2A	MW-213	12/18/2002	GROUNDWATER	89	99	41.15	51.15	E314.0	PERCHLORATE	
W213M2A	MW-213	12/18/2002	GROUNDWATER	89	99	41.15	51.15	OC21V	CHLOROFORM	
W213M3A	MW-213	12/18/2002	GROUNDWATER	77	82	29.38	34.38	E314.0	PERCHLORATE	
W213M3A	MW-213	12/18/2002	GROUNDWATER	77	82	29.38	34.38	OC21V	CHLOROFORM	
W216M1A	MW-216	12/18/2002	GROUNDWATER	253	263	51.19	61.19	OC21V	CHLOROFORM	
W216SSA	MW-216	12/18/2002	GROUNDWATER	199	209	0	7.13	OC21V	CHLOROFORM	
W216SSA	MW-216	12/18/2002	GROUNDWATER	199	209	0	7.13	E314.0	PERCHLORATE	
W216SSA	MW-216	12/18/2002	GROUNDWATER	199	209	0	7.13	8330N	PENTAERYTHRITOL TETRANITRATE	NO
W219M1A	MW-219	12/17/2002	GROUNDWATER	357	367	178	188	OC21V	CHLOROFORM	
W219M2A	MW-219	12/17/2002	GROUNDWATER	332	342	153.05	163.05	OC21V	CHLOROFORM	
W219M3A	MW-219	12/17/2002	GROUNDWATER	315	325	135.8	145.8	OC21V	CHLOROFORM	
W219M4A	MW-219	12/17/2002	GROUNDWATER	225	235	45.7	55.7	OC21V	CHLOROFORM	
W224SSA	MW-224	12/06/2002	GROUNDWATER	115	125	0	10	8330N	PENTAERYTHRITOL TETRANITRATE	NO
W226M1A	MW-226	12/19/2002	GROUNDWATER	285	295	172	182	OC21V	CHLOROFORM	
W226M2A	MW-226	12/19/2002	GROUNDWATER	175	185	61.7	71.7	E314.0	PERCHLORATE	
W226M2A	MW-226	12/19/2002	GROUNDWATER	175	185	61.7	71.7	OC21V	CHLOROFORM	
W226M3A	MW-226	12/19/2002	GROUNDWATER	135	145	21.53	31.53	OC21V	CHLOROFORM	

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W233M1A	MW-233	12/19/2002	GROUNDWATER	356	366	157.8	167.8	OC21V	CHLOROFORM	
W233M2A	MW-233	12/19/2002	GROUNDWATER	331	341	132.8	142.8	OC21V	CHLOROFORM	
W233M3A	MW-233	12/19/2002	GROUNDWATER	231	241	32.8	42.8	E314.0	PERCHLORATE	
W233M3A	MW-233	12/19/2002	GROUNDWATER	231	241	32.8	42.8	OC21V	CHLOROFORM	
W243M3A	MW-243	11/13/2002	GROUNDWATER	69.5	79.5	0.81	10.81	8330N	PICRIC ACID	NO
W243M3A	MW-243	11/13/2002	GROUNDWATER	69.5	79.5	0.81	10.81	8330N	NITROGLYCERIN	NO
W31MMA	MW-31	11/15/2002	GROUNDWATER	113	123	28	38	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W31MMA	MW-31	11/15/2002	GROUNDWATER	113	123	28	38	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W31SSA	MW-31	11/15/2002	GROUNDWATER	98	103	13	18	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W31SSA	MW-31	11/15/2002	GROUNDWATER	98	103	13	18	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W31SSA	MW-31	11/15/2002	GROUNDWATER	98	103	13	18	8330N	2,4,6-TRINITROTOLUENE	YES
W31SSA	MW-31	11/15/2002	GROUNDWATER	98	103	13	18	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
W31SSA	MW-31	11/15/2002	GROUNDWATER	98	103	13	18	8330N	2-AMINO-4,6-DINITROTOLUENE	YES
W31SSA	MW-31	11/15/2002	GROUNDWATER	98	103	13	18	8330N	2,4-DINITROTOLUENE	YES
W34M1A	MW-34	11/15/2002	GROUNDWATER	151	161	73	83	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W34M2A	MW-34	11/15/2002	GROUNDWATER	131	141	53	63	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W76M1A	MW-76	11/18/2002	GROUNDWATER	125	135	58	68	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W76M1A	MW-76	11/18/2002	GROUNDWATER	125	135	58	68	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W76M2A	MW-76	11/20/2002	GROUNDWATER	105	115	38	48	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W76M2A	MW-76	11/20/2002	GROUNDWATER	105	115	38	48	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W76SSA	MW-76	11/18/2002	GROUNDWATER	85	95	18	28	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W76SSA	MW-76	11/18/2002	GROUNDWATER	85	95	18	28	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W76SSA	MW-76	11/18/2002	GROUNDWATER	85	95	18	28	8330N	PENTAERYTHRITOL TETRANITRATE	NO
W77M2A	MW-77	11/19/2002	GROUNDWATER	120	130	38	48	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
W77M2A	MW-77	11/19/2002	GROUNDWATER	120	130	38	48	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W77M2A	MW-77	11/19/2002	GROUNDWATER	120	130	38	48	8330N	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	YES
W78M1A	MW-78	11/20/2002	GROUNDWATER	135	145	58	68	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W78M2A	MW-78	11/20/2002	GROUNDWATER	115	125	38	48	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W78M3A	MW-78	11/20/2002	GROUNDWATER	85	95	8	18	8330N	PENTAERYTHRITOL TETRANITRATE	NO
W80M1A	MW-80	12/12/2002	GROUNDWATER	130	140	86	96	E314.0	PERCHLORATE	
W80M2A	MW-80	12/12/2002	GROUNDWATER	100	110	56	66	E314.0	PERCHLORATE	
W98M1A	MW-98	12/02/2002	GROUNDWATER	164	174	26	36	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	YES
W98SSA	MW-98	12/02/2002	GROUNDWATER	137	147	0	10	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
WS-4AD-A	WS-4A	12/19/2002	GROUNDWATER	218	228	148.5	158.5	OC21V	CHLOROFORM	
WS-4AD-D	WS-4A	12/19/2002	GROUNDWATER	155	165	85.5	95.5	OC21V	CHLOROFORM	
WS-4AS-A	WS-4A	12/19/2002	GROUNDWATER	155	165	85.5	95.5	OC21V	CHLOROFORM	
XXM975-A	97-5	12/20/2002	GROUNDWATER	84	94	76	86	E314.0	PERCHLORATE	
G251DAA	MW-251	12/05/2002	PROFILE	10	10	4.95	4.95	OC21V	XYLENES, TOTAL	
G251DAA	MW-251	12/05/2002	PROFILE	10	10	4.95	4.95	OC21V	ACETONE	
G251DAA	MW-251	12/05/2002	PROFILE	10	10	4.95	4.95	OC21V	TOLUENE	
G251DBA	MW-251	12/05/2002	PROFILE	20	20	14.95	14.95	OC21V	XYLENES, TOTAL	
G251DBA	MW-251	12/05/2002	PROFILE	20	20	14.95	14.95	OC21V	TOLUENE	
G251DBA	MW-251	12/05/2002	PROFILE	20	20	14.95	14.95	OC21V	CHLOROFORM	
G251DBA	MW-251	12/05/2002	PROFILE	20	20	14.95	14.95	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 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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G251DCA	MW-251	12/05/2002	PROFILE	30	30	24.95	24.95	OC21V	TOLUENE	
G251DCA	MW-251	12/05/2002	PROFILE	30	30	24.95	24.95	OC21V	XYLENES, TOTAL	
G251DCA	MW-251	12/05/2002	PROFILE	30	30	24.95	24.95	OC21V	CHLOROFORM	
G251DDA	MW-251	12/05/2002	PROFILE	40	40	34.95	34.95	OC21V	XYLENES, TOTAL	
G251DDA	MW-251	12/05/2002	PROFILE	40	40	34.95	34.95	OC21V	TOLUENE	
G251DDA	MW-251	12/05/2002	PROFILE	40	40	34.95	34.95	OC21V	CHLOROFORM	
G251DDA	MW-251	12/05/2002	PROFILE	40	40	34.95	34.95	OC21V	ACETONE	
G251DEA	MW-251	12/05/2002	PROFILE	50	50	44.95	44.95	OC21V	XYLENES, TOTAL	
G251DEA	MW-251	12/05/2002	PROFILE	50	50	44.95	44.95	OC21V	TOLUENE	
G251DEA	MW-251	12/05/2002	PROFILE	50	50	44.95	44.95	OC21V	CHLOROFORM	
G251DFA	MW-251	12/05/2002	PROFILE	60	60	54.95	54.95	OC21V	XYLENES, TOTAL	
G251DFA	MW-251	12/05/2002	PROFILE	60	60	54.95	54.95	OC21V	CHLOROFORM	
G251DFA	MW-251	12/05/2002	PROFILE	60	60	54.95	54.95	OC21V	TOLUENE	
G251DGA	MW-251	12/05/2002	PROFILE	70	70	64.95	64.95	OC21V	XYLENES, TOTAL	
G251DGA	MW-251	12/05/2002	PROFILE	70	70	64.95	64.95	OC21V	TOLUENE	
G251DGA	MW-251	12/05/2002	PROFILE	70	70	64.95	64.95	OC21V	CHLOROFORM	
G251DHA	MW-251	12/06/2002	PROFILE	80	80	74.95	74.95	OC21V	TOLUENE	
G251DHA	MW-251	12/06/2002	PROFILE	80	80	74.95	74.95	OC21V	ETHYLBENZENE	
G251DHA	MW-251	12/06/2002	PROFILE	80	80	74.95	74.95	OC21V	BENZENE	
G251DHA	MW-251	12/06/2002	PROFILE	80	80	74.95	74.95	OC21V	CHLOROFORM	
G251DHA	MW-251	12/06/2002	PROFILE	80	80	74.95	74.95	OC21V	ACETONE	
G251DHA	MW-251	12/06/2002	PROFILE	80	80	74.95	74.95	OC21V	XYLENES, TOTAL	

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G251DIA	MW-251	12/06/2002	PROFILE	90	90	84.95	84.95	OC21V	XYLENES, TOTAL	
G251DIA	MW-251	12/06/2002	PROFILE	90	90	84.95	84.95	OC21V	ETHYLBENZENE	
G251DIA	MW-251	12/06/2002	PROFILE	90	90	84.95	84.95	OC21V	TOLUENE	
G251DIA	MW-251	12/06/2002	PROFILE	90	90	84.95	84.95	OC21V	CHLOROFORM	
G251DIA	MW-251	12/06/2002	PROFILE	90	90	84.95	84.95	OC21V	ACETONE	
G251DJA	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95	OC21V	TOLUENE	
G251DJA	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95	E314.0	PERCHLORATE	
G251DJA	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95	OC21V	CHLOROFORM	
G251DJA	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95	OC21V	XYLENES, TOTAL	
G251DJA	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95	OC21V	ACETONE	
G251DJD	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95	OC21V	XYLENES, TOTAL	
G251DJD	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95	OC21V	TOLUENE	
G251DJD	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95	OC21V	CHLOROFORM	
G251DJD	MW-251	12/06/2002	PROFILE	100	100	94.95	94.95	E314.0	PERCHLORATE	
G251DKA	MW-251	12/06/2002	PROFILE	110	110	104.95	104.95	OC21V	XYLENES, TOTAL	
G251DKA	MW-251	12/06/2002	PROFILE	110	110	104.95	104.95	OC21V	TOLUENE	
G251DKA	MW-251	12/06/2002	PROFILE	110	110	104.95	104.95	OC21V	CHLOROFORM	
G251DKA	MW-251	12/06/2002	PROFILE	110	110	104.95	104.95	E314.0	PERCHLORATE	
G251DLA	MW-251	12/06/2002	PROFILE	120	120	114.95	114.95	OC21V	TOLUENE	
G251DLA	MW-251	12/06/2002	PROFILE	120	120	114.95	114.95	OC21V	XYLENES, TOTAL	
G251DMA	MW-251	12/06/2002	PROFILE	130	130	124.95	124.95	OC21V	TOLUENE	
G251DMA	MW-251	12/06/2002	PROFILE	130	130	124.95	124.95	OC21V	CHLOROFORM	

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G251DMA	MW-251	12/06/2002	PROFILE	130	130	124.95	124.95	E314.0	PERCHLORATE	
G251DNA	MW-251	12/06/2002	PROFILE	140	140	134.95	134.95	OC21V	TOLUENE	
G251DNA	MW-251	12/06/2002	PROFILE	140	140	134.95	134.95	OC21V	BENZENE	
G251DNA	MW-251	12/06/2002	PROFILE	140	140	134.95	134.95	OC21V	CHLOROFORM	
G251DNA	MW-251	12/06/2002	PROFILE	140	140	134.95	134.95	OC21V	ACETONE	
G251DNA	MW-251	12/06/2002	PROFILE	140	140	134.95	134.95	OC21V	XYLENES, TOTAL	
G251DNA	MW-251	12/06/2002	PROFILE	140	140	134.95	134.95	OC21V	1,4-DICHLOROBENZENE	
G251DOA	MW-251	12/09/2002	PROFILE	150	150	144.95	144.95	OC21V	CHLOROFORM	
G251DOA	MW-251	12/09/2002	PROFILE	150	150	144.95	144.95	OC21V	TOLUENE	
G251DOA	MW-251	12/09/2002	PROFILE	150	150	144.95	144.95	OC21V	BENZENE	
G251DPA	MW-251	12/09/2002	PROFILE	160	160	154.95	154.95	OC21V	XYLENES, TOTAL	
G251DPA	MW-251	12/09/2002	PROFILE	160	160	154.95	154.95	OC21V	TOLUENE	
G251DPA	MW-251	12/09/2002	PROFILE	160	160	154.95	154.95	OC21V	BENZENE	
G251DPA	MW-251	12/09/2002	PROFILE	160	160	154.95	154.95	OC21V	ACETONE	
G251DQA	MW-251	12/09/2002	PROFILE	170	170	164.95	164.95	OC21V	ACETONE	
G251DQA	MW-251	12/09/2002	PROFILE	170	170	164.95	164.95	OC21V	TOLUENE	
G251DQA	MW-251	12/09/2002	PROFILE	170	170	164.95	164.95	OC21V	XYLENES, TOTAL	
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	8330N	4-NITROTOLUENE	NO
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	8330N	3-NITROTOLUENE	NO
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	8330N	NITROGLYCERIN	NO
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	OC21V	ACETONE	
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	OC21V	METHYL ETHYL KETONE (2-BUTANONE)	

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	OC21V	CHLOROFORM	
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	OC21V	2-HEXANONE	
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	OC21V	XYLENES, TOTAL	
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	8330N	2,6-DINITROTOLUENE	NO
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	8330N	2-NITROTOLUENE	NO
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	8330N	PICRIC ACID	NO
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	8330N	1,3,5-TRINITROBENZENE	NO
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	8330N	1,3-DINITROBENZENE	NO
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	8330N	4-AMINO-2,6-DINITROTOLUENE	NO
G253DAA	MW-253	12/18/2002	PROFILE	135	135	5.6	5.6	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G253DBA	MW-253	12/18/2002	PROFILE	140	140	10.6	10.6	8330N	2,6-DINITROTOLUENE	NO
G253DBA	MW-253	12/18/2002	PROFILE	140	140	10.6	10.6	8330N	PICRIC ACID	NO
G253DBA	MW-253	12/18/2002	PROFILE	140	140	10.6	10.6	OC21V	ACETONE	
G253DBA	MW-253	12/18/2002	PROFILE	140	140	10.6	10.6	OC21V	METHYL ETHYL KETONE (2-BUTANONE)	
G253DBA	MW-253	12/18/2002	PROFILE	140	140	10.6	10.6	OC21V	CHLOROFORM	
G253DCA	MW-253	12/18/2002	PROFILE	150	150	20.6	20.6	OC21V	CHLOROFORM	
G253DCA	MW-253	12/18/2002	PROFILE	150	150	20.6	20.6	OC21V	ACETONE	
G253DDA	MW-253	12/18/2002	PROFILE	160	160	30.6	30.6	OC21V	ACETONE	
G253DDA	MW-253	12/18/2002	PROFILE	160	160	30.6	30.6	OC21V	METHYL ETHYL KETONE (2-BUTANONE)	
G253DDA	MW-253	12/18/2002	PROFILE	160	160	30.6	30.6	OC21V	CHLOROFORM	
G253DEA	MW-253	12/18/2002	PROFILE	170	170	40.6	40.6	OC21V	ACETONE	
G253DEA	MW-253	12/18/2002	PROFILE	170	170	40.6	40.6	OC21V	CHLOROFORM	

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

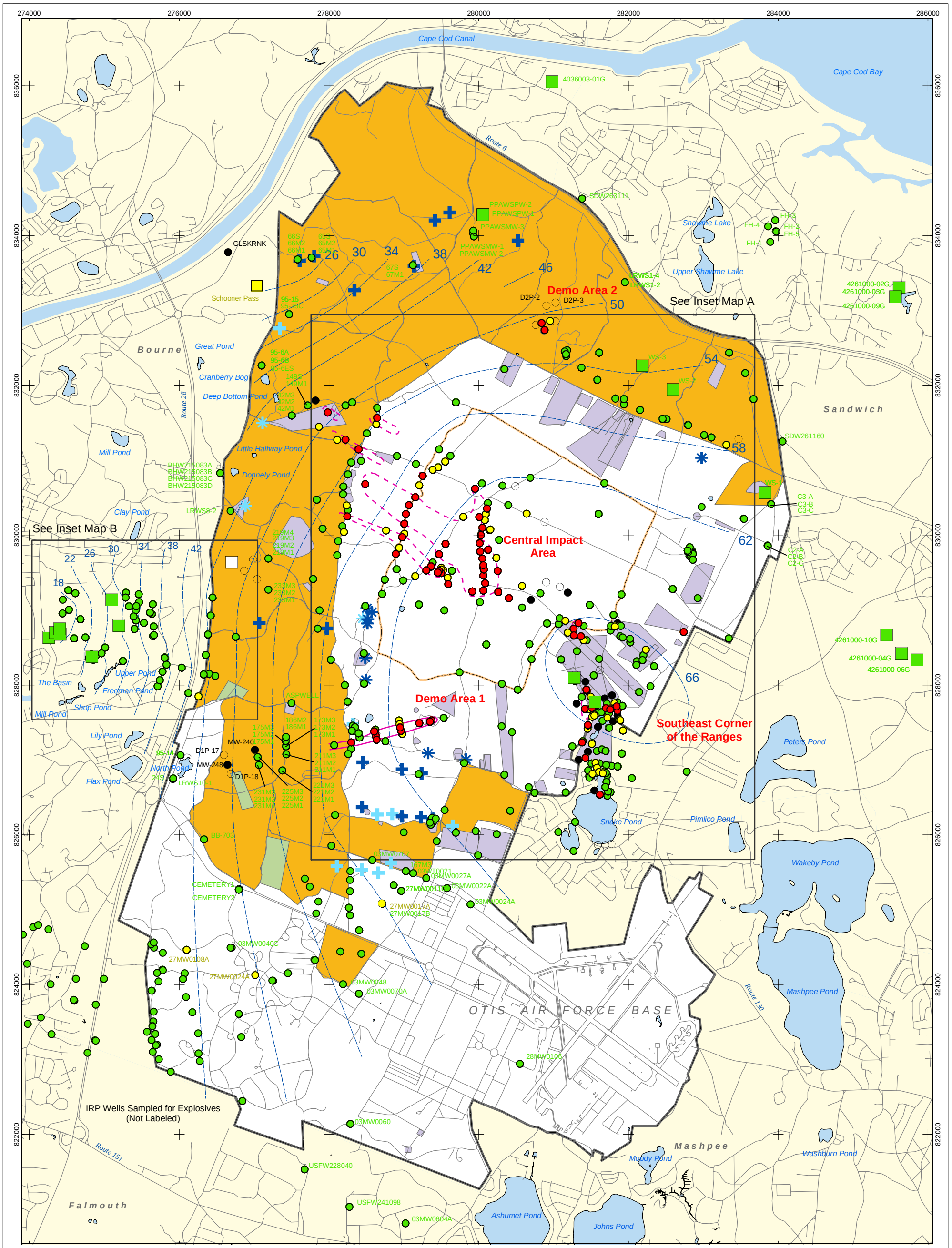
OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G253DFA	MW-253	12/18/2002	PROFILE	180	180	50.6	50.6	OC21V	ACETONE	
G253DFA	MW-253	12/18/2002	PROFILE	180	180	50.6	50.6	OC21V	CHLOROFORM	
G253DFD	MW-253	12/18/2002	PROFILE	180	180	50.6	50.6	OC21V	ACETONE	
G253DFD	MW-253	12/18/2002	PROFILE	180	180	50.6	50.6	OC21V	CHLOROFORM	
G253DGA	MW-253	12/18/2002	PROFILE	190	190	60.6	60.6	OC21V	ACETONE	
G253DGA	MW-253	12/18/2002	PROFILE	190	190	60.6	60.6	OC21V	CHLOROFORM	
G253DHA	MW-253	12/18/2002	PROFILE	200	200	70.6	70.6	OC21V	ACETONE	
G253DHA	MW-253	12/18/2002	PROFILE	200	200	70.6	70.6	OC21V	CHLOROFORM	
G253DIA	MW-253	12/19/2002	PROFILE	210	210	80.6	80.6	8330N	1,3,5-TRINITROBENZENE	NO
G253DIA	MW-253	12/19/2002	PROFILE	210	210	80.6	80.6	OC21V	ACETONE	
G253DIA	MW-253	12/19/2002	PROFILE	210	210	80.6	80.6	8330N	2,6-DINITROTOLUENE	NO
G253DIA	MW-253	12/19/2002	PROFILE	210	210	80.6	80.6	OC21V	CHLOROFORM	
G253DIA	MW-253	12/19/2002	PROFILE	210	210	80.6	80.6	8330N	NITROGLYCERIN	NO
G253DJA	MW-253	12/19/2002	PROFILE	220	220	90.6	90.6	OC21V	ACETONE	
G253DJA	MW-253	12/19/2002	PROFILE	220	220	90.6	90.6	OC21V	CHLOROFORM	
G253DKA	MW-253	12/19/2002	PROFILE	230	230	100.6	100.6	OC21V	ACETONE	
G253DKA	MW-253	12/19/2002	PROFILE	230	230	100.6	100.6	OC21V	CHLOROFORM	
G253DLA	MW-253	12/19/2002	PROFILE	240	240	110.6	110.6	OC21V	ACETONE	
G253DLA	MW-253	12/19/2002	PROFILE	240	240	110.6	110.6	OC21V	CHLOROFORM	
G253DMA	MW-253	12/19/2002	PROFILE	250	250	120.6	120.6	OC21V	ACETONE	
G253DMA	MW-253	12/19/2002	PROFILE	250	250	120.6	120.6	OC21V	CHLOROFORM	
G253DNA	MW-253	12/19/2002	PROFILE	260	260	130.6	130.6	OC21V	CHLOROFORM	

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/13/02 - 12/31/02

OGDEN_ID	LOCID OR WELL	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G253DOA	MW-253	12/19/2002	PROFILE	270	270	140.6	140.6	OC21V	ACETONE	
G253DOA	MW-253	12/19/2002	PROFILE	270	270	140.6	140.6	OC21V	CHLOROFORM	
G253DOA	MW-253	12/19/2002	PROFILE	270	270	140.6	140.6	OC21V	METHYL ETHYL KETONE (2-BUTANONE)	
G253DPA	MW-253	12/19/2002	PROFILE	280	280	150.6	150.6	OC21V	CHLOROFORM	
G253DQA	MW-253	12/19/2002	PROFILE	290	290	160.6	160.6	OC21V	ACETONE	
G253DRA	MW-253	12/19/2002	PROFILE	300	300	170.6	170.6	OC21V	CHLOROFORM	
G253DSA	MW-253	12/19/2002	PROFILE	310	310	180.6	180.6	OC21V	CHLOROFORM	
G253DTA	MW-253	12/19/2002	PROFILE	317	317	187.6	187.6	OC21V	ACETONE	
G253DTA	MW-253	12/19/2002	PROFILE	317	317	187.6	187.6	OC21V	CHLOROFORM	

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



DRAFT

Explosives in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

FIGURE 1

J:\GIS\January2003\out\monthly\exp_overall.pdf
G:\MMR\MMR\ArcMap\Monthly\January2003\Explosives\overall.mxd
January 3, 2003 KEA

278000 279000 280000 281000 282000 283000

832000 831000 830000 829000 828000 827000 826000

Demo Area 2

Central Impact Area

Demo Area 1

Southeast Corner of the Ranges

Gibbs Pond
Round Swamp
Doughnut Pond
Burgoyne Rd.
Gibbs Rd.
Grassy Pond
Baileys Pond
Spruce Swamp Rd.
Jefferson Rd.
Pocasset Sandwich Rd.
Wood Rd.
Tank Alley
Turpentine Rd.
Succonsette Pond
Wheelock Rd.
Greenway Rd.
Opening Pond
Pocasset Forestdale Rd.
Bypass Bog
Arnold Rd.
Snake Pond Rd.
Rt. 130
Peters Pond
Snake Pond
Weeks Pond
Pimlico Pond
Ox Pond
J3 Wetland

34 38 42 50 54 58 62 66

MW-249 MW-244 MW-245 MW-246 MW-247 MW-250 MW-251 MW-234 MW-237 MW-236 MW-238 MW-239 MW-240 MW-241 MW-242 MW-243

CIAP-27 CIAP-28

WS-2 WS-3

RW-1 RW-3

KP-2

LRMW0003 LRWS4-1 LRWS5-1 LRWS6-1 LRWS7-1

USCGANTST 15WT0712 15WT0711 15WT0007 15WT0010

RANGECON

SMR-2 SMR-3 SMR-4

LP-10

TEXTRONPW-1 TEXTRONPW-2

J1P-16 J1P-18 J2P-17 J3P-10 J3P-23 J3P-29 J3P-30 D1P-19 D2P-1 D2P-4

J3P-28

4261000-05G

SP3-91 SP4-91

USBH027072

C1-A C1-B C1-C C4-A C4-B C4-C C5-A C5-B C5-C C6-A C6-B C6-C C7-A C7-B

Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories

Validated Detection Less than Maximum Contaminant Level/Health Advisories

Validated Non-Detect

No Data Available

Proposed Monitoring Well

Military Training Areas

Military Ranges

Current Gun Position

Current Mortar Position

Old Gun Position

Old Mortar Position

Validated Non-Detect Water Supply Well

Water Table Contour (Feet above mean sea level)

Area of RDX Detections Greater than 2.0 ppb

2.0 ppb RDX Concentration Contour

0 600 1,200 Feet

N

IAGWSP Impact Area Groundwater Study Program

Sources & Notes
Base map data from US Geological Survey
7 1/2 minute Topographic Maps.
Source: MassGIS

DRAFT

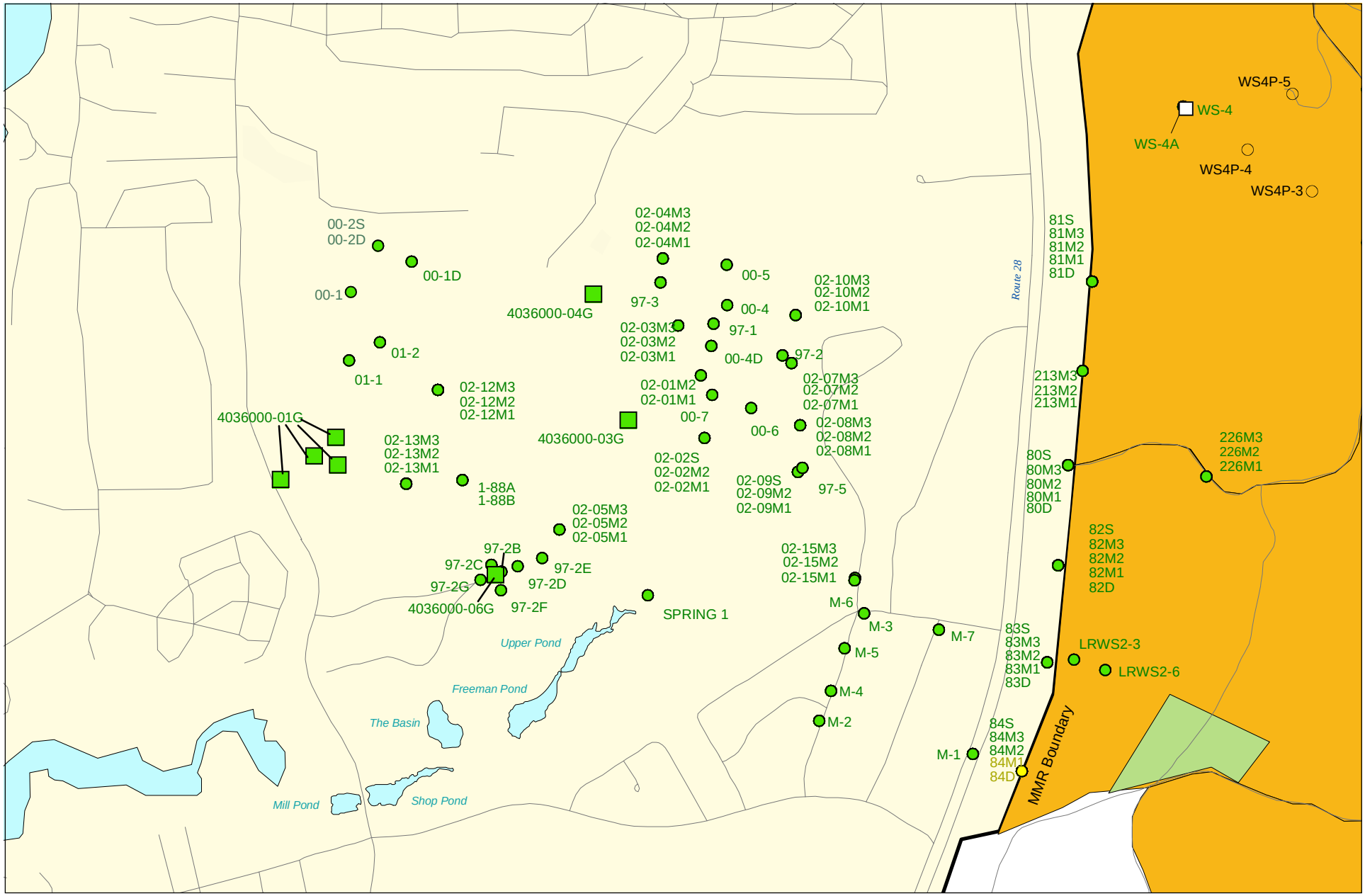
amec

Explosives in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

Inset Map A

FIGURE 1

J:\GIS\January2003\out\monthly\exp_insetA.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\Explosives\InsetA.mxd January 5, 2003 KEA JEP

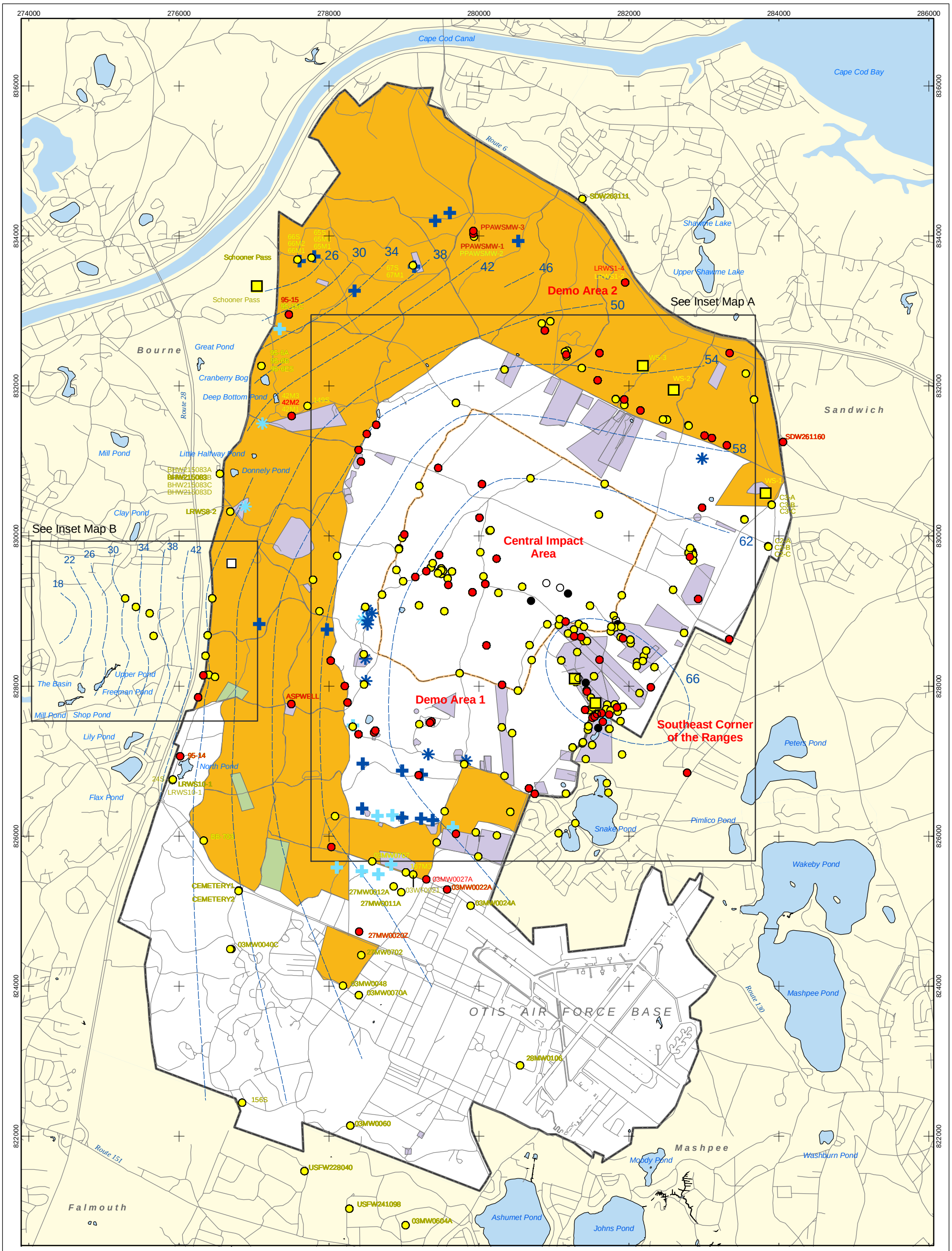


amec DRAFT

FIGURE

Inset Map B **1**

J:\GIS\JANUARY2003\OUT\MONTHLY\EXP_INSETB.PDF G:\MMR\MMR\ArcMap\Monthly\January2003\Explosives\InsetB.mxd January 5, 2003 KEA JEP



- Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories
- Validated Detection Less than Maximum Contaminant Level/Health Advisories
- Validated Non-Detect
- No Data Available
- Proposed Monitoring Well
- Current Gun Position
- Current Mortar Position
- Old Gun Position
- Old Mortar Position
- Combat Training Areas
- Military Training Areas
- Military Ranges
- Validated Non-Detect Water Supply Well
- Validated Detection Less than Maximum Contaminant Level/Health Advisories Water Supply Well
- Proposed Water Supply Well
- Water Table Contour (Feet above mean sea level)

IAGWSP Impact Area Groundwater Study Program

0 4,000 Feet

N

Sources & Notes
Base map data from US Geological Survey
7 1/2 minute Topographic Maps.
Source: MassGIS

DRAFT

amec

Metals in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

FIGURE 2

J:\GIS\January2003\out\monthly\metals_overall.pdf
G:\MMR\MMR\ArcMap\Monthly\January2003\Metals\overall.mxd
January 2, 2003 KEA

Metals in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

DRAFT

amec

FIGURE 2

Inset Map A

Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories

Validated Detection Less than Maximum Contaminant Level/Health Advisories

Validated Non-Detect

No Data Available

Proposed Monitoring Well

Military Training Areas

Military Ranges

Current Gun Position

Current Mortar Position

Old Gun Position

Old Mortar Position

Validated Non-Detect Water Supply Well

Validated Detection Less than Maximum Contaminant Level/ Health Advisories Water Supply Well

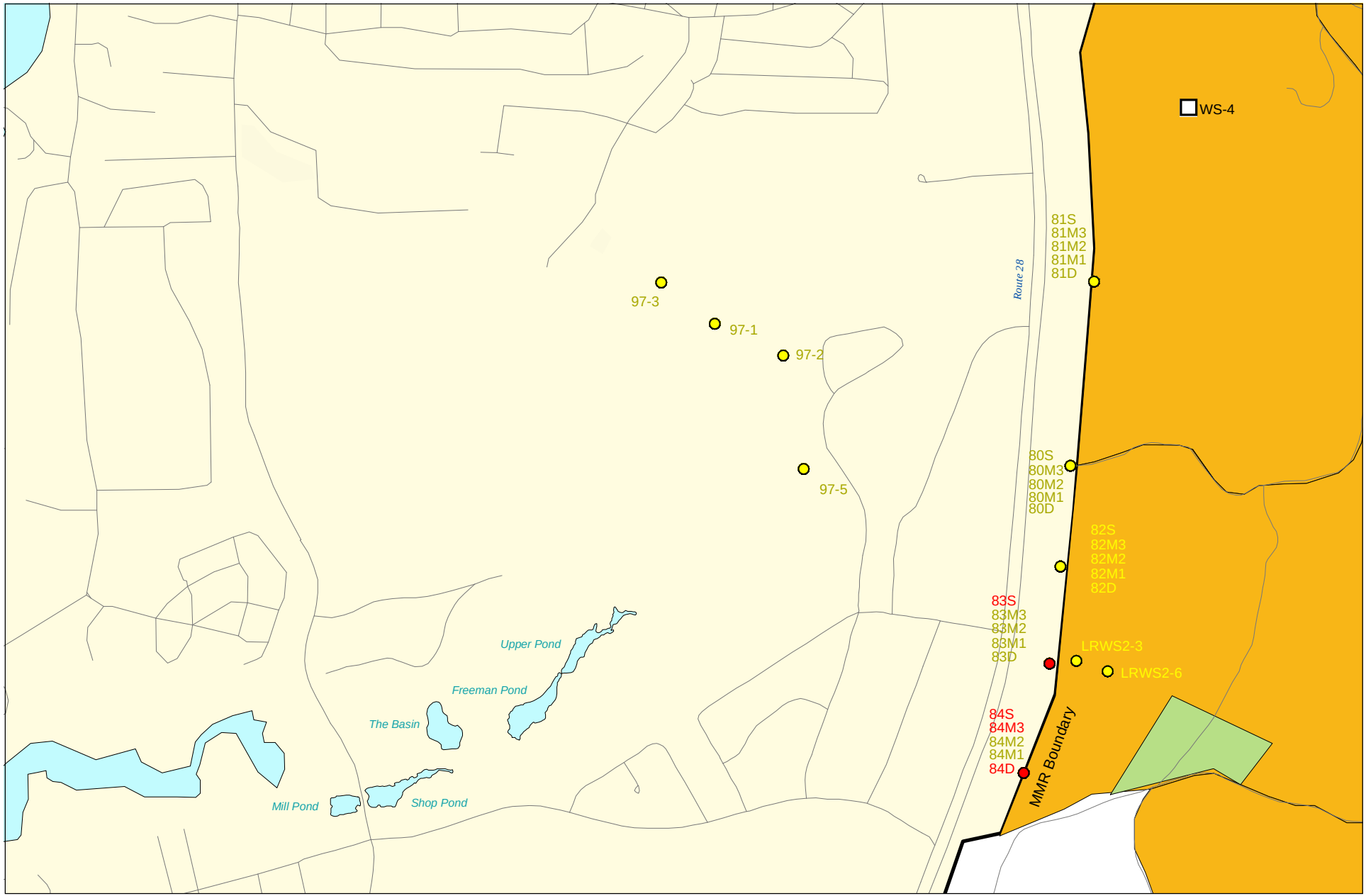
Water Table Contour (Feet above mean sea level)

0 600 1,200 Feet

IAGWSP Impact Area Groundwater Study Program

Sources & Notes
Base map data from US Geological Survey
7 1/2 minute Topographic Maps.
Source: MassGIS

J:\GIS\January2003\out\monthly\metals_insetA.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\Metals\InsetA.mxd January 2, 2003 KEA



N

0 600 1,200 Feet

Sources & Notes:
Base map data from US Geological Survey
7 1/2 minute Topographic maps.
Source: MassGIS

- Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories
- Validated Detection Less than Maximum Contaminant Level/Health Advisories
- Proposed Water Supply Well
- Combat Training Areas
- Military Training Areas

Metals in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

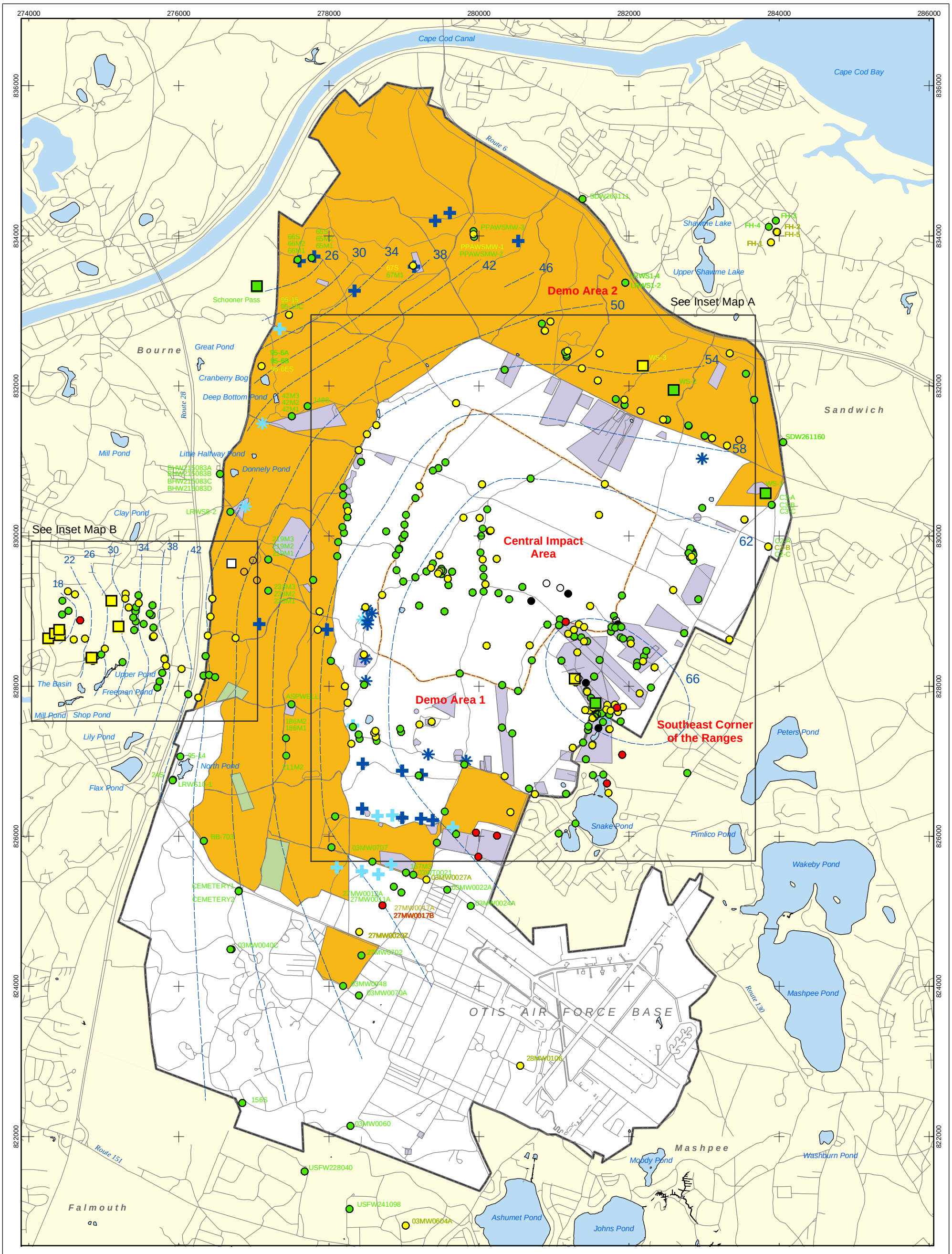
IAGWSP Impact Area Groundwater Study Program

amec DRAFT

FIGURE

Inset Map B **2**

J:\GIS\January2003\out\monthly\metals_insetB.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\Metals\InsetB.mxd January 2, 2003 KEA



DRAFT

Volatile Organic Compounds (Excluding Chloroform) in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

FIGURE 3

J:\GIS\January2003\out\monthly\VOC_overall.pdf
G:\MMR\MMR\ArcMap\Monthly\January2003\VOC\overall.mxd
January 2, 2003 KEA

Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories

Validated Detection Less than Maximum Contaminant Level/Health Advisories

Validated Non-Detect

No Data Available

Proposed Monitoring Well

Military Training Areas

Military Ranges

Current Gun Position

Current Mortar Position

Old Gun Position

Old Mortar Position

Validated Non-Detect Water Supply Well

Validated Detection Less than Maximum Contaminant Level/Health Advisories Water Supply Well

Water Table Contour (Feet above mean sea level)

0 600 1,200 Feet

Impact Area Groundwater Study Program

Sources & Notes
Base map data from US Geological Survey
7 1/2 minute Topographic Maps.
Source: MassGIS

DRAFT

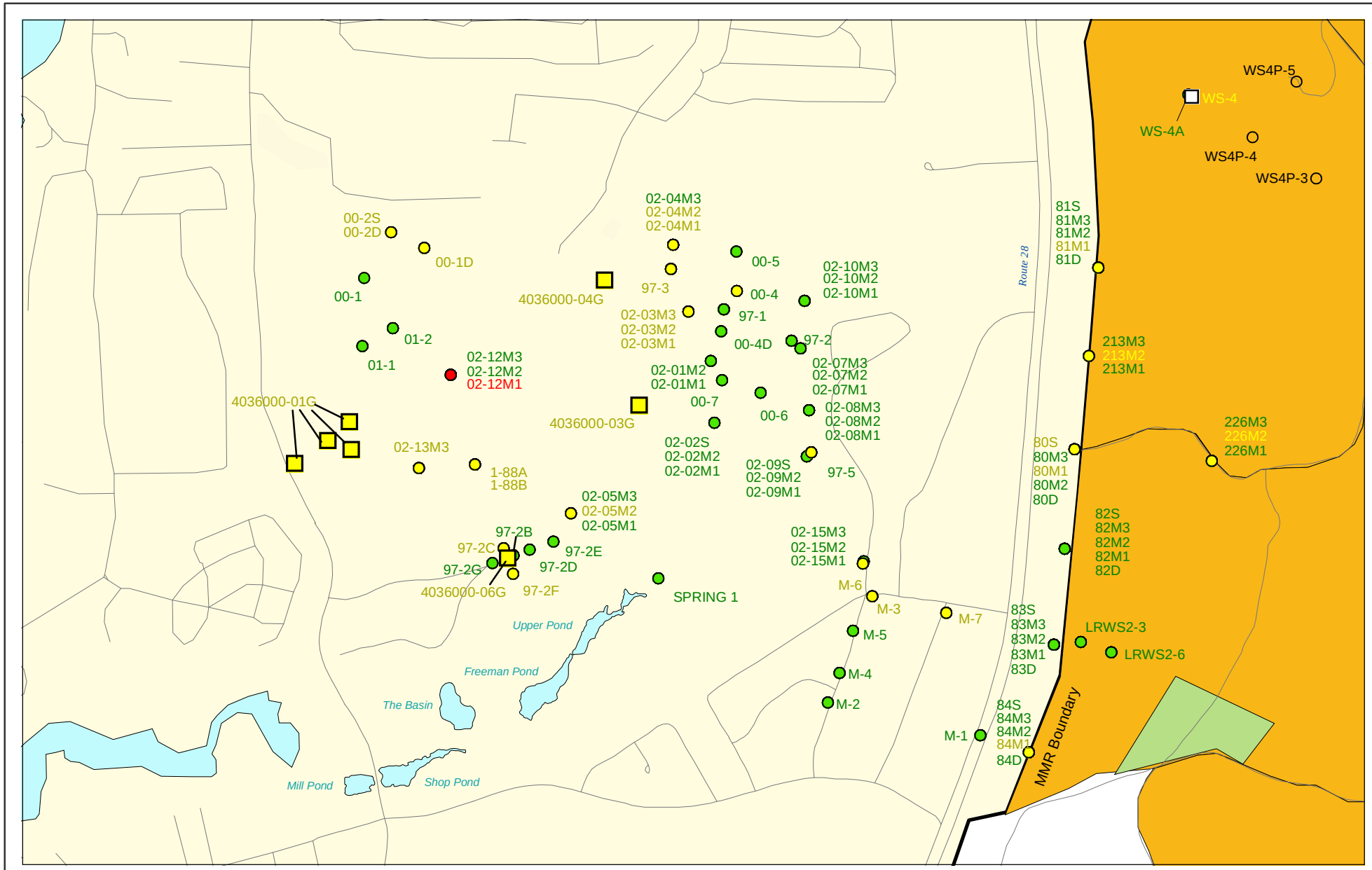
amec

Volatile Organic Compounds (excluding Chloroform) in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

FIGURE 3

Inset Map A

J:\GIS\January2003\out\monthly\VOC_insetA.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\VOC\InsetA.mxd January 2, 2003 KEA

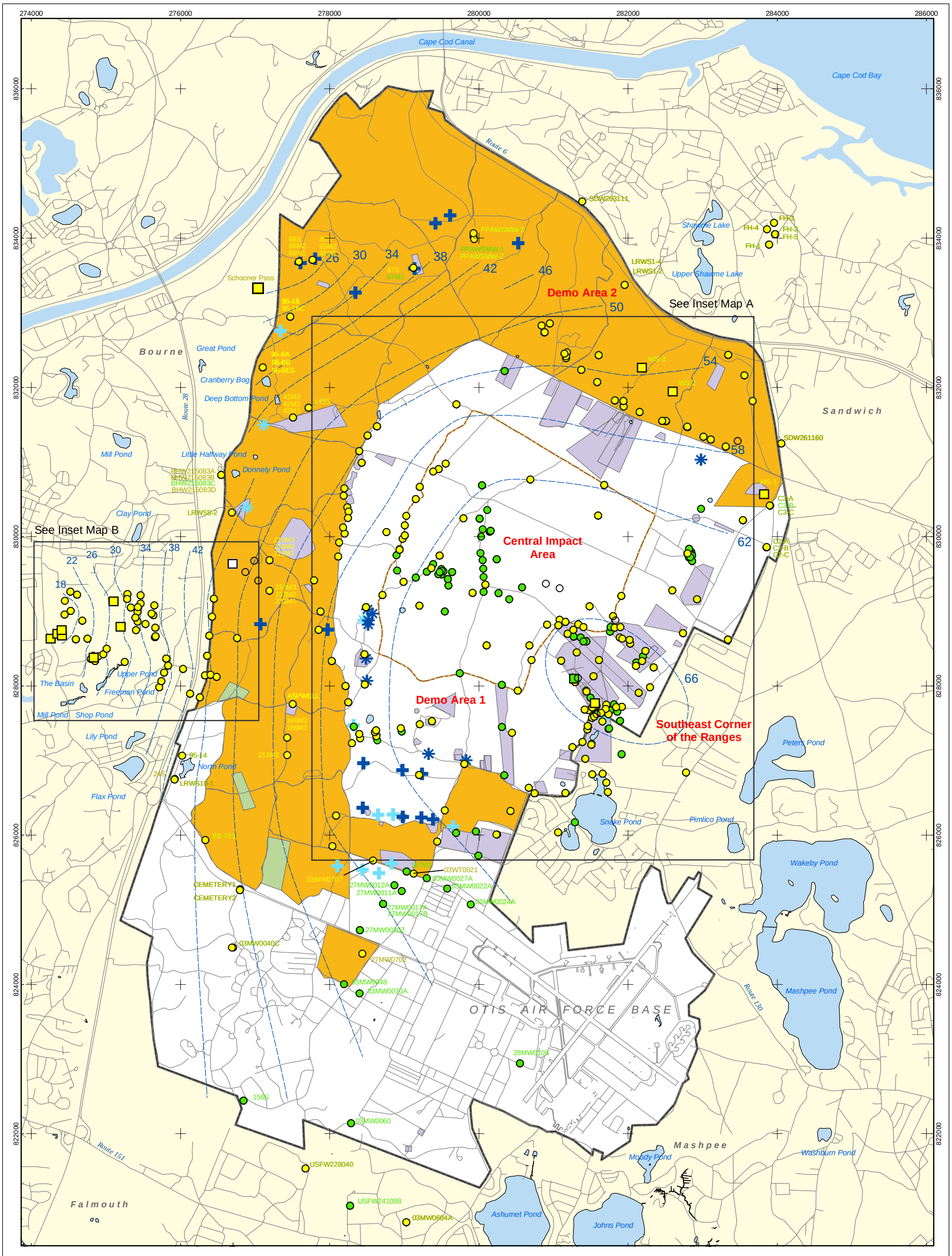


Volatile Organic Compounds (excluding Chloroform) in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

amec DRAFT

FIGURE
Inset Map B **3**

J:\GIS\January2003\out\monthly\VOC_insetB.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\VOC\InsetB.mxd January 2, 2003 KEA



DRAFT

Chloroform in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

FIGURE 4

J:\GIS\January2003\out\monthly\Chloroform_overall.pdf
G:\MMR\MMR\ArcMap\Monthly\January2003\Chloroform\overall.mxd
January 7, 2003 KEA JEP

Chloroform in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

DRAFT

amec

FIGURE 4

Inset Map A

Demo Area 2

Central Impact Area

Demo Area 1

Southeast Corner of the Ranges

Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories

Validated Detection Less than Maximum Contaminant Level/Health Advisories

Validated Non-Detect

No Data Available

Proposed Monitoring Well

Military Training Areas

Military Ranges

Current Gun Position

Current Mortar Position

Old Gun Position

Old Mortar Position

Validated Non-Detect Water Supply Well

Validated Detection Less than Maximum Contaminant Level/ Health Advisories, Water Supply Well

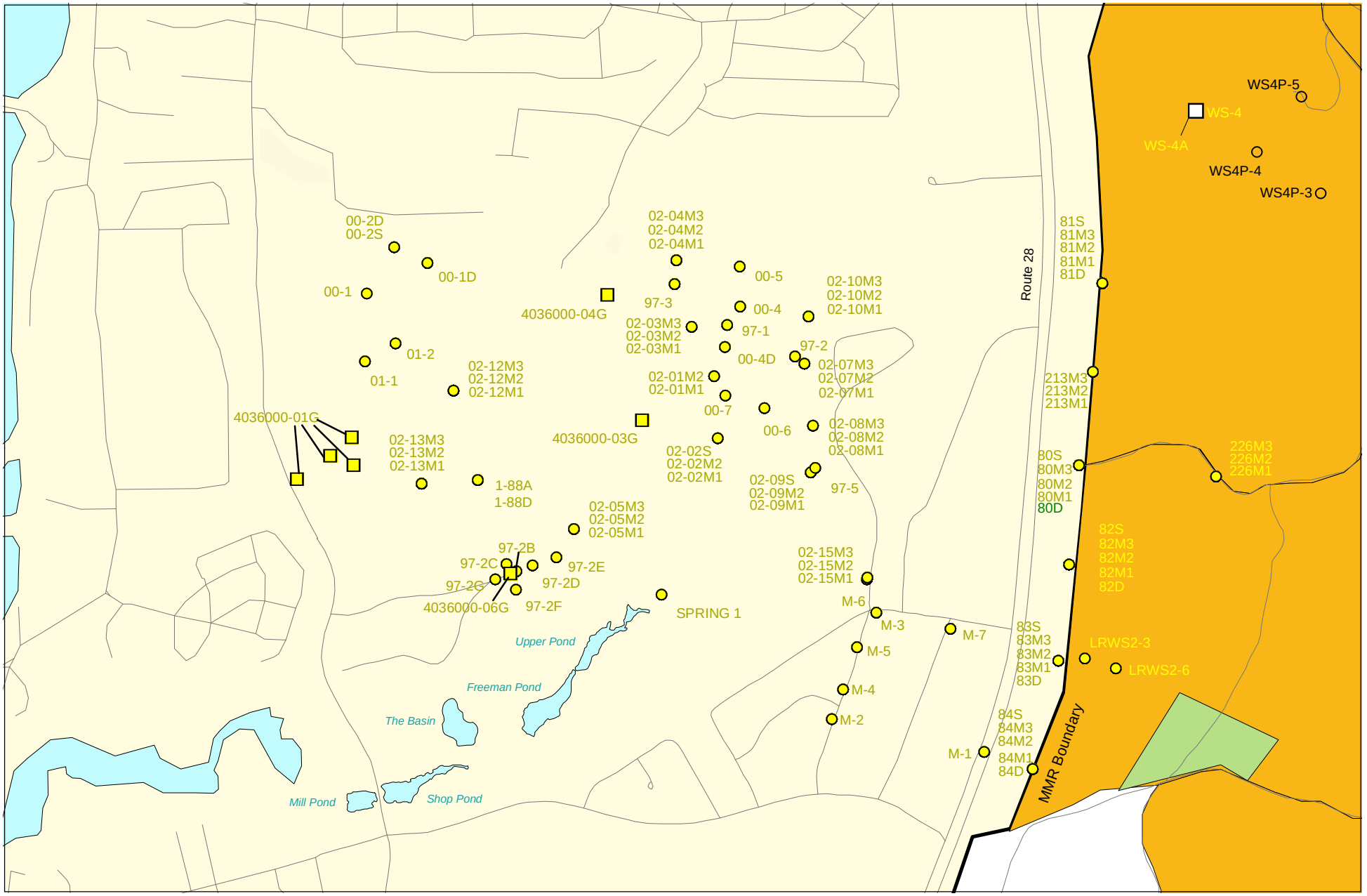
Water Table Contour (Feet above mean sea level)

0 600 1,200 Feet

IAGWSP Impact Area Groundwater Study Program

Sources & Notes
Base map data from US Geological Survey 7 1/2 minute Topographic Maps.
Source: MassGIS

J:\GIS\January2003\out\monthly\chloroform_inseta.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\Chloroform\InsetA.mxd January 7, 2003 KEA JEP



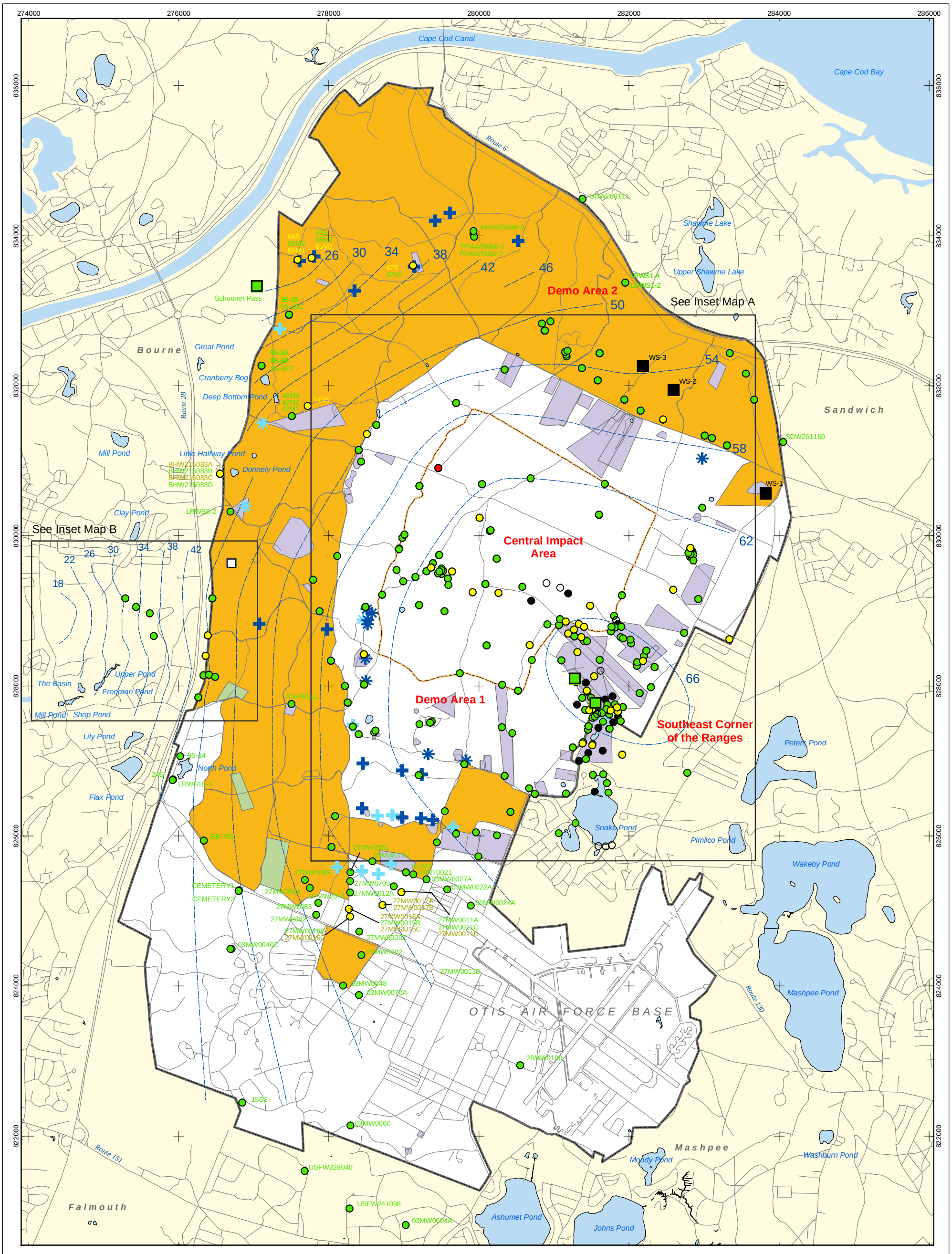
Chloroform in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

amec DRAFT

FIGURE

Inset Map B **4**

J:\GIS\January2003\out\monthly\chloroform_insetB.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\Chloroform\InsetB.mxd January 8, 2003 KEA JEP



- Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories
- Validated Detection Less than Maximum Contaminant Level/Health Advisories
- Validated Non-Detect
- No Data Available
- Proposed Monitoring Well
- Current Gun Position
- Current Mortar Position
- Old Gun Position
- Old Mortar Position
- Combat Training Areas
- Military Training Areas
- Military Ranges
- Validated Non-Detect Water Supply Well
- Proposed Water Supply Well
- No Data Available Water Supply Well
- Water Table Contour (Feet above mean sea level)

IAGWSP Impact Area Groundwater Study Program

0 4,000 Feet

N

Sources & Notes
Base map data from US Geological Survey
7 1/2 minute Topographic Maps.
Source: MassGIS

DRAFT

amec

Semi-Volatile Organic Compounds (excluding BEHP) in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

FIGURE 5

J:\GIS\January2003\out\monthly\SVOC_overall.pdf
G:\MMR\MMR\ArcMap\Monthly\January2003\SVOC\overall.mxd
January 2, 2003 KEA

278000 279000 280000 281000 282000 283000

832000 831000 830000 829000 828000 827000 826000

Demo Area 2
Central Impact Area
Demo Area 1
Southeast Corner of the Ranges

Doughnut Pond
Gibbs Pond
Round Swamp
Baileys Pond
Grassy Pond
Succonsette Pond
Opening Pond
Ox Pond
Bypass Bog
J3 Wetland
Weeks Pond
Snake Pond
Peters Pond
Pimlico Pond

Burgoyne Rd.
Gibbs Rd.
Spruce Swamp Rd.
Jefferson Rd.
Pocasset Sandwich Rd.
Wood Rd.
Turpentine Rd.
Tank Alley
Wheelock Rd.
Greenway Rd.
Pocasset Forestdale Rd.
Arnold Rd.
Rt. 130
Snake Pond Rd.

RANGECON

WS-3 WS-2 RW-3 RW-1 LRMW0003 LRWS4-1 LRWS5-1 LRWS7-1

SMR-2 SMR-3 SMR-4

LP-10 J2P-17 J1P-18 J1P-16 J3P-10 J3P-30 J3P-28 J3P-29

MW-234 MW-236 MW-237 MW-238 MW-239 MW-241 MW-242 MW-243 MW-244 MW-245 MW-246 MW-247 MW-250 MW-251

TEXTRONPW-1 TEXTRONPW-2

34 38 42 50 54 58 62 66

Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories
Validated Detection Less than Maximum Contaminant Level/Health Advisories
Validated Non-Detect
No Data Available
Proposed Monitoring Well
Military Training Areas
Military Ranges
Current Gun Position
Current Mortar Position
Old Gun Position
Old Mortar Position
Validated Non-Detect Water Supply Well
No Data Available Water Supply Well
Water Table Contour (Feet above mean sea level)

0 600 Feet

IAGWSP Impact Area Groundwater Study Program

Sources & Notes
Base map data from US Geological Survey 7 1/2 minute Topographic Maps.
Source: MassGIS

DRAFT

amec

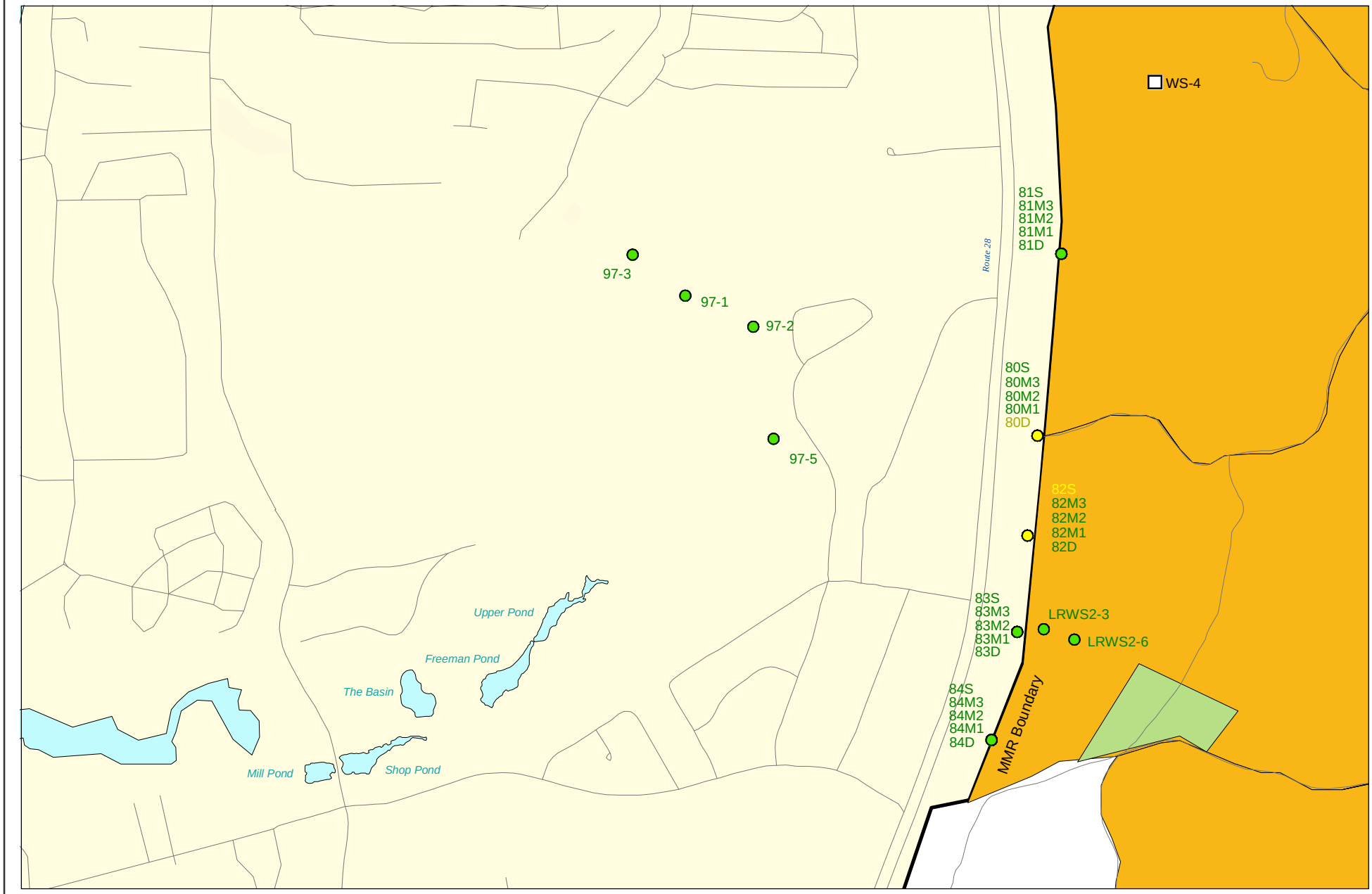
Semi-Volatile Organic Compounds (excluding BEHP) in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

FIGURE

Inset Map A

5

J:\GIS\January2003\out\monthly\SVOC_insetA.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\SVOC\InsetA.mxd January 2, 2003 KEA



N

0 600 1,200 Feet

Sources & Notes:
Base map data from US Geological Survey
7 1/2 minute Topographic maps.
Source: MassGIS

Validated Detection Less than Maximum Contaminant Level/Health Advisories

Validated Non-Detect

Proposed Water Supply Well

Combat Training Areas

Military Training Areas

Semi-Volatile Organic Compounds (excluding BEHP) in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

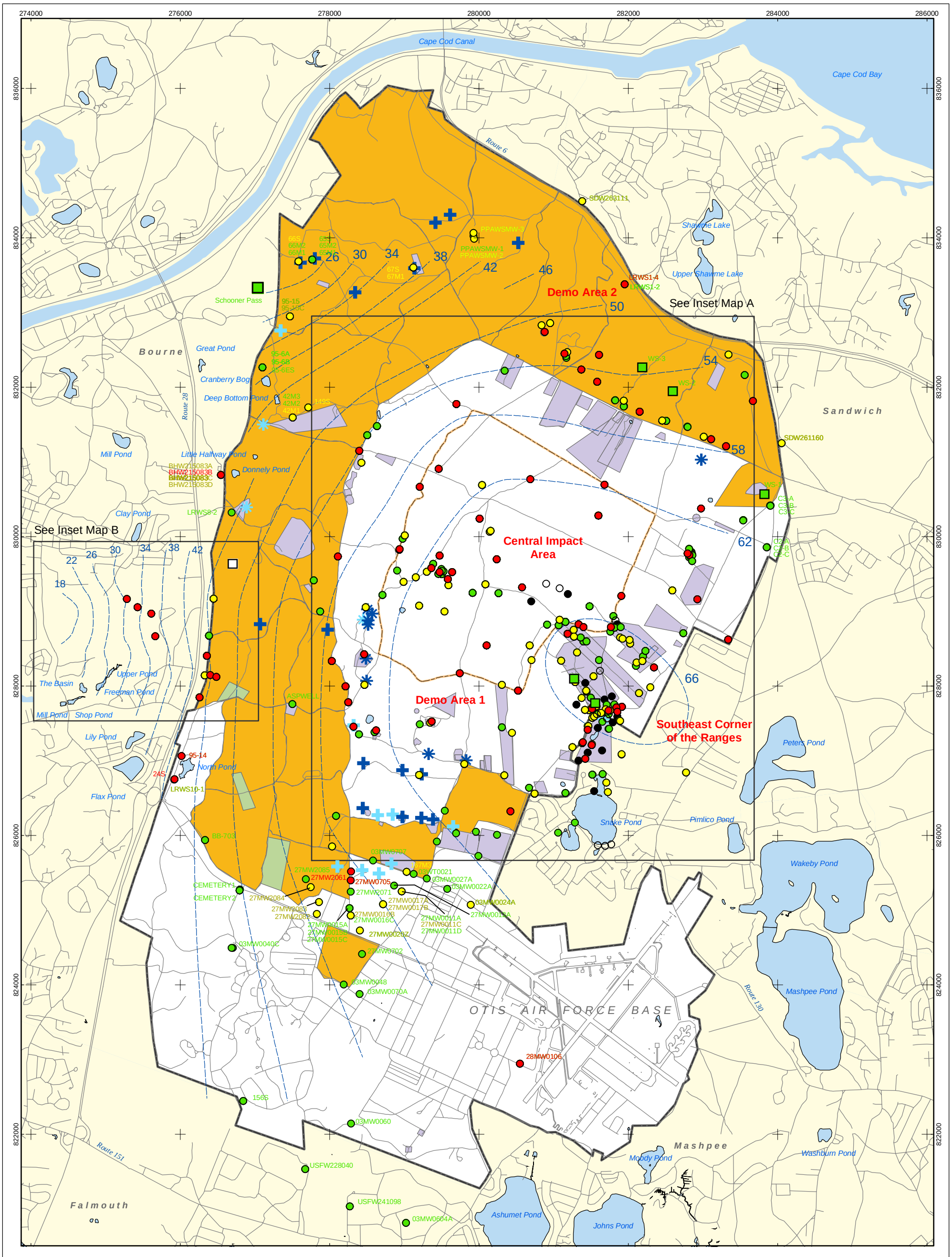
IAGWSP Impact Area Groundwater Study Program

amec DRAFT

FIGURE

Inset Map B **5**

J:\GIS\January2003\out\monthly\SVOC_insetB.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\SVOC\InsetB.mxd January 2, 2003 KEA



- Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories
- Validated Detection Less than Maximum Contaminant Level/Health Advisories
- Validated Non-Detect
- No Data Available
- Proposed Monitoring Well
- Current Gun Position
- Current Mortar Position
- Old Gun Position
- Old Mortar Position
- Combat Training Areas
- Military Training Areas
- Military Ranges
- Validated Non-Detect Water Supply Well
- Proposed Water Supply Well
- Water Table Contour (Feet above mean sea level)

IAGWSP Impact Area Groundwater Study Program

0 4,000 Feet

N

Sources & Notes
Base map data from US Geological Survey
7 1/2 minute Topographic Maps.
Source: MassGIS

DRAFT

amec

BEHP in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

FIGURE 6

J:\GIS\January2003\out\monthly\BEHP_overall.pdf
G:\MMR\MMR\ArcMap\Monthly\January2003\BEHP\overall.mxd
January 7, 2003 KEA JEP

278000 279000 280000 281000 282000 283000

832000 831000 830000 829000 828000 827000 826000

Demo Area 2

Central Impact Area

Demo Area 1

Southeast Corner of the Ranges

Gibbs Pond
Round Swamp
Baileys Pond
Succonsette Pond
Opening Pond
Grassy Pond
Ox Pond
Doughnut Pond
Bypass Bog
J3 Wetland
Snake Pond
Weeks Pond
Peters Pond
Pimlico Pond

Burgoyne Rd.
Gibbs Rd.
Jefferson Rd.
Spruce Swamp Rd.
Pocasset Sandwich Rd.
Wood Rd.
Tank Alley
Turpentine Rd.
Wheelock Rd.
Greenway Rd.
Pocasset Forestdale Rd.
Arnold Rd.
Snake Pond Rd.
Rt. 130

34 38 42 50 54 58 62 66

RANGECON

160S 161S 16S 16D 11MW0002 11MW0003 11MW0004 11MW0001 53S 53M3 53M2 53M1 53D 17S 17M3 17M2 17M1 17D 52S 52M3 52M2 52M1 52D 62S WS-3 LRMW0003 RW-3 WS-2 RW-1 54S 54M3 54M2 54M1 54D C5-A C5-B C5-C 55S 55M3 55M2 55M1 55D C6-A C6-B C6-C 63S 63M3 63M2 63M1 63D C7-A C7-B C4-A C4-B C4-C 48S 48M3 48M2 48M1 48D 49S 49M3 49M2 49M1 49D 18S 18M2 18M1 18D 10S 10M1 10D 50S 50M3 50M2 50M1 50D 51S 51M3 51M2 51M1 51D 23S 23M3 23M2 23M1 23D 72S 41M3 41M2 41M1 43S 43M2 43M1 03S 03M2 03M1 03D 04S 11S 05S 05M2 05M1 05D LRWS4-1 C1-A C1-B C1-C 59S 59M2 59M1 26S 39S 39M2 39M1 58MW0018A 58MW0018B 58MW0018C 58MW0007C 58MW0007B 58MW0007E 22S 38S 38M4 38M3 38M2 38M1 38D 58MW0017A 58MW0017B 58MW0017C 58MW0009C 58MW0009E 58MW0010A 58MW0010B 58MW0011D 58MW0011E 58MW0003 58MW0015A 58MW0015B 58MW0004 58MW0005E 58MW0008E 58MW0002 58MW0001 58MW0016A 58MW0016B 58MW0016C 58MW0006E 09S 94S 94M2 94M1 25S 44S 44M2 44M1 15MW0008 15WT0007 15MW0004 15MW0002 15WT0712 15MW0006 15MW0001 15MW0007 15MW0009 15MW0005 15WT0711 174S 15S 15D 01S 01M2 01M1 01D 40S 40M1 27S 37M3 37M2 37M1 J1P-18 J1P-16 MW-245 MW-244 12S 170M3 170M2 170M1 LRWS5-1 104S 104M2 104M1 08S 71S 71M1 192M3 192M2 192M1 229M3 229M2 229M1 J2P-17 MW-234 29S 230M2 230M1 130S 130M1 130D 119S 117S 137S 120S 120M1 228S 228M2 228M1 215S 215M2 215M1 57S 57M3 57M2 57M1 57D 06S 187S 187M1 187D 164M3 164M2 164M1 188S 188M1 118M2 118M1 126S 126M1 166M3 166M2 166M1 168M3 168M2 168M1 191S 191M2 191M1 58S 136S 136M1 189S 07S 07M2 07M1 07D 152M2 152M1 SMR-2 SMR-4 21S 21M3 21M2 21M1 21D 70S 70M1 13S 13D 190M2 190M1 127S 116S 121S 154S 154M1 122S 158S 158M2 158M1 14S 128S 128M2 128M1 LP-10 TEXTRONPW-2 MW-237 90WT0003 125S 125M1 163S 132S 132M1 147M3 147M2 147M1 153M3 153M2 153M1 131S 131M2 131M1 LRWS7-1 196S 196M1 232M2 232M1 193S 193M1 MW-236 MW-238 90LWA0007 197M3 197M2 197M1 TEXTRONPW-1 90MW0039B 181S 30S 194M1 195S 45S 45M2 45M1 146S 146M1 198M3 198M2 198M1 MW-243 90WT0013 90WT0003 90WT0015 90MW0013 144S 90MW0021 144M2 90MW0014 144M1 J3P-10 MW-241 140M1 143M3 143M2 143M1 90MW0022 145S 145M1 148S 148M1 90MW0038 MW-242 90MW0031 90MW0019 MW-239 142S 142M2 142M1 61S 28S 28M2 28M1 46S 46M3 46M2 46M1 46D 69S 69M2 69M1 47S 47M3 47M2 47M1 47D 20S 32M3 34M2 34M1 36S 36M2 36M1 35S 35M2 35M1 19S 19D 31M 73S 60S SMR-3 64S 64M2 64M1 68S 68M1 109S 227M3 227M2 227M1 90WT0005 90MW0004 155M2 155M1 157M2 157M1 157D MW-246 MW-250 90MW0054 MW-247 90MW0003 90MW0005 90WT0010 217M3 217M2 218M3 218M2 218M1 ECMWSNP02S ECMWSNP02D MW-251 ECMWSNP03S ECMWSNP03D LRWS6-1 90WT0008 56S 56M3 56M2 56M1 56D 03MW0122A 03MW0710 151S 03MW0007A 03MW0006 03MW001AA 03MW0709 03MW0020 150S SP3-91 SP4-91 J3P-28 J3P-29 J3P-30

Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories
Validated Detection Less than Maximum Contaminant Level/Health Advisories
Validated Non-Detect
No Data Available
Proposed Monitoring Well
Military Training Areas
Military Ranges
Current Gun Position
Current Mortar Position
Old Gun Position
Old Mortar Position
Validated Non-Detect Water Supply Well
Water Table Contour (Feet above mean sea level)

0 600 Feet

IAGWSP Impact Area Groundwater Study Program

Sources & Notes
Base map data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS

DRAFT

amec

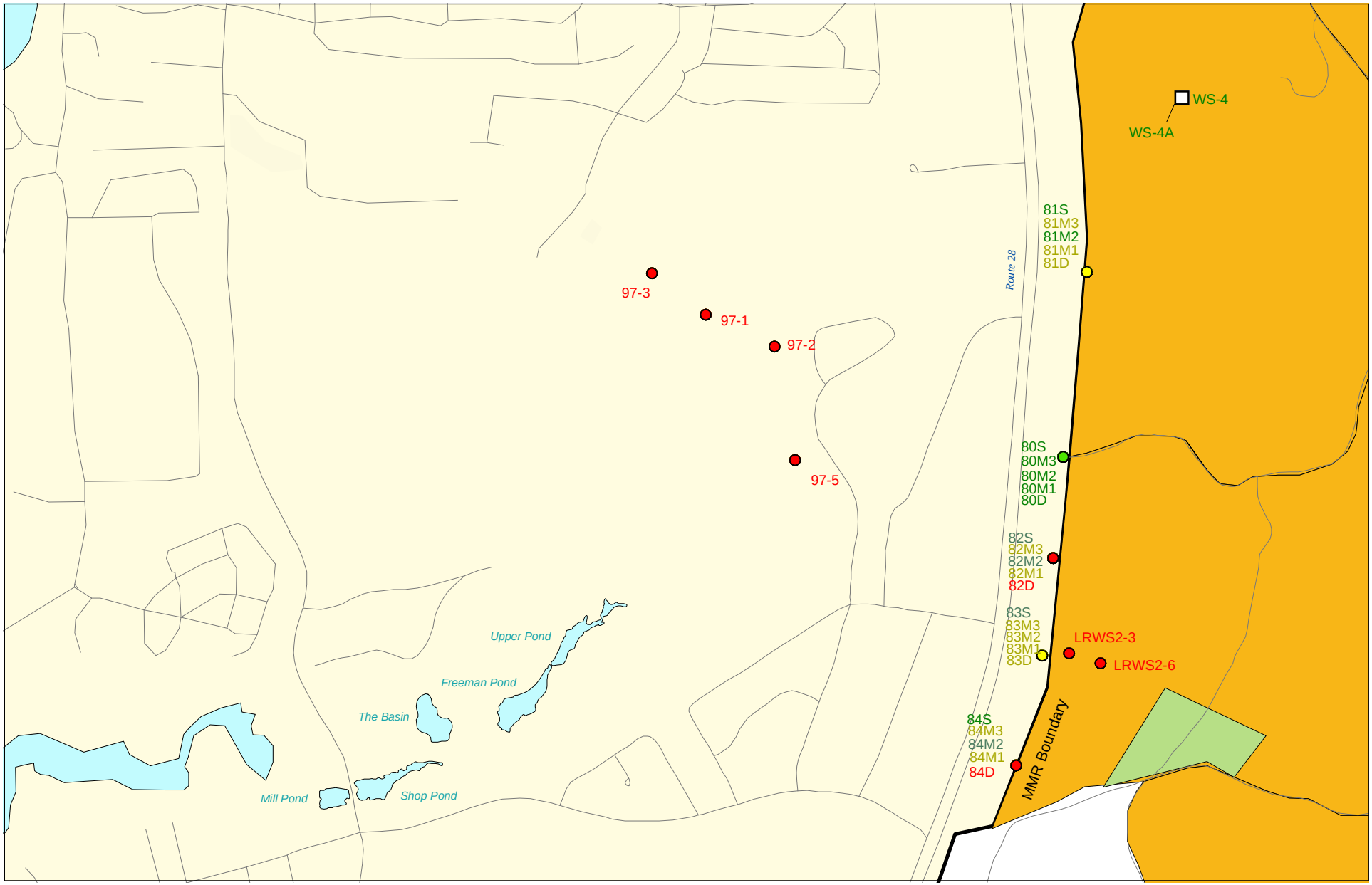
BEHP in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

FIGURE

Inset Map A

6

J:\GIS\January2003\out\monthly\behp_insetA.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\BEHP\InsetA.mxd January 7, 2003 KEA JEP



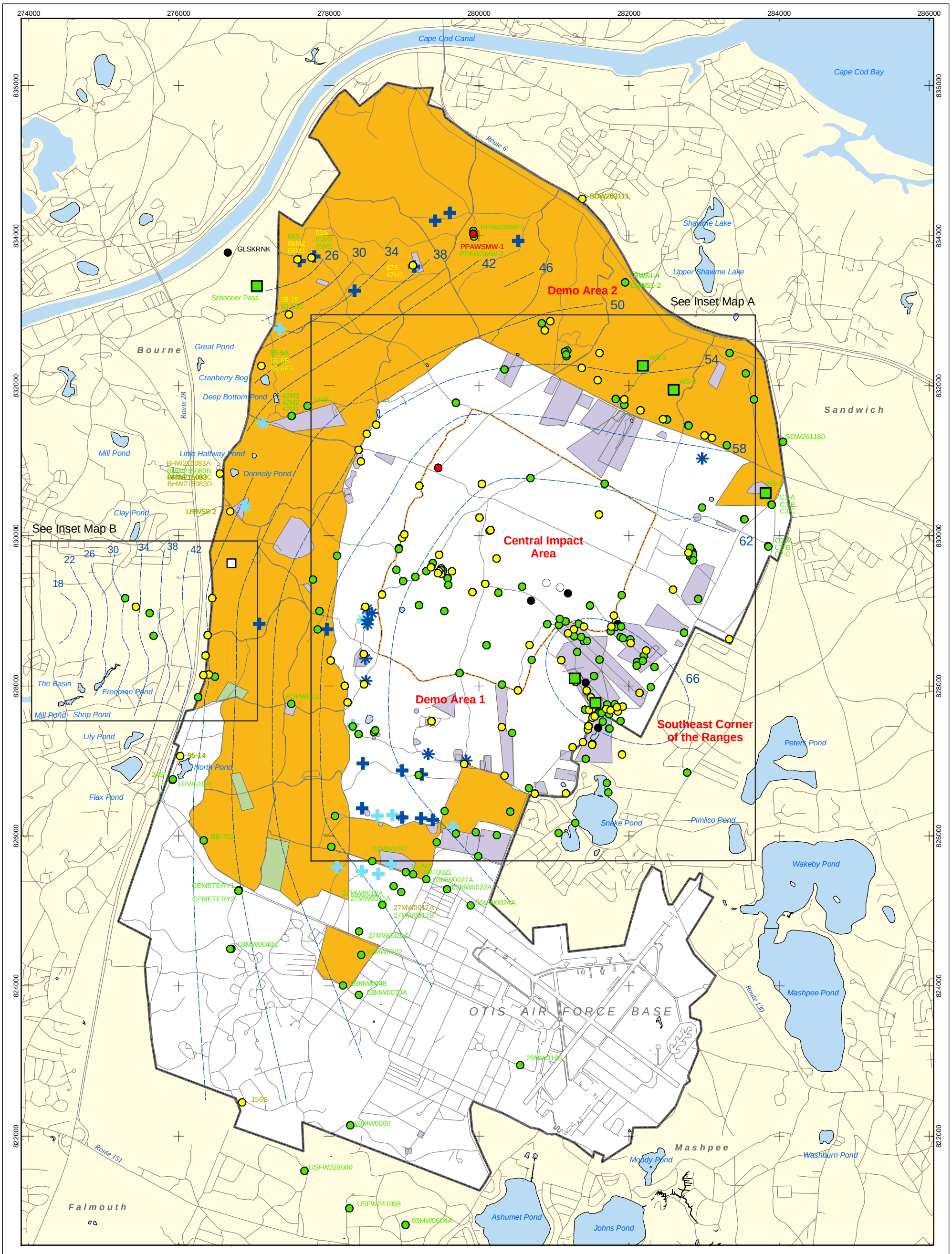
BEHP in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

amec DRAFT

FIGURE

Inset Map B **6**

J:\GIS\January2003\out\monthly\BHEP_insetB.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\BEHP\InsetB.mxd January 7, 2003 KEA JEP



- Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories
- Validated Detection Less than Maximum Contaminant Level/Health Advisories
- Validated Non-Detect
- No Data Available
- Proposed Monitoring Well
- Current Gun Position
- Current Mortar Position
- Old Gun Position
- Old Mortar Position
- Combat Training Areas
- Military Training Areas
- Military Ranges
- Validated Non-Detect Water Supply Well
- Validated Detection Less than Maximum Contaminant Level/Health Advisories Water Supply Well
- Proposed Water Supply Well
- Water Table Contour (Feet above mean sea level)

IAGWSP Impact Area Groundwater Study Program

0 4,000 Feet

N

Sources & Notes
Base map data from US Geological Survey
7 1/2 minute Topographic Maps.
Source: MassGIS

DRAFT

amec

Herbicides & Pesticides in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

FIGURE 7

J:\GIS\January2003\out\monthly\pest_overall.pdf
G:\MMR\MMR\ArcMap\Monthly\January2003\Pest\overall.mxd
January 5, 2003 KEA JEP

Herbicides & Pesticides in Groundwater Compared to Maximum Contaminant Level/Health Advisories Validated Data as of 12/20/02

DRAFT

amec

FIGURE 7

Inset Map A

Validated Detection Greater than or Equal to Maximum Contaminant Level/Health Advisories

Validated Detection Less than Maximum Contaminant Level/Health Advisories

Validated Non-Detect

No Data Available

Proposed Monitoring Well

Military Training Areas

Military Ranges

Current Gun Position

Current Mortar Position

Old Gun Position

Old Mortar Position

Validated Non-Detect Water Supply Well

Validated Detection less than Maximum Contaminant Level/ Health Advisories, Water Supply Well

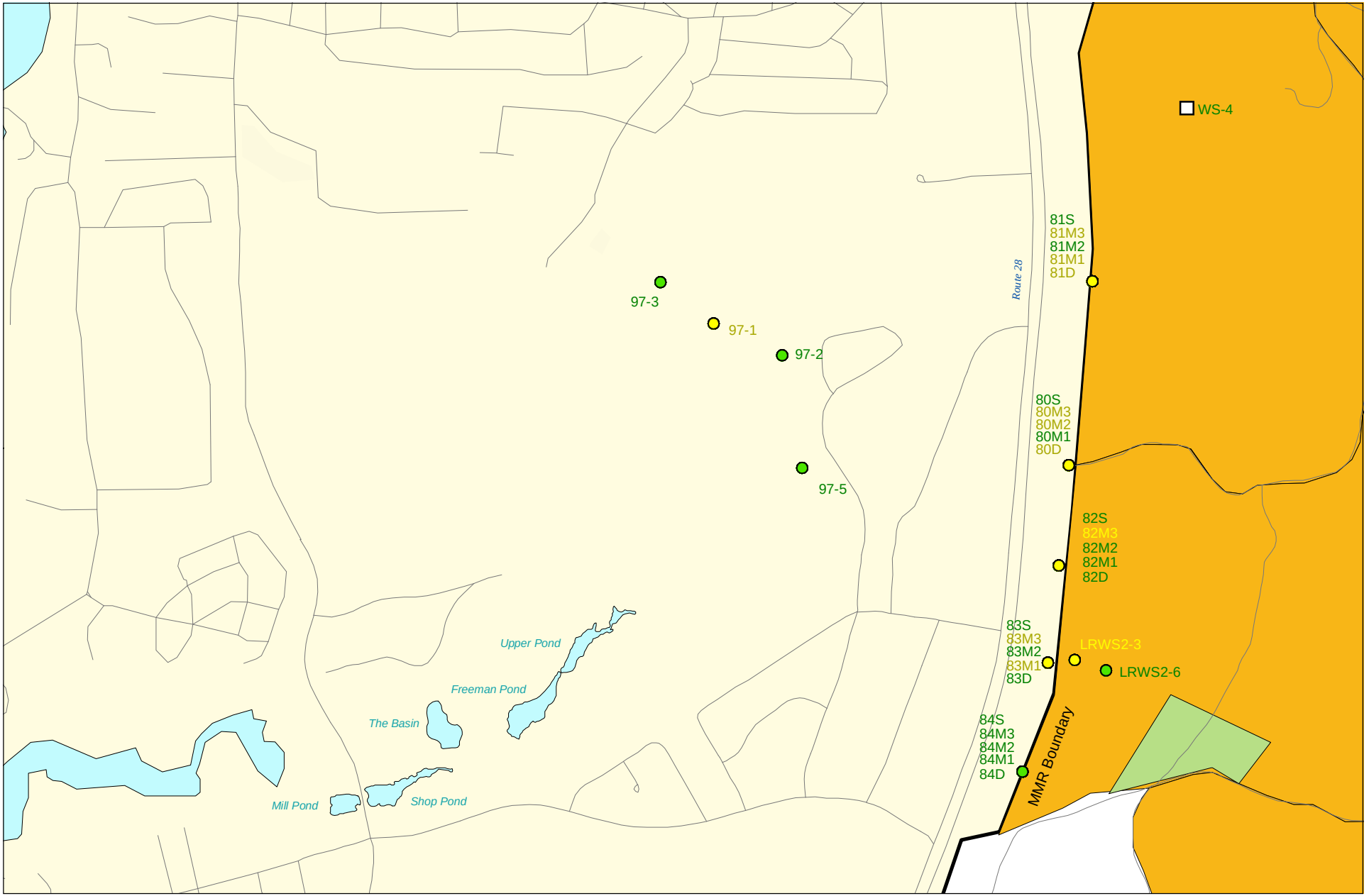
Water Table Contour (Feet above mean sea level)

0 600 1,200 Feet

IAGWSP Impact Area Groundwater Study Program

Sources & Notes
Base map data from US Geological Survey
7 1/2 minute Topographic Maps.
Source: MassGIS

J:\GIS\January2003\out\monthly\pest_insetA.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\Pest\InsetA.mxd January 5, 2003 KEA JEP



N

0 600 1,200 Feet

Sources & Notes:
Base map data from US Geological Survey
7 1/2 minute Topographic maps.
Source: MassGIS

- Validated Detection Less than Maximum Contaminant Level/Health Advisories
- Validated Non-Detect
- Proposed Water Supply Well
- Combat Training Areas
- Military Training Areas

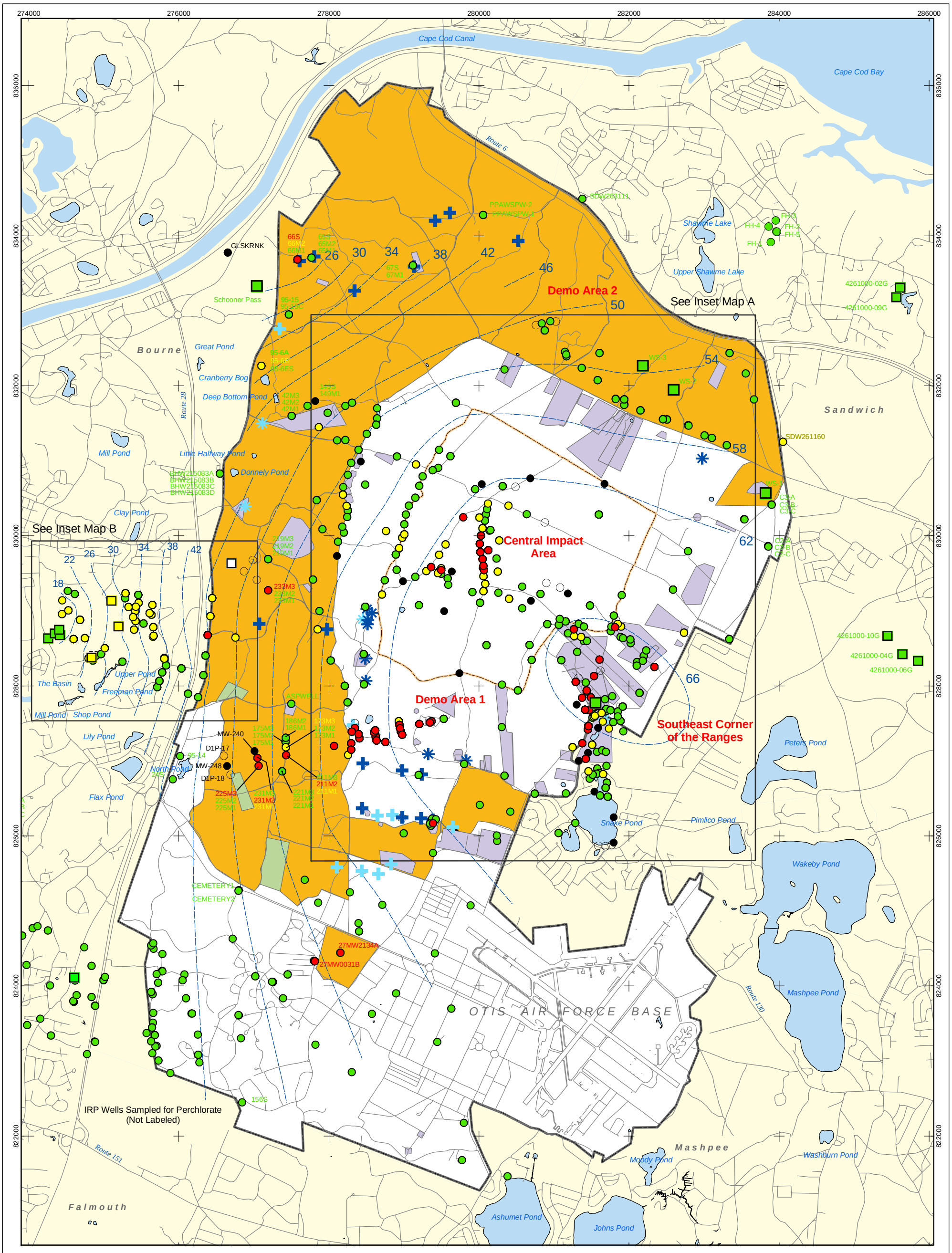
Herbicides & Pesticides in Groundwater Compared to Maximum Contaminant Level/Health Advisories
Validated Data as of 12/20/02

IAGWSP Impact Area Groundwater Study Program

amec DRAFT

FIGURE
Inset Map B **7**

J:\GIS\January2003\out\monthly\pest_insetB.pdf G:\MMR\MMR\ArcMap\Monthly\January2003\Pest\InsetB.mxd January 5, 2003 KEA JEP



DRAFT

Perchlorate in Groundwater
Compared to EPA MMR Relevant Standard
Validated Data as of 12/20/02

FIGURE 8

J:\GIS\January2003\out\monthly\perch_overall.pdf
G:\MMR\MMR\ArcMap\Monthly\January2003\Perchlorate\overall.mxd
January 5, 2003 KEA JEP

278000 279000 280000 281000 282000 283000

832000 831000 830000 829000 828000 827000 826000

Demo Area 2

Central Impact Area

Demo Area 1

Southeast Corner of the Ranges

Gibbs Pond
Round Swamp
Baileys Pond
Grassy Pond
Doughnut Pond
Ox Pond
Succonsette Pond
Opening Pond
J3 Wetland
Peters Pond
Snake Pond
Weeks Pond
Pimlico Pond
Bypass Bog

Burgoyne Rd.
Gibbs Rd.
Jefferson Rd.
Spruce Swamp Rd.
Pocasset Sandwich Rd.
Wood Rd.
Turpentine Rd.
Tank Alley
Wheelock Rd.
Pocasset Forestdale Rd.
Greenway Rd.
Arnold Rd.
Rt. 130
Snake Pond Rd.

34 38 42 50 54 58 62 66

MW-249 MW-72 MW-22 MW-9 MW-14 MW-8 MW-3 MW-4 MW-11 MW-244 MW-245 MW-243 MW-239 MW-246 MW-250 MW-247 MW-251

CIAP-27 CIAP-28

J1P-18 J1P-16 J2P-17 J3P-23 J3P-10 J3P-28 J3P-29 J3P-30

D2P-1 D2P-4 D1P-19

WS-3 WS-2 SMR-2 SMR-4 LP-10 TEXTRONPW-1

RANGECON USCGANTST

SP1-91 SP3-91

Validated Detection Greater than or Equal to EPA MMR Relevant Standard

Validated Detection Less than EPA MMR Relevant Standard

Validated Non-Detect

No Data Available

Proposed Monitoring Well

Military Training Areas

Military Ranges

Current Gun Position

Current Mortar Position

Old Gun Position

Old Mortar Position

Validated Non-Detect Water Supply Well

Water Table Contour (Feet above mean sea level)

0 600 1,200 Feet

N

IAGWSP Impact Area Groundwater Study Program

Sources & Notes
Base map data from US Geological Survey
7 1/2 minute Topographic Maps.
Source: MassGIS

DRAFT

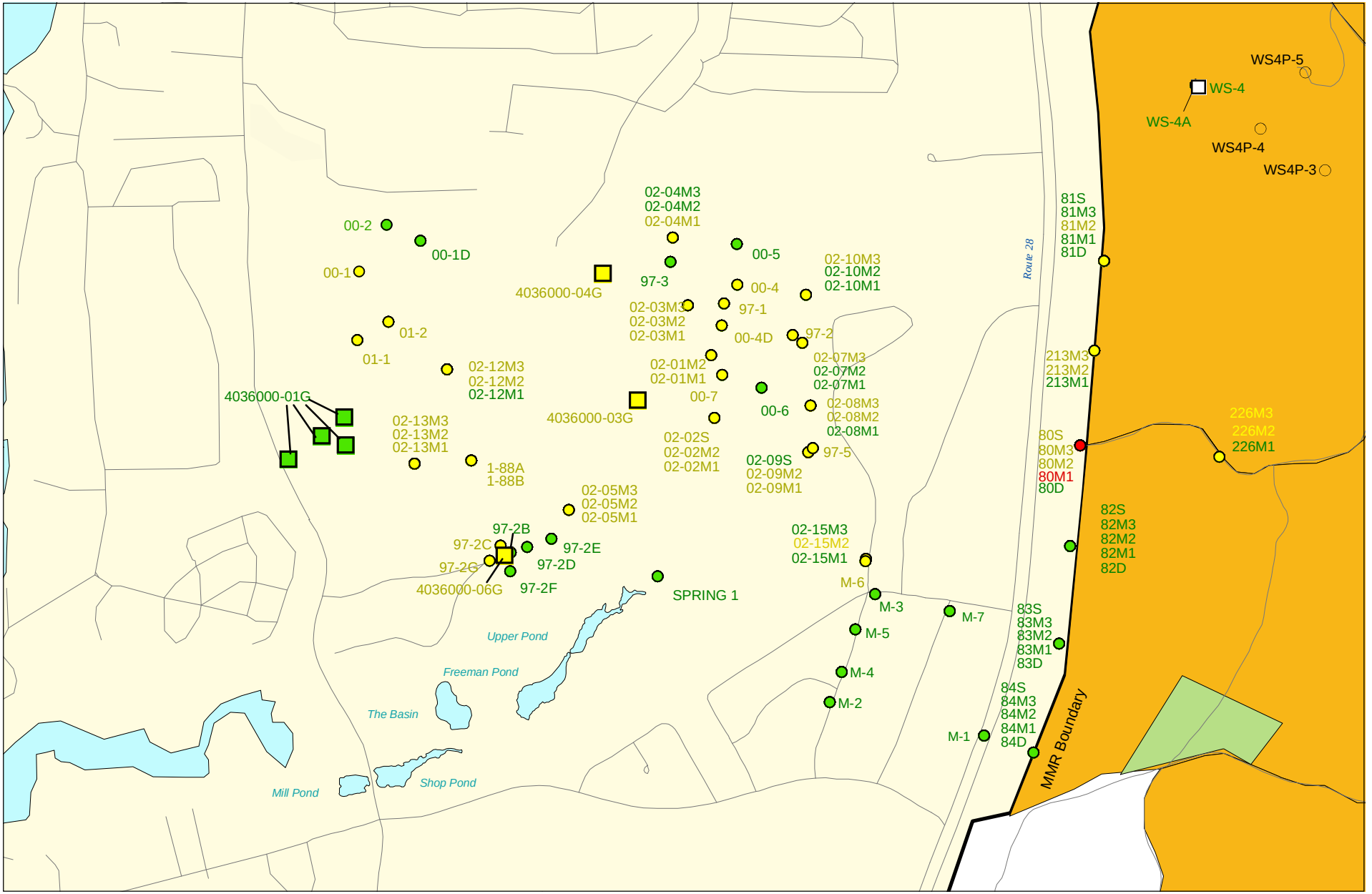
amec

Perchlorate in Groundwater
Compared to EPA MMR Relevant Standard
Validated Data as of 12/20/02

Inset Map A

FIGURE **8**

J:\GIS\JANUARY2003\OUT\MONTHLY\PERCH_INSETA.PDF G:\MMR\MMR\ArcMap\Monthly\January2003\Perchlorate\InsetA.mxd January 2, 2003 KEA JEP



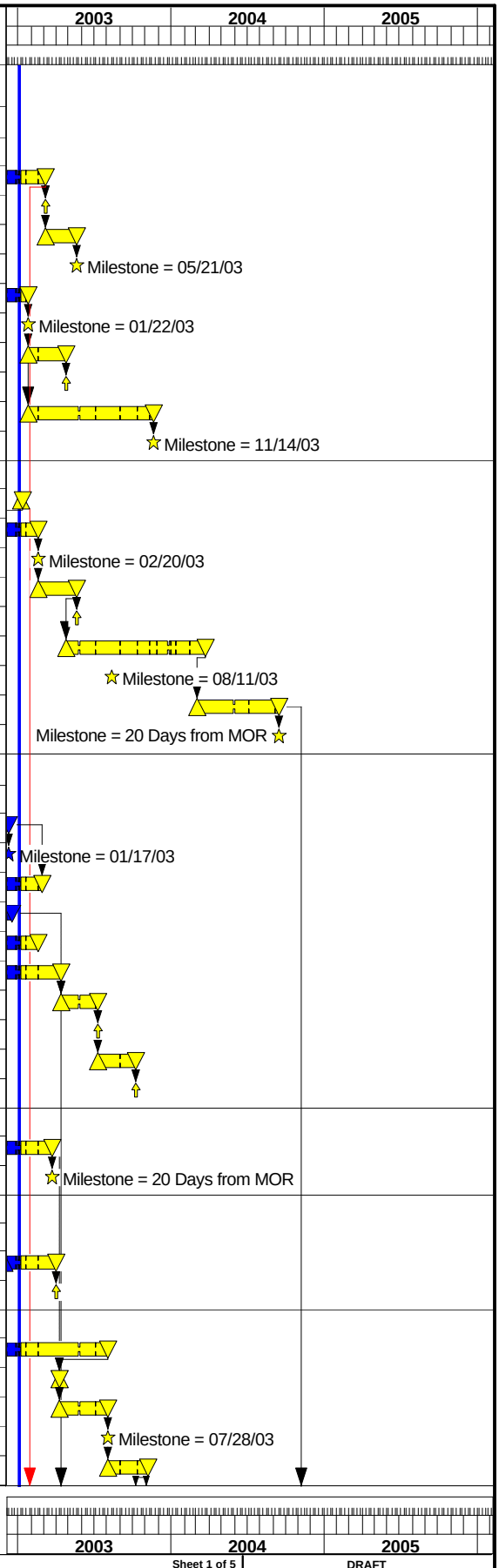
amec DRAFT

FIGURE

Inset Map B **8**

J:\GIS\JANUARY2003\OUT\MONTHLY\PERCH_INSETB.PDF G:\MMR\MMR\ArcMap\Monthly\January2003\Perchlorate\InsetB.mxd January 2, 2003 KEA

Activity ID	Activity Description	ENF MILE	REM DUR	Start	Finish
Site Characterization (AO1)					
Demo Area 1					
Groundwater Operable Unit					
00190	Additional GW Delineation		41	26NOV01A	05MAR03
00192	Agreement Delineation Complete		0		05MAR03
00193	Prepare GW Report Addendum		53	06MAR03	19MAY03
00194	Draft GW Report Addendum	YES	0		19MAY03
00121	Prepare GW RRA/RAM Plan		12	26SEP02A	22JAN03
00122	Demo 1 Dft GW RRA/RAM Plan	YES	0		22JAN03
00123	Revise GW RRA/RAM Plan		65	23JAN03	24APR03
00124	Demo 1 Fnl GW RRA/RAM Plan		0		24APR03
00125	GW RRA/RAM Implementation		210	23JAN03	20NOV03
00126	Demo 1 GW RRA System Start	YES	0		20NOV03
Soil Operable Unit					
00171	Agencies Approve MORs 01-10		5	06JAN03	10JAN03
00151	Prepare Soil RRA/RAM Plan		31	22JUL02A	19FEB03
00153	Demo 1 Soil Dft RRA/RAM Plan	YES	0		19FEB03
00155	Revise Soil RRA/RAM Plan		65	20FEB03	21MAY03
00183	Demo 1 Fnl Soil RRA/RAM Plan		0		21MAY03
00184	Soil RRA/RAM Field Work		230	24APR03	24MAR04
00186	RRA/RAM Soil Removal Start	YES	0		11AUG03
00188	Prepare Soil RRA/RAM Completion Rep		135	04MAR04	13SEP04
00159	Final Soil RRA/RAM Completion Report	YES	0		13SEP04
Central Impact Area					
Groundwater Plume Delineation					
00285	Install 17 Additional Well Nests		0	13DEC01A	10DEC02A
00287	Complete 17 Additional Well Nests	YES	0		10DEC02A
02005	Sample/Analyze/Validate 25 Additional		33	31OCT01A	24FEB03
02015	Sample/Analyze/Validate 8/02 LTGM		0	05AUG02A	16DEC02A
02017	Install 3 Additional Well Nests		31	18MAR02A	19FEB03
02018	Sample/Analyze/Validate 3 Additional		68	12JUN02A	11APR03
02020	Prepare GW Report (MCP Ph.II)		60	14APR03	08JUL03
02025	Submit Draft GW Report (MCP Ph.II)		0		08JUL03
02030	Revise GW Report (MCP Ph.II)		65	09JUL03	08OCT03
02035	Submit Final GW Report (MCP Ph.II)		0		08OCT03
High Use Target Area 1					
01192	Revise Revised Draft Final Report		53	29AUG02A	21MAR03
01195	HUTA Final Report	YES	0		21MAR03
High Use Target Area 2					
All Transects					
01955	Revise Draft Final Report		60	22NOV02A	01APR03
01957	Submit Final Report		0		01APR03
Soil Report					
00213	Ecological Risk Characterization		146	31OCT02A	01AUG03
00260	Coordination Meeting CIA Soil Report		1	10APR03	10APR03
00261	Final Revisions CIA Soil Report		80	11APR03	04AUG03
00262	Submit Draft Final CIA Soil Report	YES	0		04AUG03
00263	Revise Draft Final CIA Soil Report		65	05AUG03	05NOV03



Project Start 29FEB00
Project Finish 02NOV07
Data Date 04JAN03
Run Date 09JAN03

Early Bar
Progress Bar

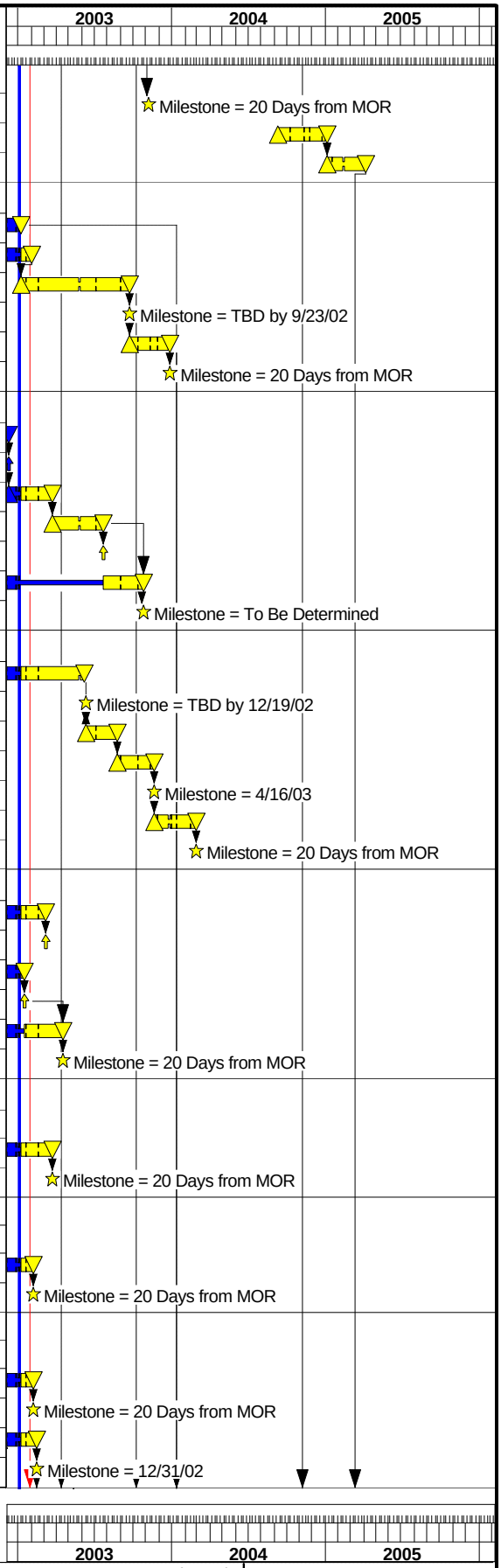
UBER

Figure 9. Combined Schedule for the Impact Area GW Study Program as of 01/06/03

DRAFT

Date	Revision	Checked	Approved

Activity ID	Activity Description	ENF MILE	REM DUR	Start	Finish
Soil Report					
00292	Final Soil Report	YES	0		05NOV03
00294	Draft Final Soil Report (if Eco Field		80	09SEP04	05JAN05
00296	Final Soil Report (if Eco Field Sampling)		65	06JAN05	08APR05
J-1/J-3 Range					
00497	Additional Delineation Rev. Draft Report		3	24MAY02A	08JAN03
00485	Additional Delineation Investigation		19	27MAR02A	31JAN03
00486	J1/J3/L Range Draft Final Rep. Prep.		181	06JAN03	22SEP03
00487	J1/J3/L Range Draft Final Report	YES	0		22SEP03
00488	Revise J1/J3/L Range Draft Final Rep.		65	23SEP03	26DEC03
00489	J1/J3/L Range Final Report	YES	0		26DEC03
Gun/Mortar Positions					
00570	Additional Characterization G/M		0	22APR02A	10DEC02A
00575	Submit Draft Final COC Letter Report		0		10DEC02A
00577	Revise Draft Final COC Letter Report		53	11DEC02A	21MAR03
00580	Prepare Draft Final G/M Report		85	24MAR03	22JUL03
00585	Submit Draft Final G/M Report		0		22JUL03
00549	Gun/Mortar Rev. Draft Final		65	01AUG01A	23OCT03
00550	Gun/Mortar Final Report	YES	0		23OCT03
Training Areas					
00860	Training Areas Background		107	20MAR00A	06JUN03
00862	Start Training Areas Fieldwork	YES	0	09JUN03	
00864	Training Areas Fieldwork		54	09JUN03	22AUG03
00870	Training Areas Report Preparation		60	25AUG03	19NOV03
00880	Submit Training Areas Draft Report	YES	0		19NOV03
00890	Training Areas Rev. Draft Report		65	20NOV03	25FEB04
00895	Training Areas Final Report	YES	0		25FEB04
Phase II(b)					
01554	Revise Draft SAR Report		42	05AUG02A	06MAR03
01555	Submit SAR Final Report		0		06MAR03
01558	Prepare Draft Final 2b Report		6	09MAY02A	13JAN03
01559	Submit Draft Final 2b Report		0		13JAN03
01560	Revise Draft Final 2b Report		65	20AUG01A	16APR03
01570	Phase II(b) Final Report	YES	0		16APR03
Munition Survey Project					
MSP Phase I					
01625	Revise Revised MSP Phase I Draft		53	04SEP01A	21MAR03
01630	Submit MSP Phase I Final Report	YES	0		21MAR03
MSP Phase II					
ASP Geophysics					
01742	Approve MOR & Finalize		23	15APR02A	06FEB03
01749	Submit Final Report	YES	0		06FEB03
MSP Phase III					
CIA MSP Sites #1 and #2					
01798	Revise Eastern Test Site Draft Report		23	25OCT02A	06FEB03
01799	Submit Eastern Test Site Final Report	YES	0		06FEB03
01803	Prepare SCAR Site Report		26	12NOV02A	11FEB03
01804	SCAR Site Draft Report	YES	0		11FEB03



Project Start 29FEB00
Project Finish 02NOV07
Data Date 04JAN03
Run Date 09JAN03

Early Bar
Progress Bar

UBER

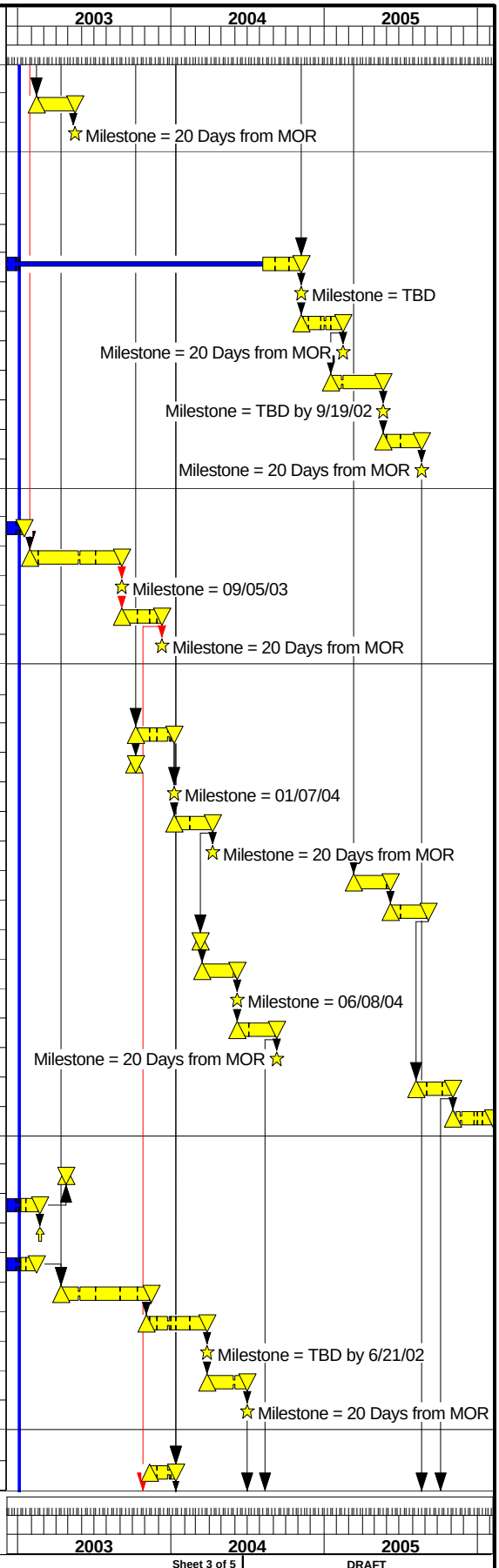
Sheet 2 of 5

DRAFT

Date	Revision	Checked	Approved

Figure 9. Combined Schedule for the Impact Area GW Study Program as of 01/06/03

Activity ID	Activity Description	ENF MILE	REM DUR	Start	Finish
CIA MSP Sites #1 and #2					
01805	Revise SCAR Site Draft Report		65	12FEB03	14MAY03
01806	Submit SCAR Site Final Report	YES	0		14MAY03
Feasibility Studies (AO3)					
Demo Area 1					
Soil Operable Unit					
21190	Revise Draft FS Screening Report		63	22JUN01A	08NOV04
21193	Submit Draft Final Demo 1 FSSR	YES	0		08NOV04
21194	Revise Draft Final Demo 1 FSSR		65	09NOV04	15FEB05
21200	Final FS Screening Report	YES	0		15FEB05
21310	FS Preparation		88	18JAN05	20MAY05
21320	Draft FS	YES	0		20MAY05
21330	Revise Draft FS		65	23MAY05	23AUG05
21340	Final FS	YES	0		23AUG05
Groundwater Operable Unit					
21670	Agency Approval of FS MOR		8	02OCT01A	15JAN03
21674	Prepare Revised Draft FS		152	29JAN03	03SEP03
21675	Revised Draft FS	YES	0		03SEP03
21678	Revise Revised Draft FS		65	04SEP03	08DEC03
21680	Final FS	YES	0		08DEC03
Central Impact Area					
Soil Operable Unit					
22110	FS Screening Report Preparation		60	08OCT03	06JAN04
22112	Scoping Meeting for FSSR		1	07OCT03	07OCT03
22120	Draft FS Screening Report	YES	0		06JAN04
22130	Revise Draft FS Screening Report		65	07JAN04	08APR04
22140	Final FS Screening Report	YES	0		08APR04
22142	Draft FSSR (if Eco Field Sampling)		60	14MAR05	06JUN05
22144	Final FSSR (if Eco Field Sampling)		65	07JUN05	07SEP05
22202	FS Scoping Meeting		1	12MAR04	12MAR04
22210	FS Preparation		60	15MAR04	07JUN04
22220	Draft FS	YES	0		07JUN04
22230	Revise Draft FS		65	08JUN04	08SEP04
22240	Final FS	YES	0		08SEP04
22250	(Draft FS if Eco Field Sampling)		60	10AUG05	03NOV05
22260	(Final FS if Eco Field Sampling)		65	04NOV05	09FEB06
Groundwater Operable Unit					
22391	FS Scoping Meeting		1	25APR03*	25APR03
22394	Review/Approve Pump Test Report		33	26SEP02A	21FEB03
22395	Submit Final Pump Test Report		0		21FEB03
22396	Update Regional GW Model		26	08OCT02A	11FEB03
22398	GW Flow/Transport Modeling		149	14APR03	13NOV03
22400	FS Preparation		99	04NOV03	29MAR04
22410	Draft FS	YES	0		29MAR04
22420	Revise Draft FS		65	30MAR04	29JUN04
22430	Final FS	YES	0		29JUN04
SE Corner of Ranges					
23110	FS Screening Report Preparation		40	13NOV03	13JAN04



Project Start 29FEB00
Project Finish 02NOV07
Data Date 04JAN03
Run Date 09JAN03

Early Bar
Progress Bar

UBER

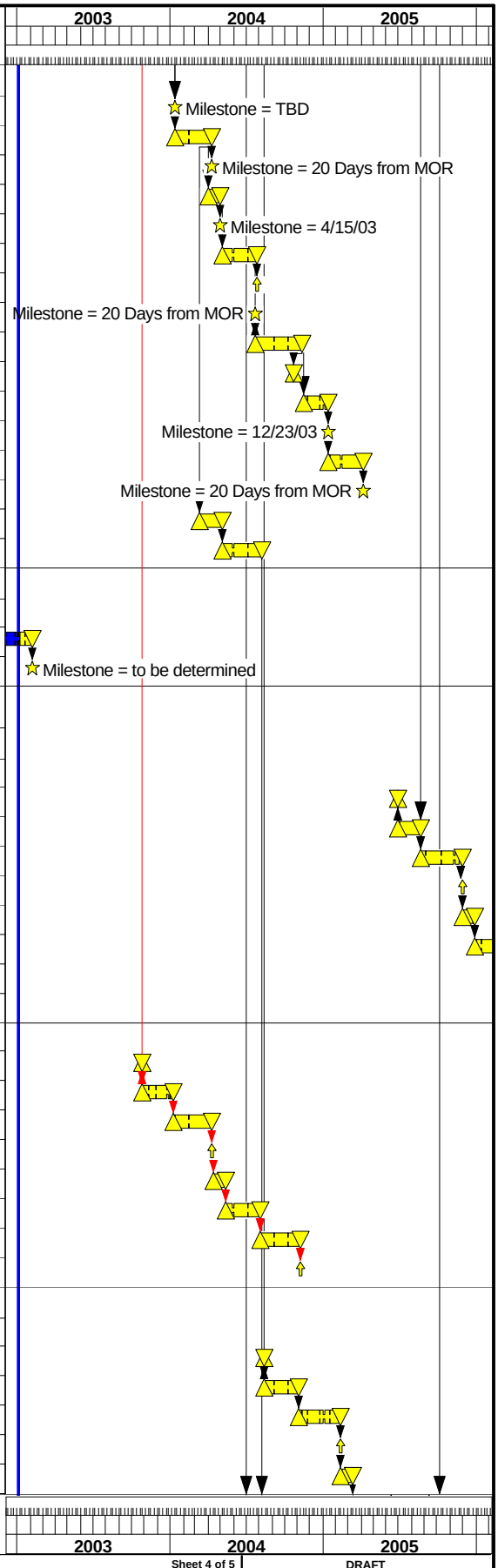
Sheet 3 of 5

DRAFT

Date	Revision	Checked	Approved

Figure 9. Combined Schedule for the Impact Area GW Study Program as of 01/06/03

Activity ID	Activity Description	ENF MILE	REM DUR	Start	Finish
SE Corner of Ranges					
23120	Draft FS Screening Report	YES	0		13JAN04
23130	Revise Draft FS Screening Report		60	14JAN04	07APR04
23140	Final FS Screening Report	YES	0		07APR04
23150	Post-Screening Invest. Workplan Prep.		22	01APR04	30APR04
23160	Draft Post-Screening Invest. Workplan	YES	0		30APR04
23170	Revise Draft PSI Workplan		60	03MAY04	27JUL04
23180	Final Post-Screening Workplan		0		27JUL04
23190	Start Post-Screening Investigation	YES	0	21JUL04	
23200	Post-Screening Investigation		80	21JUL04	12NOV04
23202	FS Scoping Meeting		1	22OCT04	22OCT04
23210	FS Preparation		40	15NOV04	12JAN05
23220	Draft FS	YES	0		12JAN05
23230	Revise Draft FS		60	13JAN05	08APR05
23240	Final FS	YES	0		08APR05
23250	(Draft FS if no PSI)		40	11MAR04	05MAY04
23260	(Final FS if no PSI)		65	06MAY04	06AUG04
UXO					
UXO Operable Unit					
24130	Revise Draft FS Screening Report		20	21MAR01A	03FEB03
24140	Final FS Screening Report	YES	0		03FEB03
Remedy Selection (AO3)					
Demo Area 1					
Soil Operable Unit					
31105	Soil RS Plan Scoping Meeting		1	28JUN05	28JUN05
31110	Prepare Draft Remedy Selection Plan		40	28JUN05	23AUG05
31120	Revise Draft Remedy Selection Plan		65	24AUG05	28NOV05
31130	Remedy Selection Plan		0		28NOV05
31140	Public Comment Period		21	29NOV05	28DEC05
31150	Draft Decision Doc/ Response		44	29DEC05	03MAR06
31160	Revise Draft DD/RS		65	06MAR06	05JUN06
31170	Final Decision Doc/ Response		0		05JUN06
Groundwater Operable Unit					
31505	GW RS Plan Scoping Meeting		1	24OCT03*	24OCT03
31510	Prepare Draft Remedy Selection Plan		50	24OCT03	07JAN04
31520	Revise Draft Remedy Selection Plan		65	08JAN04	09APR04
31530	Remedy Selection Plan		0		09APR04
31540	Public Comment Period		22	12APR04	11MAY04
31550	Draft Decision Doc/ Response		60	12MAY04	05AUG04
31560	Revise Draft DD/RS		65	06AUG04	08NOV04
31570	Final Decision Doc/ Response		0		08NOV04
Central Impact Area					
Soil Operable Unit					
32105	Soil RS Plan Scoping Meeting		1	11AUG04	11AUG04
32110	Prepare Draft Remedy Selection Plan		60	11AUG04	04NOV04
32120	Revise Draft Remedy Selection Plan		65	05NOV04	10FEB05
32130	Remedy Selection Plan		0		10FEB05
32140	Public Comment Period		21	11FEB05	14MAR05



Project Start 29FEB00
Project Finish 02NOV07
Data Date 04JAN03
Run Date 09JAN03

Early Bar
Progress Bar

UBER

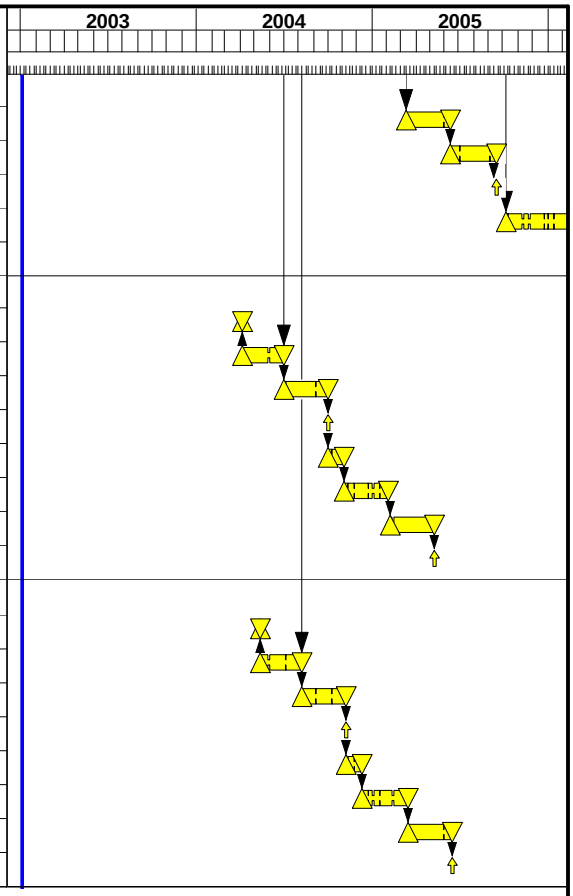
Sheet 4 of 5

DRAFT

Date	Revision	Checked	Approved

Figure 9. Combined Schedule for the Impact Area GW Study Program as of 01/06/03

Activity ID	Activity Description	ENF MILE	REM DUR	Start	Finish
Soil Operable Unit					
32150	Draft Decision Doc/ Response		64	15MAR05	13JUN05
32160	Revise Draft DD/RS		65	14JUN05	14SEP05
32170	Final Decision Doc/ Response		0		14SEP05
32172	Draft DD/RS (if Eco Field Sampling)		210	06OCT05	08AUG06
32174	Final DD/RS (if Eco Field Sampling)		65	09AUG06	09NOV06
Groundwater Operable Unit					
32505	GW RS Plan Scoping Meeting		1	06APR04	06APR04
32510	Prepare Draft Remedy Selection Plan		60	06APR04	29JUN04
32520	Revise Draft Remedy Selection Plan		65	30JUN04	30SEP04
32530	Remedy Selection Plan		0		30SEP04
32540	Public Comment Period		21	01OCT04	01NOV04
32550	Draft Decision Doc/ Response		64	02NOV04	04FEB05
32560	Revise Draft DD/RS		65	07FEB05	09MAY05
32570	Final Decision Doc/ Response		0		09MAY05
SE Corner of Ranges (if no PSI)					
33105	RS Plan Scoping Meeting		1	13MAY04	13MAY04
33110	Prepare Draft Remedy Selection Plan		60	13MAY04	06AUG04
33120	Revise Draft Remedy Selection Plan		65	09AUG04	09NOV04
33130	Remedy Selection Plan		0		09NOV04
33140	Public Comment Period		21	10NOV04	10DEC04
33150	Draft Decision Doc/ Response		64	13DEC04	16MAR05
33160	Revise Draft DD/RS		65	17MAR05	16JUN05
33170	Final Decision Doc/ Response		0		16JUN05



2003
2004
2005

Project Start 29FEB00
Project Finish 02NOV07
Data Date 04JAN03
Run Date 09JAN03

Early Bar
Progress Bar

UBER

Sheet 5 of 5

Figure 9. Combined Schedule for the Impact Area GW Study Program as of 01/06/03

DRAFT

Date	Revision	Checked	Approved