MONTHLY PROGRESS REPORT #32
FOR NOVEMBER 1999

EPA REGION I ADMINISTRATIVE ORDER SDWA I-97-1019
MASSACHUSETTS MILITARY RESERVATION
TRAINING RANGE AND IMPACT AREA

The following summary of progress is for the period from November 1 to November 30, 1999. Scheduled actions are for the six-week period ending January 7, 1999.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of November 26 is summarized in Table 1.

Table 1. Drilling progress during November 1999

Boring Number	Purpose of Boring/Well	Total Depth (ft BGS)	Saturated Depth (ft BWT)	Completed Well Screens (ft BGS)
MW-48	Re-drill of MW-48S	111	10	99-109
MW-56b	J Well far field well	188	117	131-141 156-166 176-186
MW-57	Sandwich far field well	327	240	85-95 117-127
MW-57b	Sandwich far field well	225	137	
MW-75	Demo 1 response well	200	117	81-91 115-125 140-150
MW-77	Demo 1 response well	190	105	83-93 120-130 180-190
MW-79	Demo 1 response well	200	110	89-99 116-126 156-166

BGS = below ground surface
BWT = below water table

Samples collected during the month are summarized in Table 2. Groundwater sampling was completed for round 2 of the supplemental IRP wells, round 2 of the base water supply wells, round 2 of the off-base water supply wells, round 3 of the Priority Group 1 far field wells, round 3 of the Phase I wells, and round 3 of the Phase II (a) wells (except MW-37, -40, -44). Groundwater sampling began for round 1 of the new Priority Group 2 far field wells. Groundwater profile samples were collected from MW-57, MW-75, MW-77, and MW-79; locations and drilling status for these wells are indicated in Table 1. Soil samples were collected from areas 3 (near MW-1), 11 (MW-25), and 46 (90WT0013) in accordance with the Final Workplan for Phase II (a) Activities (7/27/99). Soil samples were collected from areas 59 (GP-8) and 60 (GP-10) in accordance with the Draft Phase II (a) Field Sampling Plan for Gun and Mortar Positions (7/2/99). Post-excavation soil samples were collected from Demo 2 and the J Range location where explosives were detected previously. A field reconnaissance was conducted on the potential targets along Turpentine Road, the trench along Turpentine Road, the cleared area south of the CS-19 bunker, the cleared area north of Herbert Road, and the mortar targets. There were no technical meetings during the weeks of November 8th and November 22nd due to holidays.

The Guard, EPA, and MADEP had a meeting on November 4 to discuss technical issues, including the following:

- Jacobs Engineering gave an update on the future CS-19 investigation. The UXO survey will commence on November 18th. Surface soil sampling will commence on December 6th. They are awaiting funding for the deep soil sampling and well installation. Ogden stated that they received the agency comments on the Trenches FSP and will include the cleared area and the bunker in the investigation. UXO avoidance will be performed the week of December 6th. Ogden will check with the UXO contractor about a safety zone while performing avoidance work since Jacobs is scheduled to be sampling in the vicinity at that time.

- Screen depths were selected for two locations. The draft boring log and profile data for MW-56 was faxed on Tuesday and the draft boring log and profile data for MW-57 was distributed at the meeting. It was agreed to set the remaining three screens for MW-56 at 60' to 70' BWT, 85' to 95' BWT, and 105' to 115' BWT. Tetrachloroethene was detected in the preliminary results for shallow profile samples from MW-57. It was agreed to set the first two screens in MW-57 at the water table and at 30' to 40' BWT. The EPA requested a backward particle track from the affected profile samples at MW-57, and a travel time for the previous particle track from MW-18M1.

- The status of the detonation craters at Demo 2 and the J Range were discussed. Approximately 55 gallons of soil has been excavated and containerized at Demo 2 and approximately 1 gallon of soil at the J Range D crater was excavated and containerized. The soil is awaiting characterization and off site disposal. Ogden will collect post excavation samples from these locations (done 11/5).

- The Demo 2 groundwater in relation to the LRWS 1 ZOC was discussed. It did not appear that the ZOC for LRWS 1 intersected Demo 2. Ogden will identify the ZOC that passes closest to Demo 2.

- A six-page handout of the forward and reverse particle tracks of DP-8 and DP-9 was provided. The data for DP-8 suggest a fairly large source area for RDX extending from near the center of the J-3 Range to the south to Greenway Road. An alternative explanation would be that a small source area existed along Greenway Road, and the drilling process inadvertently dragged down the resulting shallow RDX detection at DP-8. The EPA asked what the Guard was proposing to do for these detections. The Guard stated that they would like to wait for Textron's response because the detections back track to the J-3 Range and that the groundwater is currently being captured by the FS-12 treatment system. The Guard stated that the draft letter to Textron would be ready for Agency review tomorrow (sent 11/5). EPA asked for a cross section of this area to show all the well screen depths. The Guard distributed a 1-page figure of a cross section that had been done previously.

- The Guard's request to reduce the analytes for the third round of Phase II (a) wells was discussed. The EPA will review and have an answer by Tuesday (11/9). The proposal to delay sampling these wells in order to include the perchlorate analysis was also discussed. EPA indicated that this delay is unlikely.

- Selected EPA and DEP comments to the Mortar Targets FSP, Trenches FSP, and Tech Memo 99-2 were discussed, as summarized below

  <u>Mortar Targets</u>

General Comment 2 - EPA clarified that suspected targets were observed west of Turpentine Road and north of Wheelock Road during the recent flyover. The EPA requested that the suspected targets west of Turpentine be included in the investigation and get the same level of reconnaissance detail as the other targets. Ogden stated that the reconnaissance may be performed next week when the UXO contractor is onsite, but in any case this will be added to the plan.

Specific Comment 1 - Ogden indicated that targets will be sampled as proposed if UXO clearance indicates that the 40mm rounds are inert. If these are live rounds, access for sampling would likely be denied. The Guard will provide additional information on the training with these rounds, from Range Control records.

Specific Comment 6 - EPA questioned why proposed monitoring well PMT-1 is located so close to existing monitoring well MW-9. Ogden stated that PMT-1 location was chosen to be downgradient of a majority of the targets. EPA requested that the Guard review the profile data from MW-15.

Trenches

General Comment 2 - EPA partially approved the workplan under the condition that this work provides a first phase to the requirement, with additional investigations to be included at a later date. Ogden asked what would trigger the additional investigation. EPA stated that the geophysical survey or sampling results could trigger the additional investigations.

General Comment 3 - EPA stated that the plan does not address the location of former buildings. Ogden stated that the former buildings outside the Impact Area will be included in the Phase II (b) workplan or the J Range workplan. EPA agreed that this would be acceptable provided a section is added to the FSP explaining this. EPA noted that the ASR contains a 1949 map (Appendix L-3) showing building locations.

Specific Comment 4 - EPA indicated that a trench was observed during the flyover west of Turpentine Road and should be included in the investigation. Ogden agreed to include a recon of this trench next week if possible, otherwise the recon will be discussed in the workplan.

DEP asked what was BK-2 used for. The Guard stated that it could have been used to view historic targets that no longer exit in that area or it could have been used to provide a side view of the J-1 Range.

Tech Memo 99-2

The Guard will prepare responses to the EPA comments on TM 99-2 and 99-3.

- The response to comments on the Response Plan for RDX Detections was discussed briefly. There appears to be general agreement on the approach, and EPA expects to approve the plan. If a different drilling technique is going to be used then a new approval will be required. A trial of an alternative drilling method is expected at the end of November or early December, using the Sonic rig that is currently completing far field wells.

- Ogden gave a summary of the current and future field activities which include continued Sonic drilling on MW-57 (Sandwich far field) and MW-56 (J Well far field) later next week, Barber drilling on MW-79 (upgradient Demo 1 well) which will move to MW-77 (Demo 1downgradient center line

of particle track), continued groundwater development and sampling, and soil sampling at the targets at MW-1 and MW-25 (explosive source area investigation).

The Guard, EPA, and MADEP had a meeting on November 18 to discuss technical issues, including the following:

- Jacobs provided an update on the activities at CS-19. Their UXO subcontractor commenced work today and should finish by Wednesday (11/24). Soil sampling is scheduled to start on December 6th.

- A 2-page handout of the data and a map showing the locations of the post excavation samples from the UXO detonation at Demo 2 were provided. Explosives have been detected but concentrations have been reduced from the original sampling. The Guard proposes to use a backhoe to remove an additional 6 inches of soil over the same area and re-sample. TRC asked if SVOC were sampled. The Guard stated that SVOC samples were collected on the first sampling round but not on this current round of sampling. The Guard stated that the final closure sampling will have SVOC samples collected if they are a constituent of concern in the initial samples. The Guard hopes to conduct the additional excavation during the week of 11/29/99 but needs to coordinate the schedule with Range Control because there is hunting that week. The detonation area will be covered to reduce infiltration prior to excavation.

- A 1-page handout of the soil sample locations from the APC was distributed. The analytical results from these samples were faxed out on November 11th and had explosives detected. The Guard proposed to collect more samples in the area to find the extent of contamination. The Guard will prepare a sampling plan by Tuesday. EPA asked if this APC may have been a target. The Guard stated that it may have been. EPA agreed that the proposed sampling should be performed in grids.

- A 2-page handout of the document status was distributed. Ogden stated that the table has been modified to show more detail on document revision status. The table will be updated periodically. The Guard requested that Tetra Tech format their table in the same format. The status of the various documents was discussed. It was agreed to conduct comment resolution for the Mortar Target FSP via a conference call at 0800 on 11/29, in order to meet the deadline of completing the FSP by 12/6/99. The timing of the Interim Longterm Monitoring Report and the Phase II CWR were explained as being dependent on the results of 3rd round sampling of Group 1 and Group 2 (original) wells, respectively.

- The e-mail between EPA and Ogden on the differences between compositions of Gun and Mortar propellant was discussed. EPA will contact Mr. Feigenbaum to determine what he was requesting in the last IART meeting. The Guard will have a propellant expert available to answer questions at the next IART meeting.

- The field activity update was given by Ogden and Tetra Tech. The Tetra Tech crew is performing work at the calibration area and is awaiting a shipment of additional inert rounds. They are about to award the geophysical contract and are preparing bids to go to the surveyor. Tetra Tech requested any bench marks that Ogden's surveyor has installed. Ogden is continuing to drill at MW-75 and MW-57, groundwater sample, and collect soil samples at GP-8. EPA will e-mail the approval to discharge water from the decon pad per Ogden's request. Ogden stated that the EPA method 8321 laboratory will be online in January and will need EPA comments in the next few weeks on locations to sample. DEP requested that Don Muldoon be included on all correspondence relating to the PEP comments.

- A 2-page handout of Mortar Target FSP change pages was distributed. The reconnaissance of potential targets along Turpentine Road was discussed. These scrap piles don't appear to be targets, and sampling is not proposed for these areas. The 1997 profile data from MW-15 were discussed along with the need to install an additional well downgradient of the mortar targets. It was agreed to include two wells in this plan and that their locations would depend on soil sampling results. Ogden indicated that the comment response and additional change pages would be sent on Friday (11/19).

- A 4-page handout of Trench FSP change pages was distributed. The reconnaissance of the CS-19 bunker cleared area and the trench along Turpentine Road were discussed. The comment response and additional change pages will be sent on Friday (11/19).

- A 1-page figure depicting the Former H Range was distributed. Ogden indicated that the locations of the soil grids were revised because of a problem with the historic aerial photo. EPA requested that the monitoring well locations for the CS-1 area be checked.

- A 5-page handout of the preliminary results for the first round of sampling base water supply wells was provided. There was one result above the MCL for lead at the ASP. The Guard indicated that the well was not used for drinking water. Additional monitoring is continuing in accordance with the Workplan for Completion of Phase I Activities.

- A 1-page handout of the letter that was distributed to the Raccoon Lane and Snake Pond area residences on the results of the well sampling was provided. There were no detections of explosives in any of the residential well samples.

- The status of the groundwater sampling of the supplemental IRP well 90MW0004 was discussed because it could not be sampled due to an obstruction. Ogden indicated that there were no other wells in the area that are not already being sampled.

- An 8-page handout of the MP-8 Range Packet was distributed for review. The packet includes information on what activities were authorized at that range.

- An 8-page handout of the non-explosive results from the August 1999 UXO detonation soil samples was provided. These samples were collected from the areas around MW-37, MW-40, Avery Road, and J-Range. There were no exceedances of MCP Reportable Concentrations (RCS1) for these samples. The Guard indicated that they would prepare a report summarizing all results for these samples.

- The EPA requested that the sampling of the MW-57 wells be rushed and that the VOC samples be submitted on a quick turn around. The agency would like VOC results before the 12/15 IART meeting. A response plan may be needed if the PCE detects in profile samples are confirmed.

- EPA mentioned potential NFA decisions by AFCEE for CS-22 and CS-8 (USCG).

- The EPA requested an update on the 95-14 sample results. Ogden will look into it.

- EPA requested an update on the status of the Gun and Mortar wells. Ogden indicated that all have been sampled and an update on results will be provided Friday (11/19).

- EPA requested that MW-16 and the LRWS 1 ZOC be discussed at the next technical meeting.

- Ogden asked whether the Phase II CWR should include risk assessment where there are three rounds of groundwater monitoring results. EPA will discuss internally and with DEP, to consider how to factor in the MCP approach.

- EPA requested that the Guard be present at any of the JPAT meetings when CS-19 or CS-18 are discussed. The next meeting is 1/12/00 and it is likely that CS-18 and CS-19 will be discussed.

- Ogden received the EPA comments to comment responses for the Gun and Mortar FSP; change pages will be prepared showing the additional F Range grids, and the composite sampling approach.

- Paper copies of a 11/3/99 emailed letter describing the groundwater sampling plans were distributed for agency review.

- EPA asked the Guard to check out the grid on the northern section of the Old H range which is located close to Greenway Road. EPA does not want the samples collected from road construction materials.

- The Draft KD and U Range Tech Memo was distributed for agency review.

- Ogden stated that the J-3 Wetland Tech Memo will be provided to the Agencies by next week

- Ogden stated that they are currently working on the Background Groundwater Tech Memo and the Supplement to the Interim Results Report.

2. SUMMARY OF DATA RECEIVED

Validated Data

Validated data were received during November for Sample Delivery Groups (SDGs) 120, 174, 175, 176, 177, 180, 182, 184, 185, 186, 188, 189, 190, and 191. These SDGs contain results for 14 soil samples from the August 1999 detonation craters, 23 deep soil samples from the borings at the KD and U Ranges, 103 profile samples from DP-11, MW-63, MW-81, MW-82, MW-83, and MW-84, and 100 groundwater samples from monitoring and supply wells.

Figures 1 through 5 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 300.0, 350.2M, 353M, 365.2, CYAN, IM40/MB, and IM40HG
- Figure 3 shows the results of Volatile Organic Compound (VOC) analyses by methods OC21V, 504, and 8021W
- Figure 4 shows the results of Semi-Volatile Organic Compound (SVOC) analyses by method OC21B
- Figure 5 shows the results of Pesticide (method OL21P) and Herbicide (method 8151) analyses

The concentrations from these analyses are depicted in Figures 1-5 compared to Maximum Contaminant Levels (MCLs) or Health Advisories (HAs) published by EPA for drinking water. A red circle is used to depict a well where the concentration of one or more analytes is greater than or equal to (GTE) the lowest MCL or HA for the analyte(s). A yellow circle is used to depict a well where the concentration of all

analytes is less than (LT) the lowest MCL or HA. 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 or HA, sorted by analytical method and analyte.

There are multiple labels listed for some wells in Figures 1-5, 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. 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 1-5 depict water table contours. Groundwater generally moves perpendicular to these contours. The rate of vertical groundwater flow deeper into the aquifer slows as groundwater moves away from the mound.

The results presented in Figures 1-5 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 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. There are significant differences between historical and current exceedances of drinking water criteria for Metals and SVOCs, as described further below.

Figure 1: Explosives in Groundwater Compared to MCLs/HAs

Exceedances of drinking water criteria for explosive compounds are indicated in three general areas: Demo Area 1 (wells 19, 31, 34, and 73); the Impact Area and CS-19 (wells 58MW0002, 58MW0009E, 1, 2, 23, 25, and 38); and southeast of the J Ranges (wells 90MW0022, 90WT0013). CS-19 is a site located in the Impact Area that is currently under investigation by the Air Force Center for Environmental Excellence (AFCEE) under the Superfund program. A bunker and cleared area on the north side of CS-19 is under investigation under the IAGS. Studies are currently underway to delineate the extent of contaminants in the Impact Area, which may include several separate sources. Exceedances of drinking water criteria were measured for 2,4,6-trinitrotoluene (TNT) at Demo Area 1 (well 19S), and for hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) at the other locations. One of the exceedance wells, 90WT0013, has had no detectable explosives in the last two sample rounds (January and October 1999).

Figure 2: Metals in Groundwater Compared to MCLs/HAs

Exceedances of drinking water criteria for metals are scattered throughout the study area, and where two or more rounds of sampling data are available, generally have not been replicated in consecutive sampling rounds. The exceedances have been measured for antimony, lead, molybdenum, sodium, thallium and zinc. The one lead exceedance (well 2S) was not repeated in a subsequent sampling round. None of the 9 antimony exceedances were repeated in consecutive sampling rounds. Three of the 29 molybdenum exceedances were repeated in consecutive sampling rounds (wells 13D, 2S, and 46M2). Two of the 27 thallium exceedances were repeated in consecutive sampling rounds (wells 7M2 and 47M2). Two of the 9 sodium exceedances were repeated in consecutive sampling rounds (wells 2S and SDW261160). Zinc exceeded the HA in six wells, all of which are constructed of galvanized (zinc-coated) steel.

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 six metals exceeding drinking water criteria, only molybdenum is potentially associated with the site. The population characteristics of the remaining five metals were determined to be consistent with background.

Figure 3: VOCs in Groundwater Compared to MCLs/HAs

Exceedances of drinking water criteria for VOCs are indicated in two general areas: CS-10 (wells 03MW0007A, 03MW0014A, and 03MW0020), and LF-1 (well 27MW0017B). CS-10 and LF-1 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, and for vinyl chloride at LF-1. These compounds are believed to be associated with the sites under investigation by AFCEE.

Figure 4: SVOCs in Groundwater Compared to 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 one location (well 45S, see Inset B) which had an exceedance for naphthalene, and well 41M1 which had an estimated level of 2,6-dinitrotoluene (DNT) that is equal to the HA. BEHP is believed to be largely an artifact of the investigation methods, introduced to the samples during collection or analysis. A detailed discussion of the presence of BEHP is provided in the Draft Completion of Work Report (7/97) and subsequent responses to comments. The theory that BEHP occurs as an artifact, and is not really present in the aquifer, is supported by the results of the latest sampling round that show much lower levels of the chemical after additional precautions were taken to prevent cross-contamination. Only three locations 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, a site under investigation by AFCEE). The naphthalene exceedance at well 45S is also located in FS-12.

The 2,6-DNT detected at well 41M1 is interesting in that the explosive 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 explosive analysis as indicated above. This was the second sampling round for this well, which did not have 2,6-DNT detected by either the SVOC method or the explosive method in the first round.

Figure 5: Herbicides and Pesticides in Groundwater Compared to MCLs/HAs

There was one exceedance of drinking water criteria for herbicides or 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 will be revised to include an explanation of the hydrocarbon interference and the potential for false positives.

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 conducted in this timeframe. The rush data are not 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 indicates PDA-verified explosive detections in a number of wells where they have been previously detected. Monitoring well samples are indicated in the "SAMP_TYPE" column as "GROUNDWATER". The explosive detections were verified at wells 38M3, 38M4, 39M2, 43M2, 59S, and 73S. All these wells had previous detections of the same compounds, except for 73S where 2-amino-4,6-DNT was detected for the first time. Well 73S is located in Demo 1 and had detections of 4-amino-2,6-DNT, RDX, and HMX in all three sampling rounds.

Table 4 also indicates PDA-verified explosive detections in some groundwater profile samples from the current round of drilling. Profile samples are indicated in the "SAMP_TYPE" column as "PROFILE". RDX and 2,6-DNT were detected in profile samples from MW-75, which was installed downgradient from Demo Area 1. RDX, HMX, and 4-amino-2,6-DNT were detected in profile samples from MW-77, which was installed downgradient from Demo Area 1. Profile samples from MW-57 (the Sandwich far field well cluster) contained the VOCs chloroform (which appears to be naturally occurring), toluene, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, and bromochloromethane.

Table 4 lists PDA-verified explosive detections for three soil samples. These consist of RDX and HMX detected in post-excavation samples at Demo Area 2 where artillery simulators were detonated on October 2. The samples were collected following removal of soil containing explosives from one of the craters.

3. DELIVERABLES SUBMITTED

Deliverables submitted during the reporting period include the following:

Draft Interim Results Report	11/1/99
Weekly Progress Update (Oct 18-22)	11/3/99
Draft Technical Memo 99-1 for KD and U Ranges	11/3/99
Draft Technical Memo 99-4 for J-3 Wetland	11/4/99
Weekly Progress Update (Oct 25-29)	11/5/99
Monthly Progress Report #31 (October1999)	11/10/99
Correction to 10/28/99 Public Meeting Map for Metals	11/11/99
Weekly Progress Report (November 1-5)	11/17/99
Weekly Progress Report (November 8-12)	11/21/99

4. SCHEDULED ACTIONS

Figure 6 provides a Gantt chart based on the Final Action Plan, updated to reflected progress and proposed work. Activities scheduled for December and early January include: development and sampling of MW-57 wells; development of other newly installed wells; second round of sampling for the Group 2 far field wells; start soil sampling at mortar targets, trenches, and the APC grids; continue soil sampling for gun/mortar positions; and the continued drilling of Demo 1 response wells. The next meeting of the Impact Area Groundwater Study Review Team has been scheduled for December 15, 1999.

5. SUMMARY OF ACTIVITIES FOR DEMO 1

Drilling was completed at the upgradient well (MW-79). The groundwater profile data for MW-79 had no detections of explosives that were verified by PDA spectra. Groundwater profiling was completed at the downgradient well MW-77 located directly on the flow path from Demo 1. The groundwater profile data for MW-77 had detections of explosives that were verified by PDA spectra. These detections are consistent with upgradient detections at MW-31 and –19, crossgradient detections at MW-76 to the south, and downgradient detections at MW-34. The magnitude of detections is consistent with the modeled flow path, higher at MW-77 located on the flow path than at MW-76 located south of the flow path. Well screens were selected for MW-77 based on the profile data, and installed for future sampling. Groundwater profiling was completed at the downgradient well MW-75 located north of the flow path from Demo 1. Profile results from the upper portion of MW-75 indicate that RDX and HMX are present at depths consistent with migration from Demo 1. Profile results from MW-75 had detections of explosives that were verified by PDA spectra. Well installation was completed in MW-75. The Guard and regulatory agencies will discuss the profile results to date and determine where the final two downgradient response well nests should be located. Drilling to install these well nests is scheduled to commence during the week of January 3, 2000.

TABLE 2
SAMPLING PROGRESS
11/1-11/30

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
03MW0007A-E	FIELDQC	11/2/1999	FIELDQC	0.00	0.00		
15MW0005-E	FIELDQC	11/4/1999	FIELDQC	0.00	0.00		
90LWA0007-E	FIELDQC	11/5/1999	FIELDQC	0.00	0.00		
90LWA0007-E	FIELDQC	11/15/1999	FIELDQC	0.00	0.00		
95-6A-E	FIELDQC	11/10/1999	FIELDQC	0.00	0.00		
95ES-E	FIELDQC	11/17/1999	FIELDQC	0.00	0.00		
95ES-T	FIELDQC	11/16/1999	FIELDQC	0.00	0.00		
G57DCE	FIELDQC	11/1/1999	FIELDQC	0.00	0.00		
G57DCT	FIELDQC	11/1/1999	FIELDQC	0.00	0.00		
G57DIE	FIELDQC	11/2/1999	FIELDQC	0.00	0.00		
G57DIT	FIELDQC	11/2/1999	FIELDQC	0.00	0.00		
G57DNE	FIELDQC	11/3/1999	FIELDQC	0.00	0.00		
G57DNT	FIELDQC	11/3/1999	FIELDQC	0.00	0.00		
G57DTE	FIELDQC	11/4/1999	FIELDQC	0.00	0.00		
G57DTT	FIELDQC	11/4/1999	FIELDQC	0.00	0.00		
G57DWE	FIELDQC	11/5/1999	FIELDQC	0.00	0.00		
G57DWT	FIELDQC	11/5/1999	FIELDQC	0.00	0.00		
G75MAE	FIELDQC	11/18/1999	FIELDQC	0.00	0.00		
G75MKE	FIELDQC	11/19/1999	FIELDQC	0.00	0.00		
G77MBE	FIELDQC	11/8/1999	FIELDQC	0.00	0.00		
G77MDE	FIELDQC	11/9/1999	FIELDQC	0.00	0.00		
G79MEE	FIELDQC	11/1/1999	FIELDQC	0.00	0.00		
HC03P1AAE	FIELDQC	11/10/1999	FIELDQC	0.00	0.00		
HC03P1AAT	FIELDQC	11/10/1999	FIELDQC	0.00	0.00		
HC03Q1BAE	FIELDQC	11/11/1999	FIELDQC	0.00	0.00		
HC03Q1BAT	FIELDQC	11/11/1999	FIELDQC	0.00	0.00		
HC03T1AAE	FIELDQC	11/4/1999	FIELDQC	0.00	0.00		
HC03U1CAT	FIELDQC	11/4/1999	FIELDQC	0.00	0.00		
HC11F1AAE	FIELDQC	11/5/1999	FIELDQC	0.00	0.00		
HC11GAAE	FIELDQC	11/4/1999	FIELDQC	0.00	0.00		
HC46B1AAE	FIELDQC	11/12/1999	FIELDQC	0.00	0.00		
HC59A1AAE	FIELDQC	11/17/1999	FIELDQC	0.00	0.00		
HC59A1AAT	FIELDQC	11/17/1999	FIELDQC	0.00	0.00		
HC59D1AAE	FIELDQC	11/18/1999	FIELDQC	0.00	0.00		
HC59D1AAT	FIELDQC	11/18/1999	FIELDQC	0.00	0.00		
HC60E1BAE	FIELDQC	11/24/1999	FIELDQC	0.00	0.00		
HC60E1BAT	FIELDQC	11/24/1999	FIELDQC	0.00	0.00		
PPAWSMW-1-E	FIELDQC	11/3/1999	FIELDQC	0.00	0.00		
W42M1T	FIELDQC	11/12/1999	FIELDQC	0.00	0.00		
W43SST	FIELDQC	11/15/1999	FIELDQC	0.00	0.00		
W46SST	FIELDQC	11/19/1999	FIELDQC	0.00	0.00		
W54M2T	FIELDQC	11/9/1999	FIELDQC	0.00	0.00		
W54SST	FIELDQC	11/8/1999	FIELDQC	0.00	0.00		
W58SST	FIELDQC	11/23/1999	FIELDQC	0.00	0.00		
W59SST	FIELDQC	11/22/1999	FIELDQC	0.00	0.00		
03MW0007A	03MW0007A	11/2/1999	GROUNDWATER			21.00	26.00
03MW0014A	03MW0014A	11/4/1999	GROUNDWATER			38.00	43.00
03MW0020	03MW0020	11/2/1999	GROUNDWATER			36.00	41.00
15MW0005	15MW0005	11/4/1999	GROUNDWATER			3.00	13.00

Profiling methods include: Volatiles and Explosives
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Other Sample Types methods are variable
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SED = Sample End Depth, measured in feet bgs
BWTS = Depth below water table, start depth, measured in feet
BWTE = Depth below water table, end depth, measured in feet

TABLE 2
SAMPLING PROGRESS
11/1-11/30

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
4261000-02G	4261000-02G	11/3/1999	GROUNDWATER				
4261000-03G	4261000-03G	11/3/1999	GROUNDWATER				
4261000-04G	4261000-04G	11/3/1999	GROUNDWATER				
4261000-06G	4261000-06G	11/3/1999	GROUNDWATER				
4261000-09G	4261000-09G	11/3/1999	GROUNDWATER				
4261000-10G	4261000-10G	11/3/1999	GROUNDWATER				
4261000-11G	4261000-11G	11/3/1999	GROUNDWATER				
90LWA0007	90LWA0007	11/15/1999	GROUNDWATER			0.00	10.00
95-15A	95-15A	11/10/1999	GROUNDWATER			138.00	148.00
95-6A	95-6A	11/9/1999	GROUNDWATER			142.00	152.00
95ES	95ES	11/16/1999	GROUNDWATER			-5.38	4.62
ECMWSP02D	DP-2	11/30/1999	GROUNDWATER			79.90	84.90
ECMWSP02S	DP-2	11/30/1999	GROUNDWATER			40.00	45.00
ECMWSP03D	DP-3	11/30/1999	GROUNDWATER			79.90	84.90
ECMWSP03S	DP-3	11/29/1999	GROUNDWATER			40.00	45.00
PPAWSMW-1	PPAWSMW-1	11/3/1999	GROUNDWATER			10.00	20.00
PPAWSMW-3	PPAWSMW-3	11/3/1999	GROUNDWATER			0.00	10.00
USCGANTST	USCGANTST	11/3/1999	GROUNDWATER				
W21M2A	MW-21	11/1/1999	GROUNDWATER			58.00	68.00
W21M3A	MW-21	11/1/1999	GROUNDWATER			28.00	38.00
W38DDA	MW-38	11/11/1999	GROUNDWATER			125.00	135.00
W38M1A	MW-38	11/9/1999	GROUNDWATER			100.00	110.00
W38M2A	MW-38	11/9/1999	GROUNDWATER			70.00	80.00
W38M3A	MW-38	11/10/1999	GROUNDWATER			53.00	63.00
W38M4A	MW-38	11/11/1999	GROUNDWATER			15.00	25.00
W38SSA	MW-38	11/16/1999	GROUNDWATER			0.00	10.00
W38SSD	MW-38	11/16/1999	GROUNDWATER			0.00	10.00
W39M1A	MW-39	11/11/1999	GROUNDWATER			87.00	97.00
W39M2A	MW-39	11/10/1999	GROUNDWATER			42.00	52.00
W39SSA	MW-39	11/17/1999	GROUNDWATER			0.00	10.00
W41M1A	MW-41	11/12/1999	GROUNDWATER			110.00	120.00
W41M2A	MW-41	11/12/1999	GROUNDWATER			119.00	129.00
W41M2D	MW-41	11/12/1999	GROUNDWATER			119.00	129.00
W41M3A	MW-41	11/11/1999	GROUNDWATER			0.00	10.00
W42M1A	MW-42	11/12/1999	GROUNDWATER			139.00	149.00
W42M2A	MW-42	11/19/1999	GROUNDWATER			119.00	129.00
W42M3A	MW-42	11/12/1999	GROUNDWATER			99.00	109.00
W43M1A	MW-43	11/15/1999	GROUNDWATER			93.00	103.00
W43M1D	MW-43	11/15/1999	GROUNDWATER			93.00	103.00
W43M2A	MW-43	11/18/1999	GROUNDWATER			70.00	80.00
W43SSA	MW-43	11/15/1999	GROUNDWATER			0.00	10.00
W45M1A	MW-45	11/15/1999	GROUNDWATER			98.00	108.00
W45M1D	MW-45	11/15/1999	GROUNDWATER			98.00	108.00
W45M2A	MW-45	11/15/1999	GROUNDWATER			18.00	28.00
W45SSA	MW-45	11/16/1999	GROUNDWATER			0.00	10.00
W46DDA	MW-46	11/2/1999	GROUNDWATER			135.00	145.00
W46M1A	MW-46	11/1/1999	GROUNDWATER			102.00	112.00
W46M2A	MW-46	11/1/1999	GROUNDWATER			55.00	65.00
W46M3A	MW-46	11/1/1999	GROUNDWATER			22.00	32.00

Profiling methods include: Volatiles and Explosives
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Other Sample Types methods are variable
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TABLE 2
SAMPLING PROGRESS
11/1-11/30

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
W46SSA	MW-46	11/19/1999	GROUNDWATER			0.00	10.00
W47DDA	MW-47	11/2/1999	GROUNDWATER			100.00	110.00
W47M1A	MW-47	11/2/1999	GROUNDWATER			75.00	85.00
W47M1D	MW-47	11/2/1999	GROUNDWATER			75.00	85.00
W47M2A	MW-47	11/2/1999	GROUNDWATER			38.00	48.00
W47M3A	MW-47	11/2/1999	GROUNDWATER			21.00	31.00
W47SSA	MW-47	11/17/1999	GROUNDWATER			0.00	10.00
W47SSD	MW-47	11/17/1999	GROUNDWATER			0.00	10.00
W48DDA	MW-48	11/23/1999	GROUNDWATER			118.87	128.87
W48M1A	MW-48	11/23/1999	GROUNDWATER			89.59	99.59
W48M2A	MW-48	11/23/1999	GROUNDWATER			59.69	69.69
W48M2D	MW-48	11/23/1999	GROUNDWATER			59.69	69.69
W48M3A	MW-48	11/19/1999	GROUNDWATER			29.73	39.73
W49DDA	MW-49	11/22/1999	GROUNDWATER			113.77	123.77
W49M1A	MW-49	11/22/1999	GROUNDWATER			88.75	98.75
W49M2A	MW-49	11/22/1999	GROUNDWATER			58.73	68.73
W49M3A	MW-49	11/19/1999	GROUNDWATER			29.48	39.48
W49SSA	MW-49	11/19/1999	GROUNDWATER			-2.52	7.48
W50DDA	MW-50	11/4/1999	GROUNDWATER			120.50	130.50
W50M1A	MW-50	11/4/1999	GROUNDWATER			90.00	100.00
W50M2A	MW-50	11/4/1999	GROUNDWATER			59.00	69.00
W50M3A	MW-50	11/5/1999	GROUNDWATER			29.00	39.00
W50SSA	MW-50	11/2/1999	GROUNDWATER			0.00	10.00
W51DDA	MW-51	11/3/1999	GROUNDWATER			130.00	140.00
W51M1A	MW-51	11/3/1999	GROUNDWATER			90.00	100.00
W51M2A	MW-51	11/3/1999	GROUNDWATER			60.50	70.50
W51M3A	MW-51	11/4/1999	GROUNDWATER			29.00	39.00
W51SSA	MW-51	11/3/1999	GROUNDWATER			0.00	10.00
W52DDA	MW-52	11/9/1999	GROUNDWATER			120.00	130.00
W52M1A	MW-52	11/8/1999	GROUNDWATER			139.00	149.00
W52M2A	MW-52	11/8/1999	GROUNDWATER			74.00	84.00
W52M2D	MW-52	11/8/1999	GROUNDWATER			74.00	84.00
W52M3A	MW-52	11/9/1999	GROUNDWATER			26.00	36.00
W52M3L	MW-52	11/8/1999	GROUNDWATER			26.00	36.00
W52SSA	MW-52	11/18/1999	GROUNDWATER			0.00	10.00
W53DDA	MW-53	11/5/1999	GROUNDWATER			157.00	167.00
W53M1A	MW-53	11/5/1999	GROUNDWATER			100.00	110.00
W53M1L	MW-53	11/5/1999	GROUNDWATER			100.00	110.00
W53M2A	MW-53	11/4/1999	GROUNDWATER			70.00	80.00
W53M2D	MW-53	11/4/1999	GROUNDWATER			70.00	80.00
W53M3A	MW-53	11/4/1999	GROUNDWATER			40.00	50.00
W53SSA	MW-53	11/22/1999	GROUNDWATER			0.00	10.00
W54DDA	MW-54	11/5/1999	GROUNDWATER			126.00	136.00
W54M1A	MW-54	11/5/1999	GROUNDWATER			80.00	90.00
W54M2A	MW-54	11/8/1999	GROUNDWATER			58.00	68.00
W54M3A	MW-54	11/9/1999	GROUNDWATER			28.00	38.00
W54SSA	MW-54	11/8/1999	GROUNDWATER			0.00	10.00
W55DDA	MW-55	11/8/1999	GROUNDWATER			120.00	130.00
W55M1A	MW-55	11/8/1999	GROUNDWATER			90.00	100.00

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TABLE 2
SAMPLING PROGRESS
11/1-11/30

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
W55M2A	MW-55	11/8/1999	GROUNDWATER			60.00	70.00
W55M3A	MW-55	11/8/1999	GROUNDWATER			29.50	39.50
W55SSA	MW-55	11/9/1999	GROUNDWATER			0.00	10.00
W58SSA	MW-58	11/23/1999	GROUNDWATER			0.00	10.00
W59M1A	MW-59	11/16/1999	GROUNDWATER			35.00	45.00
W59M1D	MW-59	11/16/1999	GROUNDWATER			35.00	45.00
W59M2A	MW-59	11/18/1999	GROUNDWATER			20.00	30.00
W59SSA	MW-59	11/22/1999	GROUNDWATER			0.00	10.00
W72SSA	MW-72	11/16/1999	GROUNDWATER			0.00	10.00
W73SSA	MW-73	11/2/1999	GROUNDWATER			0.00	10.00
W84DDA	MW-84	11/10/1999	GROUNDWATER			151.00	161.00
W84M1A	MW-84	11/9/1999	GROUNDWATER			101.00	111.00
W84M2A	MW-84	11/9/1999	GROUNDWATER			65.00	75.00
W84M3A	MW-84	11/9/1999	GROUNDWATER			40.00	50.00
DW1101	GAC WATER	11/1/1999	IDW	0.00	0.00		
DW1102	GAC WATER	11/2/1999	IDW	0.00	0.00		
DW1103	GAC WATER	11/3/1999	IDW	0.00	0.00		
DW1104	GAC WATER	11/4/1999	IDW	0.00	0.00		
DW1108	GAC WATER	11/8/1999	IDW	0.00	0.00		
DW1109	GAC WATER	11/9/1999	IDW	0.00	0.00		
DW1110	GAC WATER	11/10/1999	IDW	0.00	0.00		
DW1116	GAC WATER	11/16/1999	IDW	0.00	0.00		
SC4801	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC4802	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC4901	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC4902	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC5601	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC5602	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC5801	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC5802	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC6701	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC6702	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC7001	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC7002	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC7101	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC7102	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC7601	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC7602	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC7901	GAC WATER	11/3/1999	IDW	0.00	0.00		
SC7902	GAC WATER	11/3/1999	IDW	0.00	0.00		
G57DCA	MW-57	11/1/1999	PROFILE	110.00	115.00	22.50	27.50
G57DDA	MW-57	11/1/1999	PROFILE	120.00	125.00	32.50	37.50
G57DEA	MW-57	11/1/1999	PROFILE	130.00	135.00	42.50	47.50
G57DFA	MW-57	11/1/1999	PROFILE	140.00	145.00	52.50	57.50
G57DGA	MW-57	11/1/1999	PROFILE	150.00	155.00	62.50	67.50
G57DHA	MW-57	11/1/1999	PROFILE	160.00	165.00	72.50	77.50
G57DHD	MW-57	11/1/1999	PROFILE	160.00	165.00	72.50	77.50
G57DIA	MW-57	11/2/1999	PROFILE	170.00	175.00	82.50	87.50
G57DJA	MW-57	11/2/1999	PROFILE	180.00	185.00	92.50	97.50

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TABLE 2
SAMPLING PROGRESS
11/1-11/30

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
G57DKA	MW-57	11/2/1999	PROFILE	190.00	195.00	102.50	107.50
G57DLA	MW-57	11/2/1999	PROFILE	200.00	205.00	112.50	117.50
G57DMA	MW-57	11/2/1999	PROFILE	210.00	215.00	122.50	127.50
G57DNA	MW-57	11/3/1999	PROFILE	220.00	225.00	132.50	137.50
G57DOA	MW-57	11/3/1999	PROFILE	230.00	235.00	142.50	147.50
G57DPA	MW-57	11/3/1999	PROFILE	240.00	245.00	152.50	157.50
G57DQA	MW-57	11/3/1999	PROFILE	250.00	255.00	162.50	167.50
G57DQD	MW-57	11/3/1999	PROFILE	250.00	255.00	162.50	167.50
G57DRA	MW-57	11/3/1999	PROFILE	260.00	265.00	172.50	177.50
G57DSA	MW-57	11/3/1999	PROFILE	270.00	275.00	182.50	187.50
G57DTA	MW-57	11/4/1999	PROFILE	280.00	285.00	192.50	197.50
G57DUA	MW-57	11/4/1999	PROFILE	290.00	295.00	202.50	207.50
G57DVA	MW-57	11/4/1999	PROFILE	300.00	305.00	212.50	217.50
G57DWA	MW-57	11/5/1999	PROFILE	310.00	315.00	222.50	227.50
G57DXA	MW-57	11/5/1999	PROFILE	317.00	322.00	229.50	234.50
G75MAA	MW-75	11/18/1999	PROFILE	100.00	100.00	17.00	17.00
G75MBA	MW-75	11/18/1999	PROFILE	110.00	110.00	27.00	27.00
G75MBD	MW-75	11/18/1999	PROFILE	110.00	110.00	27.00	27.00
G75MCA	MW-75	11/18/1999	PROFILE	120.00	120.00	37.00	37.00
G75MDA	MW-75	11/18/1999	PROFILE	130.00	130.00	47.00	47.00
G75MEA	MW-75	11/18/1999	PROFILE	140.00	140.00	57.00	57.00
G75MFA	MW-75	11/18/1999	PROFILE	150.00	150.00	67.00	67.00
G75MGA	MW-75	11/18/1999	PROFILE	160.00	160.00	77.00	77.00
G75MHA	MW-75	11/18/1999	PROFILE	170.00	170.00	87.00	87.00
G75MIA	MW-75	11/18/1999	PROFILE	180.00	180.00	97.00	97.00
G75MID	MW-75	11/18/1999	PROFILE	180.00	180.00	97.00	97.00
G75MJA	MW-75	11/18/1999	PROFILE	190.00	190.00	107.00	107.00
G75MKA	MW-75	11/19/1999	PROFILE	200.00	200.00	117.00	117.00
G77MAA	MW-77	11/8/1999	PROFILE	90.00	90.00	5.50	5.50
G77MBA	MW-77	11/8/1999	PROFILE	100.00	100.00	15.50	15.50
G77MCA	MW-77	11/8/1999	PROFILE	110.00	110.00	25.50	25.50
G77MDA	MW-77	11/9/1999	PROFILE	120.00	120.00	35.50	35.50
G77MDD	MW-77	11/9/1999	PROFILE	120.00	120.00	35.50	35.50
G77MEA	MW-77	11/9/1999	PROFILE	130.00	130.00	45.50	45.50
G77MFA	MW-77	11/9/1999	PROFILE	140.00	140.00	55.50	55.50
G77MGA	MW-77	11/9/1999	PROFILE	150.00	150.00	65.50	65.50
G77MHA	MW-77	11/9/1999	PROFILE	160.00	160.00	75.50	75.50
G77MIA	MW-77	11/9/1999	PROFILE	170.00	170.00	85.50	85.50
G77MJA	MW-77	11/9/1999	PROFILE	180.00	180.00	95.50	95.50
G77MKA	MW-77	11/9/1999	PROFILE	190.00	190.00	105.50	105.50
G79MEA	MW-79	11/1/1999	PROFILE	140.00	140.00	49.70	49.70
G79MED	MW-79	11/1/1999	PROFILE	140.00	140.00	49.70	49.70
G79MFA	MW-79	11/1/1999	PROFILE	150.00	150.00	59.70	59.70
G79MGA	MW-79	11/1/1999	PROFILE	160.00	160.00	69.70	69.70
G79MHA	MW-79	11/1/1999	PROFILE	170.00	170.00	79.70	79.70
G79MIA	MW-79	11/1/1999	PROFILE	180.00	180.00	89.70	89.70
G79MJA	MW-79	11/1/1999	PROFILE	190.00	190.00	99.70	99.70
G79MKA	MW-79	11/1/1999	PROFILE	200.00	200.00	109.70	109.70
DEMO2PE1	DEMO2PE1	11/5/1999	SOIL GRID	0.00	0.25		

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TABLE 2
SAMPLING PROGRESS
11/1-11/30

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
DEMO2PE2	DEMO2PE2	11/5/1999	SOIL GRID	0.00	0.25		
DEMO2PE3	DEMO2PE3	11/5/1999	SOIL GRID	0.00	0.25		
HC03P1AAA	03P	11/10/1999	SOIL GRID	0.00	0.25		
HC03P1BAA	03P	11/10/1999	SOIL GRID	0.25	0.50		
HC03P1CAA	03P	11/10/1999	SOIL GRID	0.50	1.00		
HC03Q1AAA	03Q	11/11/1999	SOIL GRID	0.00	0.25		
HC03Q1BAA	03Q	11/11/1999	SOIL GRID	0.25	0.50		
HC03Q1CAA	03Q	11/11/1999	SOIL GRID	0.50	1.00		
HC03R1AAA	03R	11/11/1999	SOIL GRID	0.00	0.25		
HC03R1BAA	03R	11/11/1999	SOIL GRID	0.25	0.50		
HC03R1CAA	03R	11/11/1999	SOIL GRID	0.50	1.00		
HC03S1AAA	03S	11/10/1999	SOIL GRID	0.00	0.25		
HC03S1AAD	03S	11/10/1999	SOIL GRID	0.00	0.25		
HC03S1BAA	03S	11/10/1999	SOIL GRID	0.25	0.50		
HC03S1BAD	03S	11/10/1999	SOIL GRID	0.25	0.50		
HC03S1CAA	03S	11/10/1999	SOIL GRID	0.50	1.00		
HC03T1AAA	03T	11/4/1999	SOIL GRID	0.00	0.25		
HC03T1BAA	03T	11/4/1999	SOIL GRID	0.25	0.50		
HC03T1CAA	03T	11/4/1999	SOIL GRID	0.50	1.00		
HC03U1AAA	03U	11/4/1999	SOIL GRID	0.00	0.25		
HC03U1BAA	03U	11/4/1999	SOIL GRID	0.25	0.50		
HC03U1CAA	03U	11/4/1999	SOIL GRID	0.50	1.00		
HC11F1AAA	11F	11/5/1999	SOIL GRID	0.00	0.25		
HC11F1BAA	11F	11/5/1999	SOIL GRID	0.25	0.50		
HC11F1CAA	11F	11/5/1999	SOIL GRID	0.50	1.00		
HC11G1AAA	11G	11/5/1999	SOIL GRID	0.00	0.25		
HC11G1BAA	11G	11/5/1999	SOIL GRID	0.25	0.50		
HC11G1CAA	11G	11/5/1999	SOIL GRID	0.50	1.00		
HC46A1AAA	46A	11/11/1999	SOIL GRID	0.00	0.25		
HC46A1BAA	46A	11/11/1999	SOIL GRID	0.25	0.50		
HC46A1CAA	46A	11/11/1999	SOIL GRID	0.50	1.00		
HC46B1AAA	46B	11/12/1999	SOIL GRID	0.00	0.25		
HC46B1BAA	46B	11/12/1999	SOIL GRID	0.25	0.50		
HC46B1CAA	46B	11/12/1999	SOIL GRID	0.50	1.00		
HC46C1AAA	46C	11/12/1999	SOIL GRID	0.00	0.25		
HC46C1BAA	46C	11/12/1999	SOIL GRID	0.25	0.50		
HC46C1CAA	46C	11/12/1999	SOIL GRID	0.50	1.00		
HC46D1AAA	46D	11/12/1999	SOIL GRID	0.00	0.25		
HC46D1BAA	46D	11/12/1999	SOIL GRID	0.25	0.50		
HC46D1CAA	46D	11/12/1999	SOIL GRID	0.50	1.00		
HC59A1AAA	59A	11/17/1999	SOIL GRID	0.00	0.50		
HC59A1AAD	59A	11/17/1999	SOIL GRID	0.00	0.50		
HC59A1BAA	59A	11/17/1999	SOIL GRID	1.50	2.00		
HC59B1AAA	59B	11/17/1999	SOIL GRID	0.00	0.50		
HC59B1BAA	59B	11/17/1999	SOIL GRID	1.50	2.00		
HC59C1AAA	59C	11/18/1999	SOIL GRID	0.00	0.50		
HC59C1BAA	59C	11/18/1999	SOIL GRID	1.50	2.00		
HC59D1AAA	59D	11/18/1999	SOIL GRID	0.00	0.50		
HC59D1BAA	59D	11/18/1999	SOIL GRID	1.50	2.00		

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

TABLE 2
SAMPLING PROGRESS
11/1-11/30

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HC59D1BAD	59D	11/18/1999	SOIL GRID	1.50	2.00		
HC59E1AAA	59E	11/17/1999	SOIL GRID	0.00	0.50		
HC59E1BAA	59E	11/17/1999	SOIL GRID	1.50	2.00		
HC59F1AAA	59F	11/17/1999	SOIL GRID	0.00	0.50		
HC59F1BAA	59F	11/17/1999	SOIL GRID	1.50	2.00		
HC59G1AAA	59G	11/18/1999	SOIL GRID	0.00	0.50		
HC59G1BAA	59G	11/18/1999	SOIL GRID	1.50	2.00		
HC60A1AAA	60A	11/18/1999	SOIL GRID	0.00	0.50		
HC60A1BAA	60A	11/18/1999	SOIL GRID	1.50	2.00		
HC60B1AAA	60B	11/18/1999	SOIL GRID	0.00	0.50		
HC60B1BAA	60B	11/18/1999	SOIL GRID	1.50	2.00		
HC60C1AAA	60C	11/18/1999	SOIL GRID	0.00	0.50		
HC60C1BAA	60C	11/18/1999	SOIL GRID	1.50	2.00		
HC60D1AAA	60D	11/24/1999	SOIL GRID	0.00	0.50		
HC60D1AAD	60D	11/24/1999	SOIL GRID	0.00	0.50		
HC60D1BAA	60D	11/24/1999	SOIL GRID	1.50	2.00		
HC60D1BAD	60D	11/24/1999	SOIL GRID	1.50	2.00		
HC60E1AAA	60E	11/24/1999	SOIL GRID	0.00	0.50		
HC60E1AAD	60E	11/24/1999	SOIL GRID	0.00	0.50		
HC60E1BAA	60E	11/24/1999	SOIL GRID	1.50	2.00		
HC60F1AAA	60F	11/24/1999	SOIL GRID	0.00	0.50		
HC60F1BAA	60F	11/24/1999	SOIL GRID	1.50	2.00		
HC60I1AAA	60I	11/24/1999	SOIL GRID	0.00	0.50		
HC60I1BAA	60I	11/24/1999	SOIL GRID	1.50	2.00		
HD03S1AAA	03S	11/10/1999	SOIL GRID	0.00	0.25		
HD03S1BAA	03S	11/10/1999	SOIL GRID	0.25	0.50		
HD03S1CAA	03S	11/10/1999	SOIL GRID	0.50	1.00		
HD03S2AAA	03S	11/10/1999	SOIL GRID	0.00	0.25		
HD03S2BAA	03S	11/10/1999	SOIL GRID	0.25	0.50		
HD03S2CAA	03S	11/10/1999	SOIL GRID	0.50	1.00		
HD03S3AAA	03S	11/10/1999	SOIL GRID	0.00	0.25		
HD03S3AAD	03S	11/10/1999	SOIL GRID	0.00	0.25		
HD03S3BAA	03S	11/10/1999	SOIL GRID	0.25	0.50		
HD03S3BAD	03S	11/10/1999	SOIL GRID	0.25	0.50		
HD03S3CAA	03S	11/10/1999	SOIL GRID	0.50	1.00		
HD03S3CAD	03S	11/10/1999	SOIL GRID	0.50	1.00		
HD03S4AAA	03S	11/10/1999	SOIL GRID	0.00	0.25		
HD03S4BAA	03S	11/10/1999	SOIL GRID	0.25	0.50		
HD03S4CAA	03S	11/10/1999	SOIL GRID	0.50	1.00		
HD03S5AAA	03S	11/10/1999	SOIL GRID	0.00	0.25		
HD03S5BAA	03S	11/10/1999	SOIL GRID	0.25	0.50		
HD03S5CAA	03S	11/10/1999	SOIL GRID	0.50	1.00		
HD03T1AAA	03T	11/4/1999	SOIL GRID	0.00	0.25		
HD03T1BAA	03T	11/4/1999	SOIL GRID	0.25	0.50		
HD03T1CAA	03T	11/4/1999	SOIL GRID	0.50	1.00		
HD03T3AAA	03T	11/4/1999	SOIL GRID	0.00	0.25		
HD03T3BAA	03T	11/4/1999	SOIL GRID	0.25	0.50		
HD03T3CAA	03T	11/4/1999	SOIL GRID	0.50	1.00		
HD03T5AAA	03T	11/4/1999	SOIL GRID	0.00	0.25		

Profiling methods include: Volatiles and Explosives
Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, and Wet Chemistry
Other Sample Types methods are variable
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
11/1-11/30

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HD03T5BAA	03T	11/4/1999	SOIL GRID	0.25	0.50		
HD03T5CAA	03T	11/4/1999	SOIL GRID	0.50	1.00		
HD03T7AAA	03T	11/4/1999	SOIL GRID	0.00	0.25		
HD03T7BAA	03T	11/4/1999	SOIL GRID	0.25	0.50		
HD03T7CAA	03T	11/4/1999	SOIL GRID	0.50	1.00		
HD03U1AAA	03U	11/4/1999	SOIL GRID	0.00	0.25		
HD03U1BAA	03U	11/4/1999	SOIL GRID	0.25	0.50		
HD03U1CAA	03U	11/4/1999	SOIL GRID	0.50	1.00		
HD03U3AAA	03U	11/4/1999	SOIL GRID	0.00	0.25		
HD03U3BAA	03U	11/4/1999	SOIL GRID	0.25	0.50		
HD03U3CAA	03U	11/4/1999	SOIL GRID	0.50	1.00		
HD03U5AAA	03U	11/4/1999	SOIL GRID	0.00	0.25		
HD03U5BAA	03U	11/4/1999	SOIL GRID	0.25	0.50		
HD03U5CAA	03U	11/4/1999	SOIL GRID	0.50	1.00		
HD03U7AAA	03U	11/4/1999	SOIL GRID	0.00	0.25		
HD03U7BAA	03U	11/4/1999	SOIL GRID	0.25	0.50		
HD03U7CAA	03U	11/4/1999	SOIL GRID	0.50	1.00		
HD11F1AAA	11F	11/5/1999	SOIL GRID	0.00	0.25		
HD11F1BAA	11F	11/5/1999	SOIL GRID	0.25	0.50		
HD11F1CAA	11F	11/5/1999	SOIL GRID	0.50	1.00		
HD11F3AAA	11F	11/5/1999	SOIL GRID	0.00	0.25		
HD11F3BAA	11F	11/5/1999	SOIL GRID	0.25	0.50		
HD11F3CAA	11F	11/5/1999	SOIL GRID	0.50	1.00		
HD11F5AAA	11F	11/5/1999	SOIL GRID	0.00	0.25		
HD11F5BAA	11F	11/5/1999	SOIL GRID	0.25	0.50		
HD11F5CAA	11F	11/5/1999	SOIL GRID	0.50	1.00		
HD11F7AAA	11F	11/5/1999	SOIL GRID	0.00	0.25		
HD11F7BAA	11F	11/5/1999	SOIL GRID	0.25	0.50		
HD11F7CAA	11F	11/5/1999	SOIL GRID	0.50	1.00		
HD11G1AAA	11G	11/5/1999	SOIL GRID	0.00	0.25		
HD11G1BAA	11G	11/5/1999	SOIL GRID	0.25	0.50		
HD11G1CAA	11G	11/5/1999	SOIL GRID	0.50	1.00		
HD11G3AAA	11G	11/5/1999	SOIL GRID	0.00	0.25		
HD11G3BAA	11G	11/5/1999	SOIL GRID	0.25	0.50		
HD11G3CAA	11G	11/5/1999	SOIL GRID	0.50	1.00		
HD11G5AAA	11G	11/5/1999	SOIL GRID	0.00	0.25		
HD11G5BAA	11G	11/5/1999	SOIL GRID	0.25	0.50		
HD11G5CAA	11G	11/5/1999	SOIL GRID	0.50	1.00		
HD11G7AAA	11G	11/5/1999	SOIL GRID	0.00	0.25		
HD11G7BAA	11G	11/5/1999	SOIL GRID	0.25	0.50		
HD11G7CAA	11G	11/5/1999	SOIL GRID	0.50	1.00		
HD46B1AAA	46B	11/12/1999	SOIL GRID	0.00	0.25		
HD46B1BAA	46B	11/12/1999	SOIL GRID	0.25	0.50		
HD46B1CAA	46B	11/12/1999	SOIL GRID	0.50	1.00		
HD46B2AAA	46B	11/12/1999	SOIL GRID	0.00	0.25		
HD46B2BAA	46B	11/12/1999	SOIL GRID	0.25	0.50		
HD46B2CAA	46B	11/12/1999	SOIL GRID	0.50	1.00		
HD46B3AAA	46B	11/12/1999	SOIL GRID	0.00	0.25		
HD46B3BAA	46B	11/12/1999	SOIL GRID	0.25	0.50		

Profiling methods include: Volatiles and Explosives
Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, and Wet Chemistry
Other Sample Types methods are variable
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BWTS = Depth below water table, start depth, measured in feet
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TABLE 2
SAMPLING PROGRESS
11/1-11/30

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HD46B3CAA	46B	11/12/1999	SOIL GRID	0.50	1.00		
HD46B4AAA	46B	11/12/1999	SOIL GRID	0.00	0.25		
HD46B4BAA	46B	11/12/1999	SOIL GRID	0.25	0.50		
HD46B4CAA	46B	11/12/1999	SOIL GRID	0.50	1.00		
HD46B5AAA	46B	11/12/1999	SOIL GRID	0.00	0.25		
HD46B5BAA	46B	11/12/1999	SOIL GRID	0.25	0.50		
HD46B5CAA	46B	11/12/1999	SOIL GRID	0.50	1.00		
JRANGEDPE1	JRANGEDPE1	11/5/1999	SOIL GRID	0.00	0.25		

Profiling methods include: Volatiles and Explosives
Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, and Wet Chemistry
Other Sample Types methods are variable
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
VALIDATED DETECTS EXCEEDING MCLs OR HEALTH ADVISORY LIMITS
1997 THROUGH NOVEMBER 1999

LOCID/WELL ID	OGDEN_ID	SAMPLED	METHOD	OGDEN_ANALYTE	CONC.	FLAG	UNITS	BWTS	BWTE	MCL/HA	>MCL/HA
MW-19	W19SSA	3/5/1998	8330N	2,4,6-TRINITROTOLUENE	10.00	J	UG/L	0.00	10.00	2.00	X
MW-19	W19S2A	7/20/1998	8330N	2,4,6-TRINITROTOLUENE	16.00		UG/L	0.00	10.00	2.00	X
MW-19	W19S2D	7/20/1998	8330N	2,4,6-TRINITROTOLUENE	16.00		UG/L	0.00	10.00	2.00	X
MW-19	W19SSA	2/12/1999	8330N	2,4,6-TRINITROTOLUENE	7.20	J	UG/L	0.00	10.00	2.00	X
58MW0002	WC2XXA	2/26/1998	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	19.00		UG/L	0.00	0.00	2.00	X
58MW0002	WC2XXA	1/14/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	20.00		UG/L	25.00	30.00	2.00	X
58MW0009E	WC9EXA	10/2/1997	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	7.70		UG/L	21.00	26.00	2.00	X
58MW0009E	WC9EXA	1/26/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	17.00		UG/L	21.00	26.00	2.00	X
90MW0022	WF22XA	1/26/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	3.80		UG/L	80.00	85.00	2.00	X
90MW0022	WF22XA	2/16/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	5.40		UG/L	80.00	85.00	2.00	X
90WT0013	WF13XA	1/16/1998	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	5.20	J	UG/L	2.00	12.00	2.00	X
MW-1	W01SSA	9/30/1997	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	2.50		UG/L	0.00	10.00	2.00	X
MW-1	W01SSD	9/30/1997	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	2.40		UG/L	0.00	10.00	2.00	X
MW-1	W01SSA	2/22/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	2.80		UG/L	0.00	10.00	2.00	X
MW-1	W01MMA	9/29/1997	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	4.60		UG/L	40.00	45.00	2.00	X
MW-1	W01M2A	3/1/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	2.20		UG/L	40.00	45.00	2.00	X
MW-19	W19SSA	3/5/1998	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	190.00		UG/L	0.00	10.00	2.00	X
MW-19	W19S2A	7/20/1998	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	260.00		UG/L	0.00	10.00	2.00	X
MW-19	W19S2D	7/20/1998	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	260.00		UG/L	0.00	10.00	2.00	X
MW-19	W19SSA	2/12/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	250.00		UG/L	0.00	10.00	2.00	X
MW-2	W02M2A	1/20/1998	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	13.00		UG/L	31.00	36.00	2.00	X
MW-2	W02M2A	2/3/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	6.80		UG/L	31.00	36.00	2.00	X
MW-23	W23M1A	11/7/1997	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	2.30	J	UG/L	99.00	109.00	2.00	X
MW-23	W23M1A	3/18/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	4.40		UG/L	99.00	109.00	2.00	X
MW-23	W23M1D	3/18/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	4.70		UG/L	99.00	109.00	2.00	X
MW-25	W25SSA	10/16/1997	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	2.00		UG/L	0.00	10.00	2.00	X
MW-25	W25SSA	3/17/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	4.10		UG/L	0.00	10.00	2.00	X
MW-31	W31SSA	7/15/1998	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	64.00		UG/L	14.00	19.00	2.00	X
MW-31	W31SSA	2/1/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	210.00		UG/L	14.00	19.00	2.00	X
MW-31	W31MMA	7/15/1998	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	280.00		UG/L	29.00	39.00	2.00	X
MW-31	W31MMA	2/2/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	370.00		UG/L	29.00	39.00	2.00	X
MW-34	W34M2A	2/19/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	6.20		UG/L	55.00	65.00	2.00	X
MW-38	W38M3A	5/6/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	2.50		UG/L	53.00	63.00	2.00	X
MW-38	W38M3A	8/18/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	2.60		UG/L	53.00	63.00	2.00	X
MW-73	W73SSA	7/9/1999	8330N	HEXAHYDRO-1,3,5-TRINITRO-1	50.00	J	UG/L	0.00	10.00	2.00	X

BWTS = DEPTH BELOW WATER TABLE, START DEPTH, MEASURED IN FEET
BWTE = DEPTH BELOW WATER TABLE, END DEPTH, MEASURED IN FEET
MCL/HA = EITHER THE MCL OR LOWEST HEALTH ADVISORY CONCENTRATION (CHILD, ADULT OR LIFETIME)
>MCL/HA = EQUALS OR EXCEEDS EITHER THE MCL OR LOWEST HEALTH ADVISORY CONCENTRATION (CHILD, ADULT, OR LIFETIME)

TABLE 3
VALIDATED DETECTS EXCEEDING MCLs OR HEALTH ADVISORY LIMITS
1997 THROUGH NOVEMBER 1999

LOCID/WELL ID	OGDEN_ID	SAMPLED	METHOD	OGDEN_ANALYTE	CONC.	FLAG	UNITS	BWTS	BWTE	MCL/HA	>MCL/HA
MW-3	W03DDL	3/6/1998	IM40MB	ANTIMONY	13.80	J	UG/L	218.00	223.00	6.00	X
MW-34	W34M2A	8/16/1999	IM40MB	ANTIMONY	6.60	J	UG/L	55.00	65.00	6.00	X
MW-35	W35SSA	8/19/1999	IM40MB	ANTIMONY	6.90	J	UG/L	0.00	10.00	6.00	X
MW-35	W35SSD	8/19/1999	IM40MB	ANTIMONY	13.80	J	UG/L	0.00	10.00	6.00	X
MW-36	W36SSA	8/17/1999	IM40MB	ANTIMONY	6.70	J	UG/L	0.00	10.00	6.00	X
MW-38	W38SSA	8/18/1999	IM40MB	ANTIMONY	7.40		UG/L	0.00	10.00	6.00	X
MW-38	W38M3A	8/18/1999	IM40MB	ANTIMONY	6.60	J	UG/L	53.00	63.00	6.00	X
MW-38	W38DDA	8/17/1999	IM40MB	ANTIMONY	6.90	J	UG/L	125.00	135.00	6.00	X
MW-39	W39M1A	8/18/1999	IM40MB	ANTIMONY	7.50		UG/L	87.00	97.00	6.00	X
PPAWSMW-3	PPAWSMW-3	8/12/1999	IM40MB	ANTIMONY	6.00	J	UG/L	0.00	10.00	6.00	X
MW-2	W02SSA	2/23/1998	IM40MB	LEAD	20.10		UG/L	0.00	10.00	15.00	X
MW-13	W13SSA	1/27/1998	IM40MB	MOLYBDENUM	11.20		UG/L	0.00	10.00	10.00	X
MW-13	W13SSL	1/27/1998	IM40MB	MOLYBDENUM	10.40	J	UG/L	0.00	10.00	10.00	X
MW-13	W13DDA	1/26/1998	IM40MB	MOLYBDENUM	26.60		UG/L	140.00	145.00	10.00	X
MW-13	W13DDL	1/26/1998	IM40MB	MOLYBDENUM	30.40		UG/L	140.00	145.00	10.00	X
MW-13	W13DDA	3/11/1999	IM40MB	MOLYBDENUM	11.00		UG/L	140.00	145.00	10.00	X
MW-13	W13DDD	3/11/1999	IM40MB	MOLYBDENUM	12.10	J	UG/L	140.00	145.00	10.00	X
MW-16	W16SSA	3/10/1999	IM40MB	MOLYBDENUM	21.00	J	UG/L	0.00	10.00	10.00	X
MW-16	W16DDA	3/9/1999	IM40MB	MOLYBDENUM	22.20		UG/L	222.00	227.00	10.00	X
MW-16	W16DDD	3/9/1999	IM40MB	MOLYBDENUM	23.20		UG/L	222.00	227.00	10.00	X
MW-17	W17M1L	5/18/1999	IM40MB	MOLYBDENUM	12.60		UG/L	97.00	107.00	10.00	X
MW-2	W02SSA	2/23/1998	IM40MB	MOLYBDENUM	72.10		UG/L	0.00	10.00	10.00	X
MW-2	W02SSL	2/23/1998	IM40MB	MOLYBDENUM	63.30		UG/L	0.00	10.00	10.00	X
MW-2	W02SSA	2/1/1999	IM40MB	MOLYBDENUM	26.10	J	UG/L	0.00	10.00	10.00	X
MW-2	W02SSL	2/1/1999	IM40MB	MOLYBDENUM	34.00		UG/L	0.00	10.00	10.00	X
MW-2	W02DDA	2/2/1999	IM40MB	MOLYBDENUM	25.60		UG/L	287.00	295.00	10.00	X
MW-2	W02DDL	2/2/1999	IM40MB	MOLYBDENUM	26.30	J	UG/L	287.00	295.00	10.00	X
MW-46	W46M2A	3/30/1999	IM40MB	MOLYBDENUM	48.90		UG/L	55.00	65.00	10.00	X
MW-46	W46M2L	3/30/1999	IM40MB	MOLYBDENUM	51.00		UG/L	55.00	65.00	10.00	X
MW-46	W46M2A	8/24/1999	IM40MB	MOLYBDENUM	17.40		UG/L	55.00	65.00	10.00	X
MW-46	W46M1A	3/29/1999	IM40MB	MOLYBDENUM	32.80		UG/L	102.00	112.00	10.00	X
MW-46	W46DDA	4/1/1999	IM40MB	MOLYBDENUM	17.20		UG/L	135.00	145.00	10.00	X
MW-47	W47M3A	3/29/1999	IM40MB	MOLYBDENUM	43.10		UG/L	21.00	31.00	10.00	X
MW-47	W47M3L	3/29/1999	IM40MB	MOLYBDENUM	40.50		UG/L	21.00	31.00	10.00	X
MW-47	W47M2A	3/26/1999	IM40MB	MOLYBDENUM	11.00		UG/L	38.00	48.00	10.00	X

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TABLE 3
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1997 THROUGH NOVEMBER 1999

LOCID/WELL ID	OGDEN_ID	SAMPLED	METHOD	OGDEN_ANALYTE	CONC.	FLAG	UNITS	BWTS	BWTE	MCL/HA	>MCL/HA
MW-5	W05DDA	2/13/1998	IM40MB	MOLYBDENUM	28.30		UG/L	220.00	225.00	10.00	X
MW-5	W05DDL	2/13/1998	IM40MB	MOLYBDENUM	26.60		UG/L	220.00	225.00	10.00	X
MW-50	W50M2A	4/26/1999	IM40MB	MOLYBDENUM	20.60		UG/L	59.00	69.00	10.00	X
MW-50	W50M1A	4/27/1999	IM40MB	MOLYBDENUM	11.80		UG/L	90.00	100.00	10.00	X
MW-52	W52M3A	4/7/1999	IM40MB	MOLYBDENUM	72.60		UG/L	26.00	36.00	10.00	X
MW-52	W52M3L	4/7/1999	IM40MB	MOLYBDENUM	67.60		UG/L	26.00	36.00	10.00	X
MW-52	W52M2A	4/29/1999	IM40MB	MOLYBDENUM	15.30		UG/L	74.00	84.00	10.00	X
MW-52	W52M2L	4/29/1999	IM40MB	MOLYBDENUM	18.50		UG/L	74.00	84.00	10.00	X
MW-52	W52DDA	4/2/1999	IM40MB	MOLYBDENUM	51.10		UG/L	219.00	229.00	10.00	X
MW-52	W52DDL	4/2/1999	IM40MB	MOLYBDENUM	48.90		UG/L	219.00	229.00	10.00	X
MW-53	W53SSA	2/17/1999	IM40MB	MOLYBDENUM	24.90		UG/L	0.00	10.00	10.00	X
MW-53	W53SSL	2/17/1999	IM40MB	MOLYBDENUM	27.60		UG/L	0.00	10.00	10.00	X
MW-53	W53M1A	5/3/1999	IM40MB	MOLYBDENUM	122.00		UG/L	100.00	110.00	10.00	X
MW-53	W53M1L	5/3/1999	IM40MB	MOLYBDENUM	132.00		UG/L	100.00	110.00	10.00	X
MW-53	W53DDA	2/18/1999	IM40MB	MOLYBDENUM	15.90		UG/L	157.00	167.00	10.00	X
MW-53	W53DDL	2/18/1999	IM40MB	MOLYBDENUM	17.40		UG/L	157.00	167.00	10.00	X
MW-54	W54SSA	4/30/1999	IM40MB	MOLYBDENUM	56.70		UG/L	0.00	10.00	10.00	X
MW-54	W54SSL	4/30/1999	IM40MB	MOLYBDENUM	66.20		UG/L	0.00	10.00	10.00	X
MW-54	W54M2A	5/4/1999	IM40MB	MOLYBDENUM	11.20		UG/L	58.00	68.00	10.00	X
MW-54	W54M2L	5/4/1999	IM40MB	MOLYBDENUM	13.10		UG/L	58.00	68.00	10.00	X
MW-54	W54M1A	4/30/1999	IM40MB	MOLYBDENUM	11.80		UG/L	80.00	90.00	10.00	X
MW-54	W54DDA	5/5/1999	IM40MB	MOLYBDENUM	17.50		UG/L	126.00	136.00	10.00	X
MW-55	W55SSA	5/17/1999	IM40MB	MOLYBDENUM	15.90		UG/L	0.00	10.00	10.00	X
MW-55	W55M2A	5/14/1999	IM40MB	MOLYBDENUM	21.80		UG/L	60.00	70.00	10.00	X
MW-55	W55M1A	5/13/1999	IM40MB	MOLYBDENUM	12.50		UG/L	90.00	100.00	10.00	X
MW-55	W55DDA	5/13/1999	IM40MB	MOLYBDENUM	22.60		UG/L	120.00	130.00	10.00	X
15MW0002	15MW0002	4/8/1999	IM40MB	SODIUM	37,600.00		UG/L	0.00	10.00	20,000.00	X
90WT0015	90WT0015	4/23/1999	IM40MB	SODIUM	34,300.00		UG/L	0.00	10.00	20,000.00	X
MW-16	W16SSA	11/17/1997	IM40MB	SODIUM	20,900.00		UG/L	0.00	10.00	20,000.00	X
MW-16	W16SSL	11/17/1997	IM40MB	SODIUM	20,400.00		UG/L	0.00	10.00	20,000.00	X
MW-2	W02SSA	2/23/1998	IM40MB	SODIUM	27,200.00		UG/L	0.00	10.00	20,000.00	X
MW-2	W02SSL	2/23/1998	IM40MB	SODIUM	26,300.00		UG/L	0.00	10.00	20,000.00	X
MW-2	W02SSA	2/1/1999	IM40MB	SODIUM	20,300.00		UG/L	0.00	10.00	20,000.00	X
MW-2	W02SSL	2/1/1999	IM40MB	SODIUM	20,100.00		UG/L	0.00	10.00	20,000.00	X
MW-2	W02DDA	11/19/1997	IM40MB	SODIUM	21,500.00		UG/L	287.00	295.00	20,000.00	X

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1997 THROUGH NOVEMBER 1999

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MW-2	W02DDL	11/19/1997	IM40MB	SODIUM	22,600.00		UG/L	287.00	295.00	20,000.00	X
MW-21	W21SSA	10/24/1997	IM40MB	SODIUM	24,000.00		UG/L	0.00	10.00	20,000.00	X
MW-21	W21SSL	10/24/1997	IM40MB	SODIUM	24,200.00		UG/L	0.00	10.00	20,000.00	X
MW-46	W46SSA	8/25/1999	IM40MB	SODIUM	20,600.00		UG/L	22.00	32.00	20,000.00	X
MW-46	W46M2A	3/30/1999	IM40MB	SODIUM	23,300.00		UG/L	55.00	65.00	20,000.00	X
MW-46	W46M2L	3/30/1999	IM40MB	SODIUM	24,400.00		UG/L	55.00	65.00	20,000.00	X
SDW261160	WG160L	1/7/1998	IM40MB	SODIUM	20,600.00		UG/L	0.00	0.00	20,000.00	X
SDW261160	WG160A	1/13/1999	IM40MB	SODIUM	27,200.00		UG/L	0.00	0.00	20,000.00	X
SDW261160	WG160L	1/13/1999	IM40MB	SODIUM	28,200.00		UG/L	0.00	0.00	20,000.00	X
03MW0006	03MW0006	4/15/1999	IM40MB	THALLIUM	2.60	J	UG/L	0.00	10.00	2.00	X
03MW0022A	03MW0022A	4/16/1999	IM40MB	THALLIUM	3.90		UG/L	71.00	76.00	2.00	X
03MW0027A	03MW0027A	4/14/1999	IM40MB	THALLIUM	2.00	J	UG/L	64.00	69.00	2.00	X
11MW0004	11MW0004	4/16/1999	IM40MB	THALLIUM	2.30	J	UG/L	0.00	10.00	2.00	X
27MW0020Z	27MW0020Z	4/16/1999	IM40MB	THALLIUM	2.70	J	UG/L	98.00	103.00	2.00	X
90MW0038	90MW0038	4/21/1999	IM40MB	THALLIUM	4.40	J	UG/L	29.00	34.00	2.00	X
90WT0010	WF10XA	1/16/1998	IM40MB	THALLIUM	6.50	J	UG/L	2.00	12.00	2.00	X
LRWS1-4	WL14XA	1/7/1999	IM40MB	THALLIUM	5.20	J	UG/L	107.00	117.00	2.00	X
MW-18	W18SSA	3/12/1999	IM40MB	THALLIUM	2.30	J	UG/L	0.00	10.00	2.00	X
MW-19	W19DDL	2/11/1999	IM40MB	THALLIUM	3.10	J	UG/L	251.00	256.00	2.00	X
MW-21	W21SSA	10/24/1997	IM40MB	THALLIUM	6.90	J	UG/L	0.00	10.00	2.00	X
MW-38	W38M4A	8/18/1999	IM40MB	THALLIUM	2.80	J	UG/L	15.00	25.00	2.00	X
MW-38	W38M2A	5/11/1999	IM40MB	THALLIUM	4.90	J	UG/L	70.00	80.00	2.00	X
MW-41	W41M2A	4/2/1999	IM40MB	THALLIUM	2.50	J	UG/L	69.00	79.00	2.00	X
MW-45	W45SSA	5/26/1999	IM40MB	THALLIUM	3.00	J	UG/L	0.00	10.00	2.00	X
MW-47	W47M3A	8/25/1999	IM40MB	THALLIUM	3.20	J	UG/L	21.00	31.00	2.00	X
MW-47	W47M2A	3/26/1999	IM40MB	THALLIUM	3.20	J	UG/L	38.00	48.00	2.00	X
MW-47	W47M2A	8/25/1999	IM40MB	THALLIUM	4.00	J	UG/L	38.00	48.00	2.00	X
MW-47	W47M1A	8/24/1999	IM40MB	THALLIUM	2.60	J	UG/L	75.00	85.00	2.00	X
MW-51	W51M3A	8/25/1999	IM40MB	THALLIUM	4.30	J	UG/L	29.00	39.00	2.00	X
MW-52	W52SSA	8/26/1999	IM40MB	THALLIUM	3.60	J	UG/L	0.00	10.00	2.00	X
MW-52	W52M3L	4/7/1999	IM40MB	THALLIUM	3.60	J	UG/L	26.00	36.00	2.00	X
MW-52	W52DDA	4/2/1999	IM40MB	THALLIUM	2.80	J	UG/L	219.00	229.00	2.00	X
MW-52	W52DDL	4/2/1999	IM40MB	THALLIUM	2.60	J	UG/L	219.00	229.00	2.00	X
MW-7	W07MMA	2/23/1999	IM40MB	THALLIUM	4.10	J	UG/L	67.00	72.00	2.00	X
MW-7	W07M2L	2/5/1998	IM40MB	THALLIUM	6.60	J	UG/L	137.00	142.00	2.00	X

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1997 THROUGH NOVEMBER 1999

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MW-7	W07M2A	2/24/1999	IM40MB	THALLIUM	4.40	J	UG/L	137.00	142.00	2.00	X
MW-72	W72SSA	5/27/1999	IM40MB	THALLIUM	4.00		UG/L	0.00	10.00	2.00	X
PPAWSMW-1	PPAWSMW-1	6/22/1999	IM40MB	THALLIUM	3.10	J	UG/L	10.00	20.00	2.00	X
SMR-2	WSMR2A	3/25/1999	IM40MB	THALLIUM	2.00	J	UG/L	0.00	10.00	2.00	X
95-15	W9515A	10/17/1997	IM40MB	ZINC	7,210.00		UG/L	80.00	92.00	2,000.00	X
95-15	W9515L	10/17/1997	IM40MB	ZINC	4,620.00		UG/L	80.00	92.00	2,000.00	X
LRWS3-1	WL31XA	10/21/1997	IM40MB	ZINC	2,480.00		UG/L	102.00	117.00	2,000.00	X
LRWS3-1	WL31XL	10/21/1997	IM40MB	ZINC	2,410.00		UG/L	102.00	117.00	2,000.00	X
LRWS4-1	WL41XA	11/24/1997	IM40MB	ZINC	3,220.00		UG/L	66.00	91.00	2,000.00	X
LRWS4-1	WL41XL	11/24/1997	IM40MB	ZINC	3,060.00		UG/L	66.00	91.00	2,000.00	X
LRWS5-1	WL51DL	11/25/1997	IM40MB	ZINC	4,410.00		UG/L	66.00	91.00	2,000.00	X
LRWS5-1	WL51XA	11/25/1997	IM40MB	ZINC	4,510.00		UG/L	187.00	202.00	2,000.00	X
LRWS5-1	WL51XD	11/25/1997	IM40MB	ZINC	4,390.00		UG/L	187.00	202.00	2,000.00	X
LRWS5-1	WL51XL	11/25/1997	IM40MB	ZINC	3,900.00		UG/L	187.00	202.00	2,000.00	X
LRWS5-1	WL51XA	1/25/1999	IM40MB	ZINC	3,980.00		UG/L	187.00	202.00	2,000.00	X
LRWS5-1	WL51XL	1/25/1999	IM40MB	ZINC	3,770.00		UG/L	187.00	202.00	2,000.00	X
LRWS6-1	WL61XA	11/17/1997	IM40MB	ZINC	3,480.00		UG/L	184.00	199.00	2,000.00	X
LRWS6-1	WL61XL	11/17/1997	IM40MB	ZINC	2,600.00		UG/L	184.00	199.00	2,000.00	X
LRWS6-1	WL61XA	1/28/1999	IM40MB	ZINC	2,240.00		UG/L	184.00	199.00	2,000.00	X
LRWS6-1	WL61XL	1/28/1999	IM40MB	ZINC	2,200.00		UG/L	184.00	199.00	2,000.00	X
LRWS7-1	WL71XA	11/21/1997	IM40MB	ZINC	4,320.00		UG/L	186.00	201.00	2,000.00	X
LRWS7-1	WL71XL	11/21/1997	IM40MB	ZINC	3,750.00		UG/L	186.00	201.00	2,000.00	X
LRWS7-1	WL71XA	1/22/1999	IM40MB	ZINC	4,160.00		UG/L	186.00	201.00	2,000.00	X
LRWS7-1	WL71XL	1/22/1999	IM40MB	ZINC	4,100.00		UG/L	186.00	201.00	2,000.00	X
MW-41	W41M1A	8/19/1999	OC21B	2,6-DINITROTOLUENE	5.00	J	UG/L	110.00	120.00	5.00	X
11MW0003	WF143A	2/25/1998	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	9.00		UG/L	0.00	0.00	6.00	X
15MW0004	15MW0004	4/9/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	6.00		UG/L	0.00	10.00	6.00	X
15MW0008	15MW0008D	4/12/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	25.00	J	UG/L	0.00	0.00	6.00	X
28MW0106	WL28XA	2/19/1998	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	18.00	J	UG/L	0.00	10.00	6.00	X
28MW0106	WL28XA	3/23/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	26.00		UG/L	0.00	10.00	6.00	X
58MW0002	WC2XXA	2/26/1998	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	36.00		UG/L	0.00	0.00	6.00	X
58MW0006E	WC6EXA	10/3/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	59.00		UG/L	0.00	10.00	6.00	X
58MW0006E	WC6EXD	10/3/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	57.00		UG/L	0.00	10.00	6.00	X
58MW0006E	WC6EXA	1/29/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	6.00		UG/L	0.00	10.00	6.00	X
90WT0005	WF05XA	1/13/1998	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	47.00		UG/L	0.00	10.00	6.00	X

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90WT0013	WF13XA	1/16/1998	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	34.00		UG/L	2.00	12.00	6.00	X
90WT0013	WF13XA	1/14/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	16.00		UG/L	2.00	12.00	6.00	X
97-1	W9701A	11/19/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	54.00	J	UG/L	62.00	72.00	6.00	X
97-1	W9701D	11/19/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	28.00	J	UG/L	62.00	72.00	6.00	X
97-2	W9702A	11/20/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	7.00		UG/L	53.00	63.00	6.00	X
97-3	W9703A	11/21/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	73.00	J	UG/L	36.00	46.00	6.00	X
97-5	W9705A	11/20/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	15.00		UG/L	76.00	86.00	6.00	X
BHW215083	WG083A	11/26/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	13.00		UG/L	0.00	0.00	6.00	X
LRWS2-3	WL23XA	11/21/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	20.00	J	UG/L	68.00	83.00	6.00	X
LRWS2-6	WL26XA	10/20/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	21.00		UG/L	75.00	90.00	6.00	X
LRWS4-1	WL41XA	11/24/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	100.00		UG/L	66.00	91.00	6.00	X
LRWS5-1	WL51XA	11/25/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	7.00		UG/L	187.00	202.00	6.00	X
MW-11	W11SSA	11/6/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	33.00	J	UG/L	0.00	10.00	6.00	X
MW-11	W11SSD	11/6/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	23.00	J	UG/L	0.00	10.00	6.00	X
MW-12	W12SSA	11/6/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	28.00		UG/L	0.00	10.00	6.00	X
MW-14	W14SSA	11/4/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	14.00		UG/L	0.00	10.00	6.00	X
MW-16	W16SSA	11/17/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	28.00		UG/L	0.00	10.00	6.00	X
MW-16	W16DDA	11/17/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	43.00		UG/L	108.00	113.00	6.00	X
MW-17	W17SSD	11/10/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	120.00	J	UG/L	0.00	10.00	6.00	X
MW-17	W17DDA	11/11/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	42.00		UG/L	197.00	207.00	6.00	X
MW-18	W18SSA	10/10/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	36.00		UG/L	0.00	10.00	6.00	X
MW-19	W19DDA	3/4/1998	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	7.00		UG/L	251.00	256.00	6.00	X
MW-2	W02M2A	1/20/1998	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	24.00		UG/L	31.00	36.00	6.00	X
MW-2	W02M1A	1/21/1998	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	10.00	J	UG/L	73.00	78.00	6.00	X
MW-2	W02DDA	2/2/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	9.00		UG/L	287.00	295.00	6.00	X
MW-20	W20SSA	11/7/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	280.00		UG/L	0.00	10.00	6.00	X
MW-21	W21M2A	4/1/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	8.00		UG/L	58.00	68.00	6.00	X
MW-22	W22SSA	11/24/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	96.00		UG/L	0.00	10.00	6.00	X
MW-23	W23SSA	10/27/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	24.00		UG/L	0.00	10.00	6.00	X
MW-23	W23M3A	11/13/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	10.00		UG/L	153.00	163.00	6.00	X
MW-23	W23M3D	11/13/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	13.00		UG/L	153.00	163.00	6.00	X
MW-24	W24SSA	11/14/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	8.00		UG/L	0.00	10.00	6.00	X
MW-28	W28SSA	11/3/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	11.00		UG/L	0.00	10.00	6.00	X
MW-29	W29SSA	11/3/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	16.00		UG/L	0.00	10.00	6.00	X
MW-36	W36M2A	8/17/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	8.00		UG/L	59.00	69.00	6.00	X

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BWTE = DEPTH BELOW WATER TABLE, END DEPTH, MEASURED IN FEET
MCL/HA = EITHER THE MCL OR LOWEST HEALTH ADVISORY CONCENTRATION (CHILD, ADULT OR LIFETIME)
>MCL/HA = EQUALS OR EXCEEDS EITHER THE MCL OR LOWEST HEALTH ADVISORY CONCENTRATION (CHILD, ADULT, OR LIFETIME)

TABLE 3
VALIDATED DETECTS EXCEEDING MCLs OR HEALTH ADVISORY LIMITS
1997 THROUGH NOVEMBER 1999

LOCID/WELL ID	OGDEN_ID	SAMPLED	METHOD	OGDEN_ANALYTE	CONC.	FLAG	UNITS	BWTS	BWTE	MCL/HA	>MCL/HA
MW-38	W38M3A	5/6/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	15.00		UG/L	53.00	63.00	6.00	X
MW-4	W04SSA	11/4/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	30.00		UG/L	0.00	10.00	6.00	X
MW-43	W43M1A	5/26/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	6.00		UG/L	93.00	103.00	6.00	X
MW-45	W45M1A	5/24/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	37.00		UG/L	98.00	108.00	6.00	X
MW-47	W47M1A	8/24/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	14.00		UG/L	75.00	85.00	6.00	X
MW-47	W47DDA	8/24/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	16.00		UG/L	100.00	110.00	6.00	X
MW-5	W05DDA	2/13/1998	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	9.00	J	UG/L	220.00	225.00	6.00	X
MW-53	W53DDA	2/18/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	18.00		UG/L	157.00	167.00	6.00	X
MW-55	W55DDA	5/13/1999	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	8.00		UG/L	120.00	130.00	6.00	X
MW-7	W07SSA	10/31/1997	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	10.00		UG/L	0.00	10.00	6.00	X
RW-1	WRW1XA	2/18/1998	OC21B	BIS(2-ETHYLHEXYL) PHTHALAT	59.00		UG/L	0.00	9.00	6.00	X
MW-45	W45SSA	5/26/1999	OC21B	NAPHTHALENE	24.00		UG/L	0.00	10.00	20.00	X
03MW0007A	03MW0007A	4/13/1999	OC21V	TETRACHLOROETHYLENE(PCE	6.00		UG/L	21.00	26.00	5.00	X
03MW0014A	03MW0014A	4/13/1999	OC21V	TETRACHLOROETHYLENE(PCE	8.00		UG/L	38.00	43.00	5.00	X
03MW0020	03MW0020	4/14/1999	OC21V	TETRACHLOROETHYLENE(PCE	12.00		UG/L	36.00	41.00	5.00	X
27MW0017B	27MW0017B	4/30/1999	OC21V	VINYL CHLORIDE	2.00		UG/L	21.00	26.00	2.00	X
PPAWSMW-1	PPAWSMW-1	6/22/1999	OL21P	DIELDRIN	3.00		UG/L	10.00	20.00	0.50	X

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>MCL/HA = EQUALS OR EXCEEDS EITHER THE MCL OR LOWEST HEALTH ADVISORY CONCENTRATION (CHILD, ADULT, OR LIFETIME)

TABLE 4
DETECTED COMPOUNDS IN RUSH DATA
(UNVALIDATED)
SAMPLES COLLECTED 10/18/99-11/30/99

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G57DCE	FIELDQC	11/1/1999	FIELDQC	0.00	0.00			8330N	1,3,5-TRINITROBENZENE	NO
27MW0017B	27MW0017B	11/5/1999	GROUNDWATER			21.00	26.00	8330N	PICRIC ACID	NO
90LWA0007	90LWA0007	11/15/1999	GROUNDWATER			0.00	10.00	8330N	2-NITROTOLUENE	NO
90LWA0007	90LWA0007	11/15/1999	GROUNDWATER			0.00	10.00	8330N	3-NITROTOLUENE	NO
90LWA0007	90LWA0007	11/15/1999	GROUNDWATER			0.00	10.00	8330N	4-NITROTOLUENE	NO
90LWA0007	90LWA0007	11/15/1999	GROUNDWATER			0.00	10.00	8330N	NITROGLYCERIN	NO
90LWA0007	90LWA0007	11/15/1999	GROUNDWATER			0.00	10.00	8330N	PICRIC ACID	NO
PPAWSMW-1	PPAWSMW-1	10/28/1999	GROUNDWATER			10.00	20.00	8330N	1,3,5-TRINITROBENZENE	NO
PPAWSMW-2	PPAWSMW-2	10/28/1999	GROUNDWATER			0.00	10.00	8330N	1,3,5-TRINITROBENZENE	NO
PPAWSPW-1	PPAWSPW-1	10/28/1999	GROUNDWATER			158.00	178.00	8330N	1,3,5-TRINITROBENZENE	NO
PPAWSPW-2	PPAWSPW-2	10/28/1999	GROUNDWATER			85.00	105.00	8330N	1,3,5-TRINITROBENZENE	NO
PPAWSPW-2D	PPAWSPW-2	10/28/1999	GROUNDWATER			85.00	105.00	8330N	1,3,5-TRINITROBENZENE	NO
W35M2A	MW-35	10/28/1999	GROUNDWATER			14.00	24.00	8330N	1,3,5-TRINITROBENZENE	NO
W38M3A	MW-38	11/10/1999	GROUNDWATER			53.00	63.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W38M4A	MW-38	11/11/1999	GROUNDWATER			15.00	25.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W39M2A	MW-39	11/10/1999	GROUNDWATER			42.00	52.00	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
W43M2A	MW-43	11/18/1999	GROUNDWATER			70.00	80.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W45SSA	MW-45	11/16/1999	GROUNDWATER			0.00	10.00	8330N	3-NITROTOLUENE	NO
W45SSA	MW-45	11/16/1999	GROUNDWATER			0.00	10.00	8330N	4-NITROTOLUENE	NO
W45SSA	MW-45	11/16/1999	GROUNDWATER			0.00	10.00	8330N	NITROGLYCERIN	NO
W45SSA	MW-45	11/16/1999	GROUNDWATER			0.00	10.00	8330N	PENTAERYTHRITOL TETRANITR/	NO
W45SSA	MW-45	11/16/1999	GROUNDWATER			0.00	10.00	8330N	PICRIC ACID	NO
W53DDA	MW-53	11/5/1999	GROUNDWATER			157.00	167.00	8330N	PENTAERYTHRITOL TETRANITR/	NO
W54DDA	MW-54	11/5/1999	GROUNDWATER			126.00	136.00	8330N	1,3,5-TRINITROBENZENE	NO
W59SSA	MW-59	11/22/1999	GROUNDWATER			0.00	10.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W59SSA	MW-59	11/22/1999	GROUNDWATER			0.00	10.00	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
W65M2A	MW-65	10/28/1999	GROUNDWATER			8.00	13.00	8330N	1,3,5-TRINITROBENZENE	NO
W70M2A	MW-70	10/28/1999	GROUNDWATER			5.00	15.00	8330N	1,3,5-TRINITROBENZENE	NO
W73SSA	MW-73	11/2/1999	GROUNDWATER			0.00	10.00	8330N	2-AMINO-4,6-DINITROTOLUENE	YES
W73SSA	MW-73	11/2/1999	GROUNDWATER			0.00	10.00	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
W73SSA	MW-73	11/2/1999	GROUNDWATER			0.00	10.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W73SSA	MW-73	11/2/1999	GROUNDWATER			0.00	10.00	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES

DATA REPORTED REFLECT CURRENT DATABASE FOR SAMPLES COLLECTED IN SPECIFIED TIMEFRAME. NOT ALL RESULTS ARE COMPLETE.
SBD = SAMPLE COLLECTION BEGIN DEPTH IN FEET BGS
SED = SAMPLE COLLECTION END DEPTH IN FEET BGS
BWTS = DEPTH BELOW WATER TABLE, START DEPTH, MEASURED IN FEET
BWTE = DEPTH BELOW WATER TABLE, END DEPTH, MEASURED IN FEET
PDA/YES = Photo Diode Array, Detect Confirmed
PDA/NO = Photo Diode Array, Detect Not Confirmed

TABLE 4
DETECTED COMPOUNDS IN RUSH DATA
(UNVALIDATED)
SAMPLES COLLECTED 10/18/99-11/30/99

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G57DCA	MW-57	11/1/1999	PROFILE	110.00	115.00	22.50	27.50	OC21V	CHLOROFORM	
G57DDA	MW-57	11/1/1999	PROFILE	120.00	125.00	32.50	37.50	OC21V	CHLOROFORM	
G57DDA	MW-57	11/1/1999	PROFILE	120.00	125.00	32.50	37.50	OC21V	TETRACHLOROETHYLENE(PCE)	
G57DEA	MW-57	11/1/1999	PROFILE	130.00	135.00	42.50	47.50	OC21V	CHLOROFORM	
G57DEA	MW-57	11/1/1999	PROFILE	130.00	135.00	42.50	47.50	OC21V	TETRACHLOROETHYLENE(PCE)	
G57DEA	MW-57	11/1/1999	PROFILE	130.00	135.00	42.50	47.50	OC21V	TOLUENE	
G57DFA	MW-57	11/1/1999	PROFILE	140.00	145.00	52.50	57.50	OC21V	CHLOROFORM	
G57DFA	MW-57	11/1/1999	PROFILE	140.00	145.00	52.50	57.50	OC21V	TETRACHLOROETHYLENE(PCE)	
G57DGA	MW-57	11/1/1999	PROFILE	150.00	155.00	62.50	67.50	OC21V	1,1,1-TRICHLOROETHANE	
G57DGA	MW-57	11/1/1999	PROFILE	150.00	155.00	62.50	67.50	OC21V	CHLOROFORM	
G57DGA	MW-57	11/1/1999	PROFILE	150.00	155.00	62.50	67.50	OC21V	TETRACHLOROETHYLENE(PCE)	
G57DHA	MW-57	11/1/1999	PROFILE	160.00	165.00	72.50	77.50	OC21V	CHLOROFORM	
G57DHA	MW-57	11/1/1999	PROFILE	160.00	165.00	72.50	77.50	OC21V	TETRACHLOROETHYLENE(PCE)	
G57DIA	MW-57	11/2/1999	PROFILE	170.00	175.00	82.50	87.50	OC21V	CHLOROFORM	
G57DIA	MW-57	11/2/1999	PROFILE	170.00	175.00	82.50	87.50	OC21V	TETRACHLOROETHYLENE(PCE)	
G57DJA	MW-57	11/2/1999	PROFILE	180.00	185.00	92.50	97.50	OC21V	CHLOROFORM	
G57DKA	MW-57	11/2/1999	PROFILE	190.00	195.00	102.50	107.50	OC21V	CHLOROFORM	
G57DKA	MW-57	11/2/1999	PROFILE	190.00	195.00	102.50	107.50	OC21V	TRICHLOROETHYLENE (TCE)	
G57DLA	MW-57	11/2/1999	PROFILE	200.00	205.00	112.50	117.50	OC21V	CHLOROFORM	
G57DMA	MW-57	11/2/1999	PROFILE	210.00	215.00	122.50	127.50	OC21V	CHLOROFORM	
G57DNA	MW-57	11/3/1999	PROFILE	220.00	225.00	132.50	137.50	OC21V	CHLOROFORM	
G57DOA	MW-57	11/3/1999	PROFILE	230.00	235.00	142.50	147.50	OC21V	CHLOROFORM	
G57DSA	MW-57	11/3/1999	PROFILE	270.00	275.00	182.50	187.50	OC21V	CHLOROFORM	
G57DTA	MW-57	11/4/1999	PROFILE	280.00	285.00	192.50	197.50	OC21V	BROMOCHLOROMETHANE	
G57DUA	MW-57	11/4/1999	PROFILE	290.00	295.00	202.50	207.50	OC21V	CHLOROFORM	
G75MAA	MW-75	11/18/1999	PROFILE	100.00	100.00	17.00	17.00	8330N	3-NITROTOLUENE	NO
G75MAA	MW-75	11/18/1999	PROFILE	100.00	100.00	17.00	17.00	8330N	NITROGLYCERIN	NO
G75MAA	MW-75	11/18/1999	PROFILE	100.00	100.00	17.00	17.00	8330N	PICRIC ACID	NO
G75MBA	MW-75	11/18/1999	PROFILE	110.00	110.00	27.00	27.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G75MBD	MW-75	11/18/1999	PROFILE	110.00	110.00	27.00	27.00	8330N	3-NITROTOLUENE	NO
G75MBD	MW-75	11/18/1999	PROFILE	110.00	110.00	27.00	27.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G75MCA	MW-75	11/18/1999	PROFILE	120.00	120.00	37.00	37.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES

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TABLE 4
DETECTED COMPOUNDS IN RUSH DATA
(UNVALIDATED)
SAMPLES COLLECTED 10/18/99-11/30/99

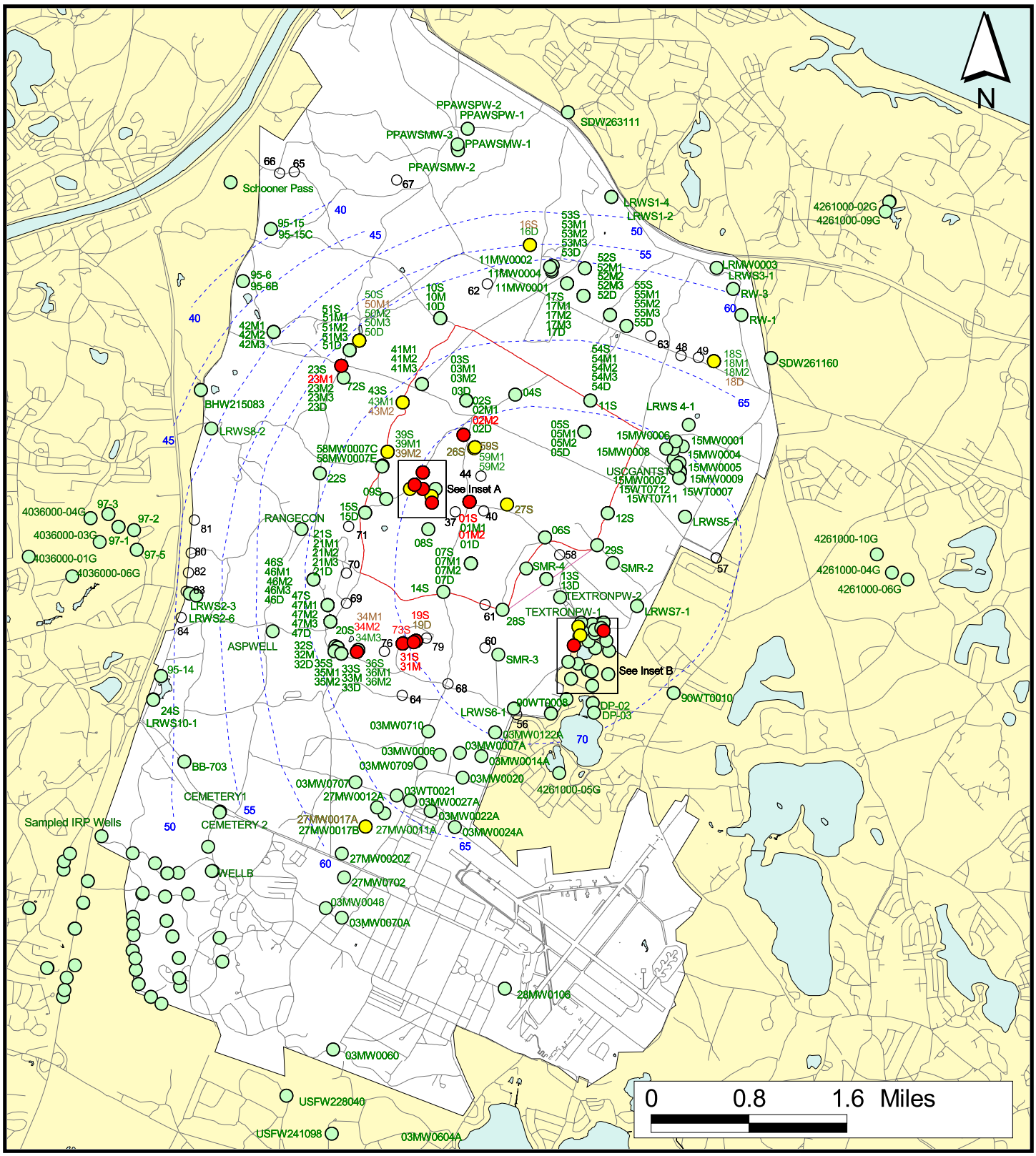
OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G75MDA	MW-75	11/18/1999	PROFILE	130.00	130.00	47.00	47.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G75MJA	MW-75	11/18/1999	PROFILE	190.00	190.00	107.00	107.00	8330N	3-NITROTOLUENE	NO
G77MAA	MW-77	11/8/1999	PROFILE	90.00	90.00	5.50	5.50	8330N	1,3,5-TRINITROBENZENE	NO
G77MAA	MW-77	11/8/1999	PROFILE	90.00	90.00	5.50	5.50	8330N	1,3-DINITROBENZENE	NO
G77MAA	MW-77	11/8/1999	PROFILE	90.00	90.00	5.50	5.50	8330N	2,6-DINITROTOLUENE	YES
G77MAA	MW-77	11/8/1999	PROFILE	90.00	90.00	5.50	5.50	8330N	NITROGLYCERIN	NO
G77MAA	MW-77	11/8/1999	PROFILE	90.00	90.00	5.50	5.50	8330N	PENTAERYTHRITOL TETRANITR/	NO
G77MAA	MW-77	11/8/1999	PROFILE	90.00	90.00	5.50	5.50	8330N	PICRIC ACID	NO
G77MBA	MW-77	11/8/1999	PROFILE	100.00	100.00	15.50	15.50	8330N	1,3,5-TRINITROBENZENE	NO
G77MBA	MW-77	11/8/1999	PROFILE	100.00	100.00	15.50	15.50	8330N	1,3-DINITROBENZENE	NO
G77MBA	MW-77	11/8/1999	PROFILE	100.00	100.00	15.50	15.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	NO
G77MBA	MW-77	11/8/1999	PROFILE	100.00	100.00	15.50	15.50	8330N	NITROGLYCERIN	NO
G77MCA	MW-77	11/8/1999	PROFILE	110.00	110.00	25.50	25.50	8330N	1,3-DINITROBENZENE	NO
G77MCA	MW-77	11/8/1999	PROFILE	110.00	110.00	25.50	25.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G77MCA	MW-77	11/8/1999	PROFILE	110.00	110.00	25.50	25.50	8330N	NITROGLYCERIN	NO
G77MCA	MW-77	11/8/1999	PROFILE	110.00	110.00	25.50	25.50	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G77MCA	MW-77	11/8/1999	PROFILE	110.00	110.00	25.50	25.50	8330N	PICRIC ACID	NO
G77MDA	MW-77	11/9/1999	PROFILE	120.00	120.00	35.50	35.50	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
G77MDA	MW-77	11/9/1999	PROFILE	120.00	120.00	35.50	35.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G77MDA	MW-77	11/9/1999	PROFILE	120.00	120.00	35.50	35.50	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G77MDD	MW-77	11/9/1999	PROFILE	120.00	120.00	35.50	35.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G77MDD	MW-77	11/9/1999	PROFILE	120.00	120.00	35.50	35.50	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G77MEA	MW-77	11/9/1999	PROFILE	130.00	130.00	45.50	45.50	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
G77MEA	MW-77	11/9/1999	PROFILE	130.00	130.00	45.50	45.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G77MEA	MW-77	11/9/1999	PROFILE	130.00	130.00	45.50	45.50	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G77MFA	MW-77	11/9/1999	PROFILE	140.00	140.00	55.50	55.50	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
G77MGA	MW-77	11/9/1999	PROFILE	150.00	150.00	65.50	65.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G77MGA	MW-77	11/9/1999	PROFILE	150.00	150.00	65.50	65.50	8330N	NITROGLYCERIN	NO
G77MGA	MW-77	11/9/1999	PROFILE	150.00	150.00	65.50	65.50	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G77MHA	MW-77	11/9/1999	PROFILE	160.00	160.00	75.50	75.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G77MHA	MW-77	11/9/1999	PROFILE	160.00	160.00	75.50	75.50	8330N	NITROGLYCERIN	NO
G77MIA	MW-77	11/9/1999	PROFILE	170.00	170.00	85.50	85.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES

DATA REPORTED REFLECT CURRENT DATABASE FOR SAMPLES COLLECTED IN SPECIFIED TIMEFRAME. NOT ALL RESULTS ARE COMPLETE.
SBD = SAMPLE COLLECTION BEGIN DEPTH IN FEET BGS
SED = SAMPLE COLLECTION END DEPTH IN FEET BGS
BWTS = DEPTH BELOW WATER TABLE, START DEPTH, MEASURED IN FEET
BWTE = DEPTH BELOW WATER TABLE, END DEPTH, MEASURED IN FEET
PDA/YES = Photo Diode Array, Detect Confirmed
PDA/NO = Photo Diode Array, Detect Not Confirmed

TABLE 4
DETECTED COMPOUNDS IN RUSH DATA
(UNVALIDATED)
SAMPLES COLLECTED 10/18/99-11/30/99

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G77MIA	MW-77	11/9/1999	PROFILE	170.00	170.00	85.50	85.50	8330N	NITROGLYCERIN	NO
G77MKA	MW-77	11/9/1999	PROFILE	190.00	190.00	105.50	105.50	8330N	NITROGLYCERIN	NO
G77MKA	MW-77	11/9/1999	PROFILE	190.00	190.00	105.50	105.50	8330N	PICRIC ACID	NO
DEMO2PE1	DEMO2PE1	11/5/1999	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
DEMO2PE1	DEMO2PE1	11/5/1999	SOIL GRID	0.00	0.25			8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
DEMO2PE2	DEMO2PE2	11/5/1999	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
DEMO2PE3	DEMO2PE3	11/5/1999	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES

DATA REPORTED REFLECT CURRENT DATABASE FOR SAMPLES COLLECTED IN SPECIFIED TIMEFRAME. NOT ALL RESULTS ARE COMPLETE.
SBD = SAMPLE COLLECTION BEGIN DEPTH IN FEET BGS
SED = SAMPLE COLLECTION END DEPTH IN FEET BGS
BWTS = DEPTH BELOW WATER TABLE, START DEPTH, MEASURED IN FEET
BWTE = DEPTH BELOW WATER TABLE, END DEPTH, MEASURED IN FEET
PDA/YES = Photo Diode Array, Detect Confirmed
PDA/NO = Photo Diode Array, Detect Not Confirmed



Sources & Notes

Map Coordinates: Stateplane, NAD83, Zone 4151, Meters
Source: MASSGIS

Legend

- Validated Detection GTE MCL/HA
- Validated Detection LT MCL/HA
- Validated Non-detect
- No Data Available

Figure 1
Explosives in Groundwater
Compared to MCL/HAs
Validated Data As Of 12/02/99

Analyte Group
1

December 08, 1999 DRAFT

L:\MMR\GIS\December99\Monthly Maps\Expl GTE MCL\HA

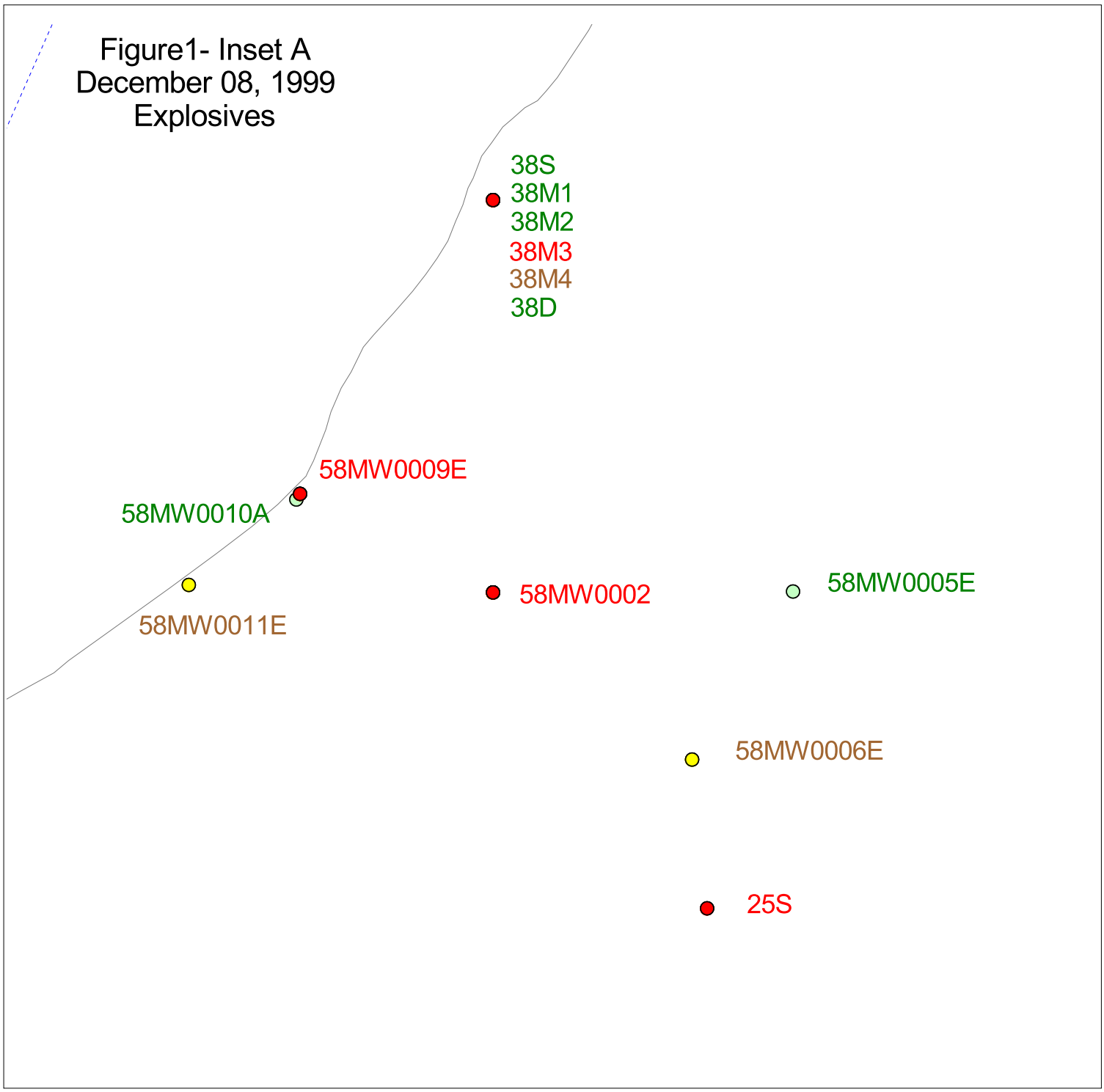


Figure1- Inset A
December 08, 1999
Explosives
38S
38M1
38M2
38M3
38M4
38D
58MW0009E
58MW0010A
58MW0011E
58MW0002
58MW0005E
58MW0006E
25S

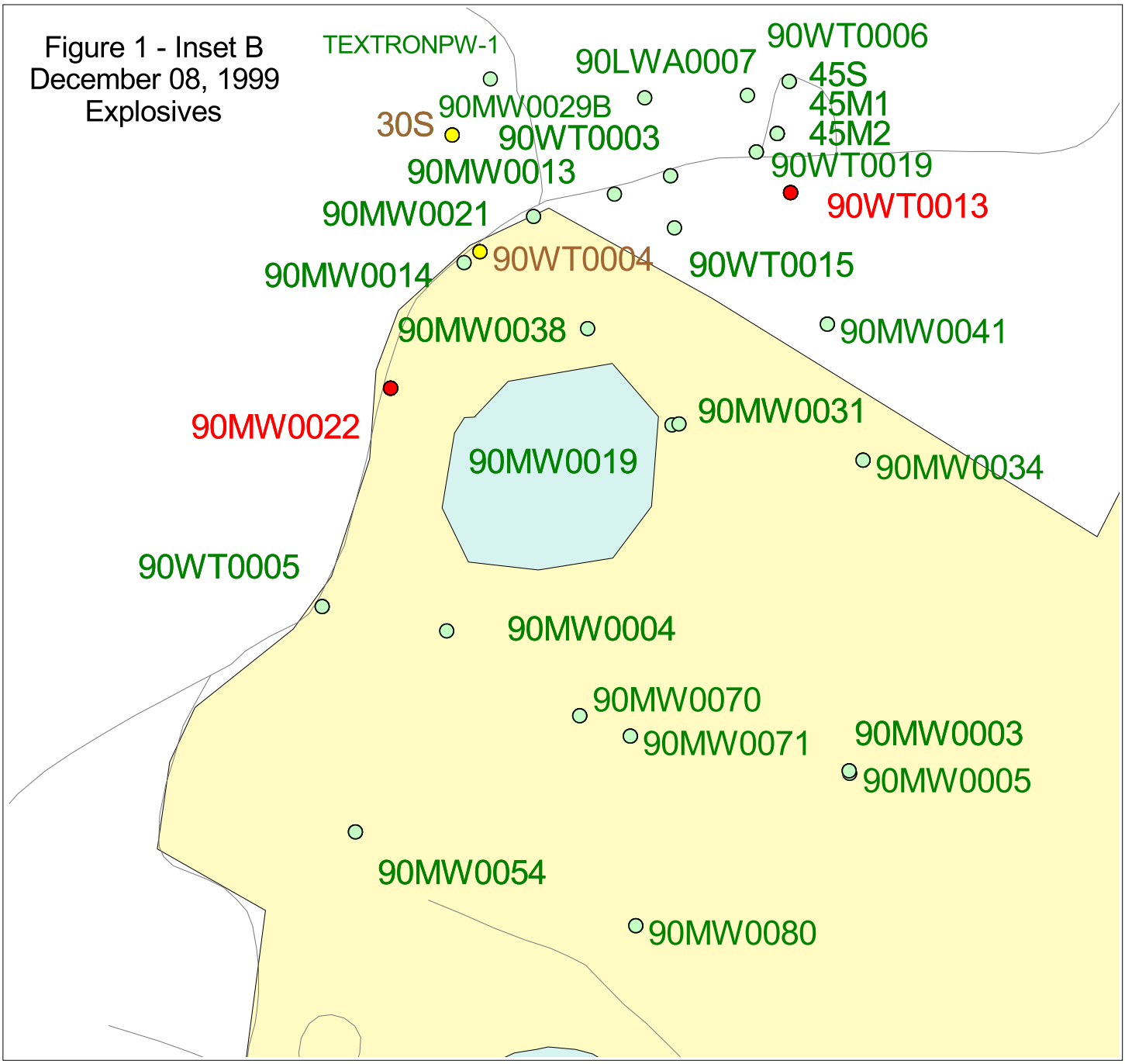
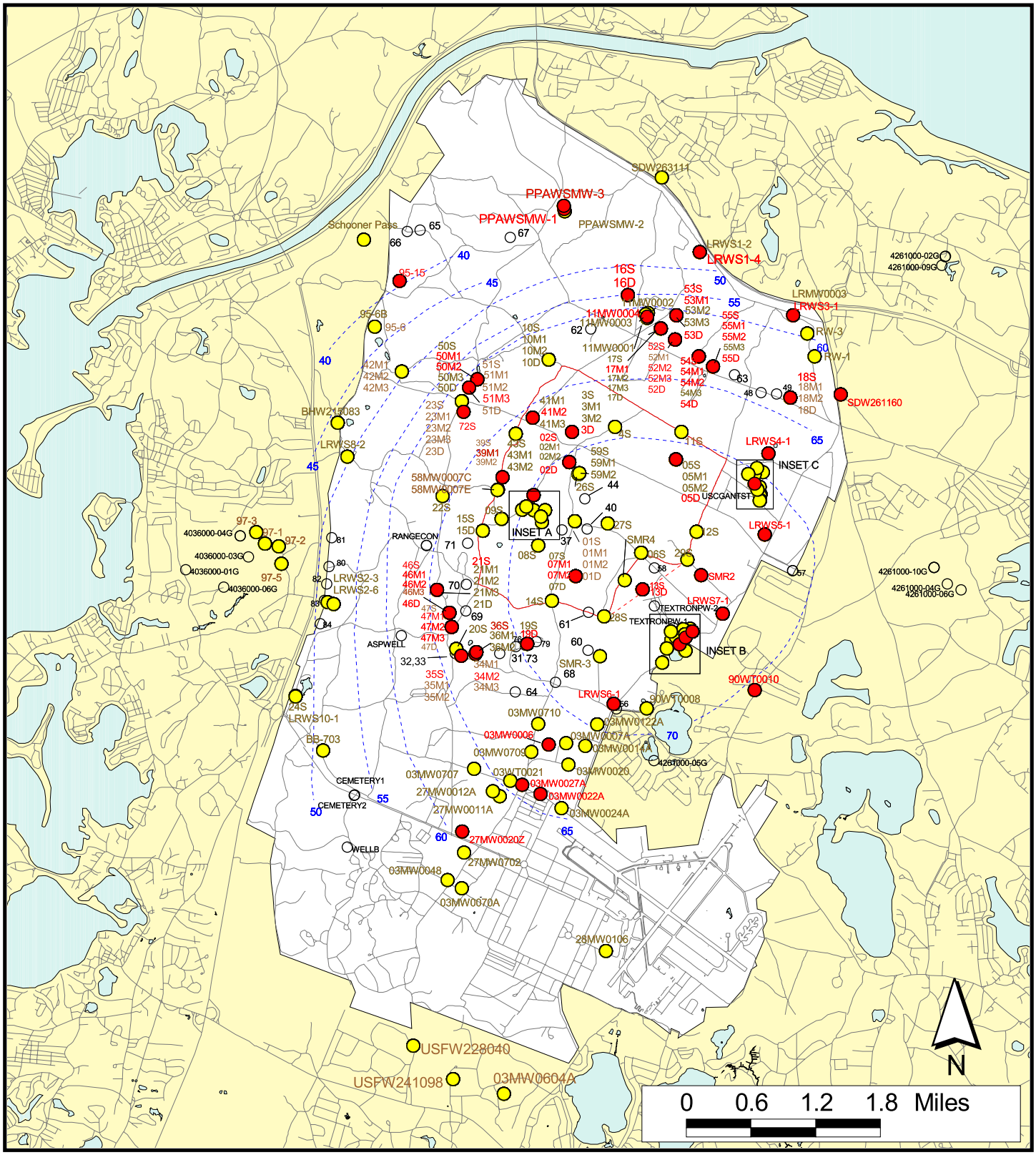


Figure 1 - Inset B
December 08, 1999
Explosives
TEXTRONPW-1
90LWA0007
90WT0006
45S
45M1
45M2
90WT0019
90WT0013
30S
90MW0029B
90WT0003
90MW0013
90MW0021
90WT0004
90WT0015
90MW0014
90MW0038
90MW0041
90MW0022
90MW0031
90MW0019
90MW0034
90WT0005
90MW0004
90MW0070
90MW0071
90MW0003
90MW0005
90MW0054
90MW0080



Sources & Notes

Map Coordinates: Stateplane, NAD83, Zone 4151, Meters
Source: MASSGIS

Legend

- Validated Detection GTE MCL/HA
- Validated Detection LT MCL/HA
- Validated Non-detect
- No Data Available

Figure 2
Metals in Groundwater Compared to MCL/HAs Validated Data As Of 12/02/99

Analyte Group
2

December 08, 1999 DRAFT

L:\MMR\GIS\December99\Monthly Maps\Metal MCL Detects - 1999 Data

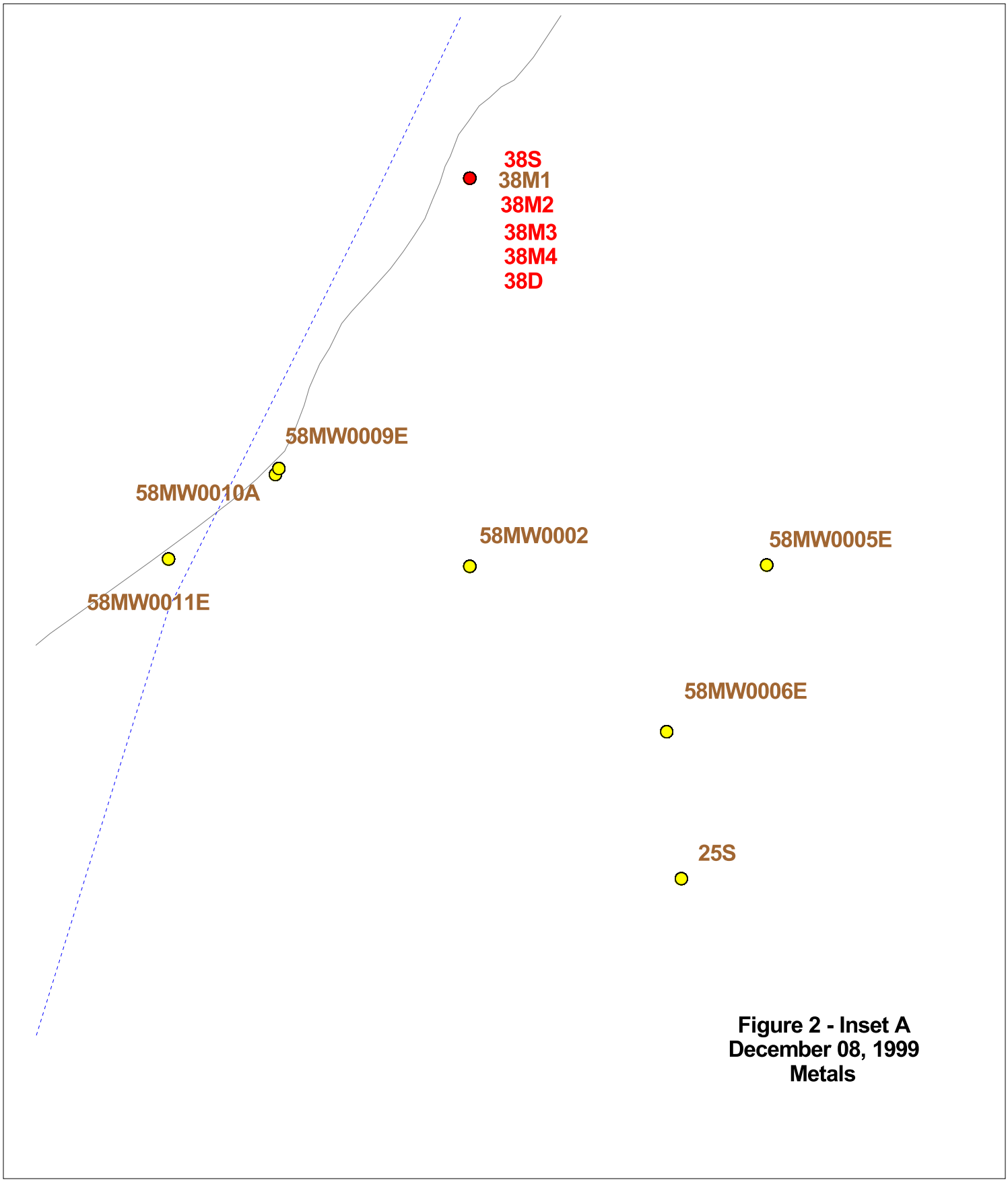


Figure 2 - Inset A
December 08, 1999
Metals

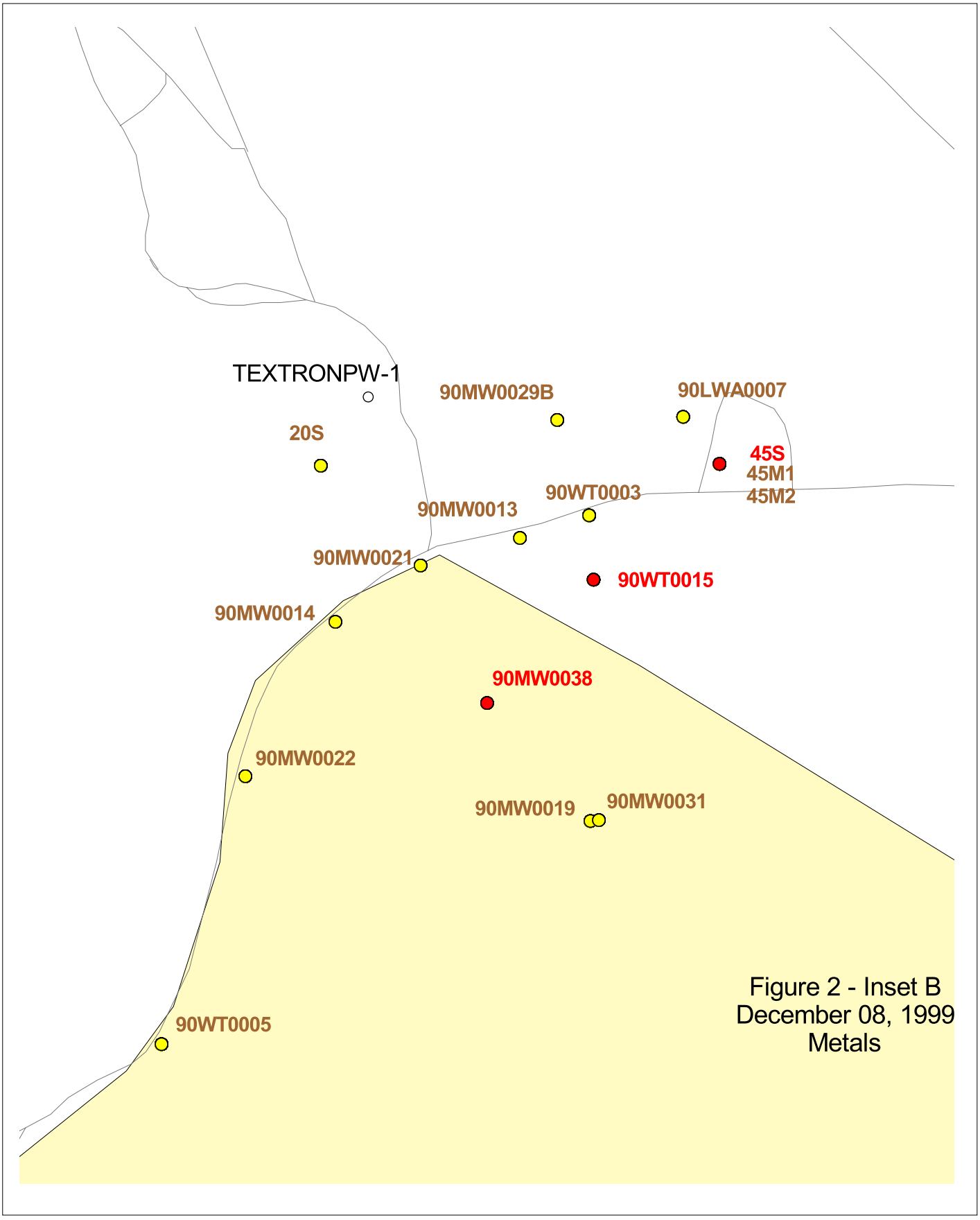


Figure 2 - Inset B
December 08, 1999
Metals

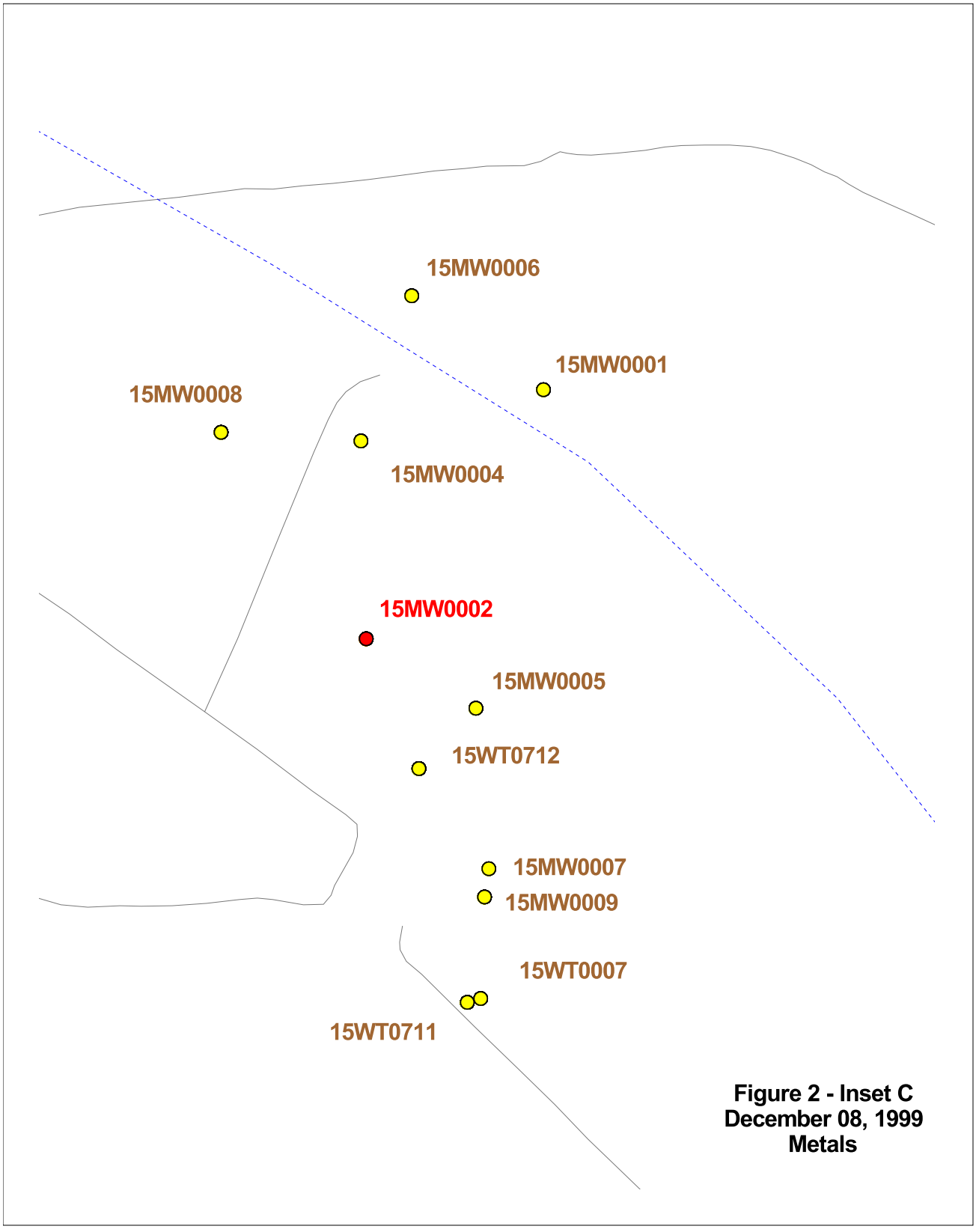
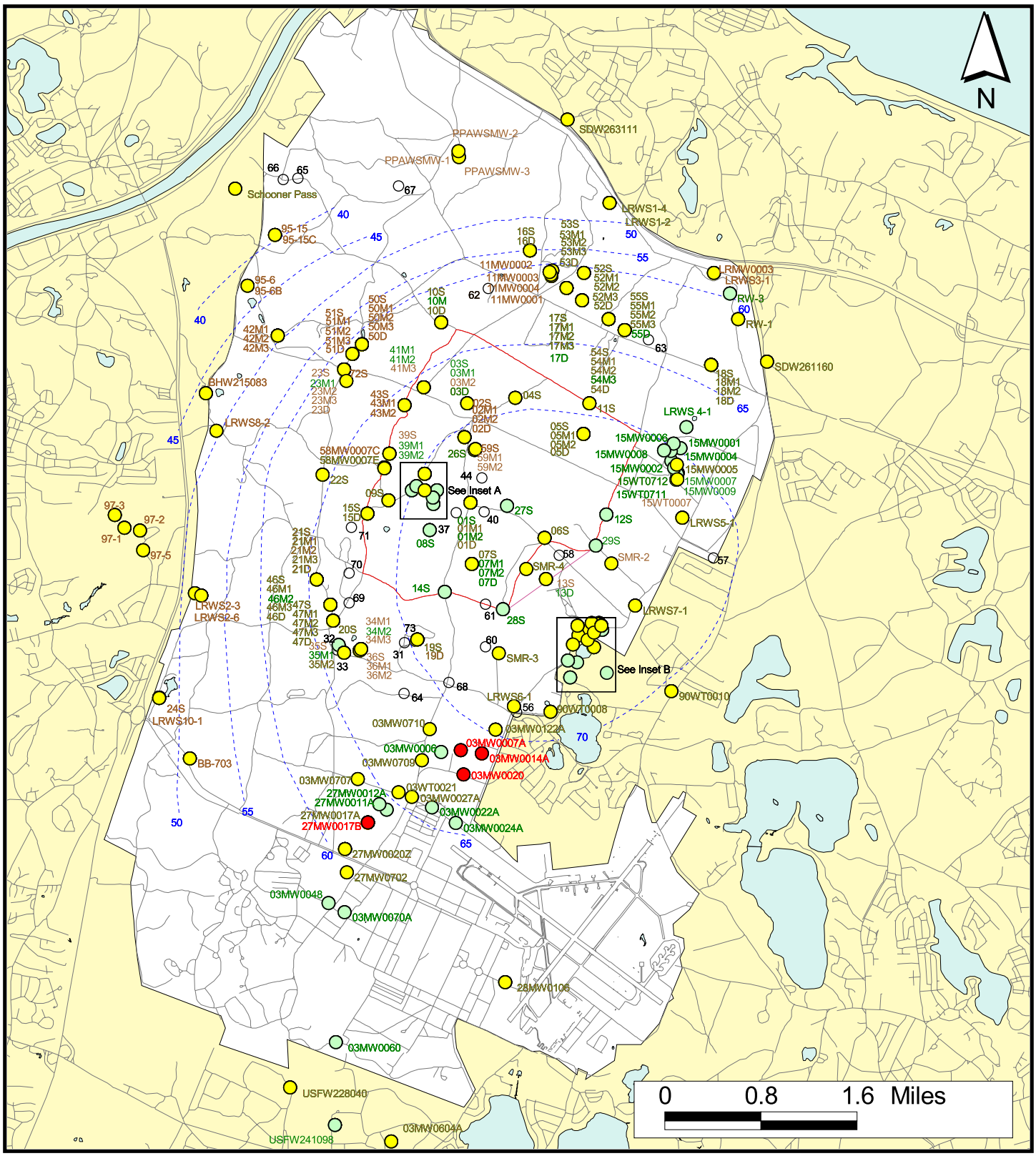


Figure 2 - Inset C
December 08, 1999
Metals



Sources & Notes

Map Coordinates: Stateplane, NAD83, Zone 4151, Meters
Source: MASSGIS

Legend

- Validated Detection GTE MCL/HA
- Validated Detection LT MCL/HA
- Validated Non-detect
- No Data Available

Figure 3
VOCs in Groundwater
Compared To MCL/HAs
Validated Data As Of 12/02/99

Analyte Group
3

December 8, 1999 DRAFT

L:\MMR\GIS\December99\Monthly Maps\VOC GTE MCL\HA

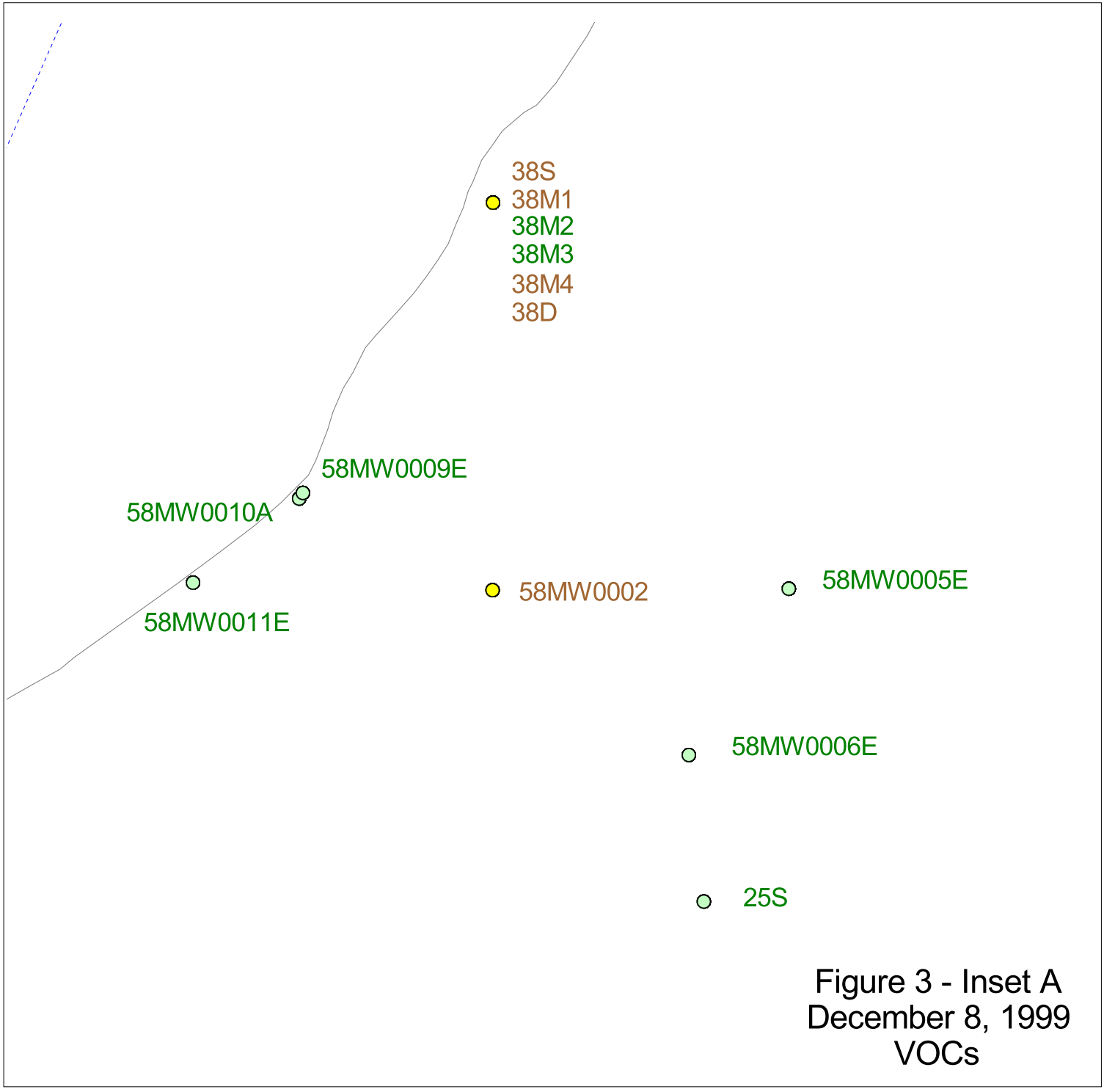


Figure 3 - Inset A
December 8, 1999
VOCs

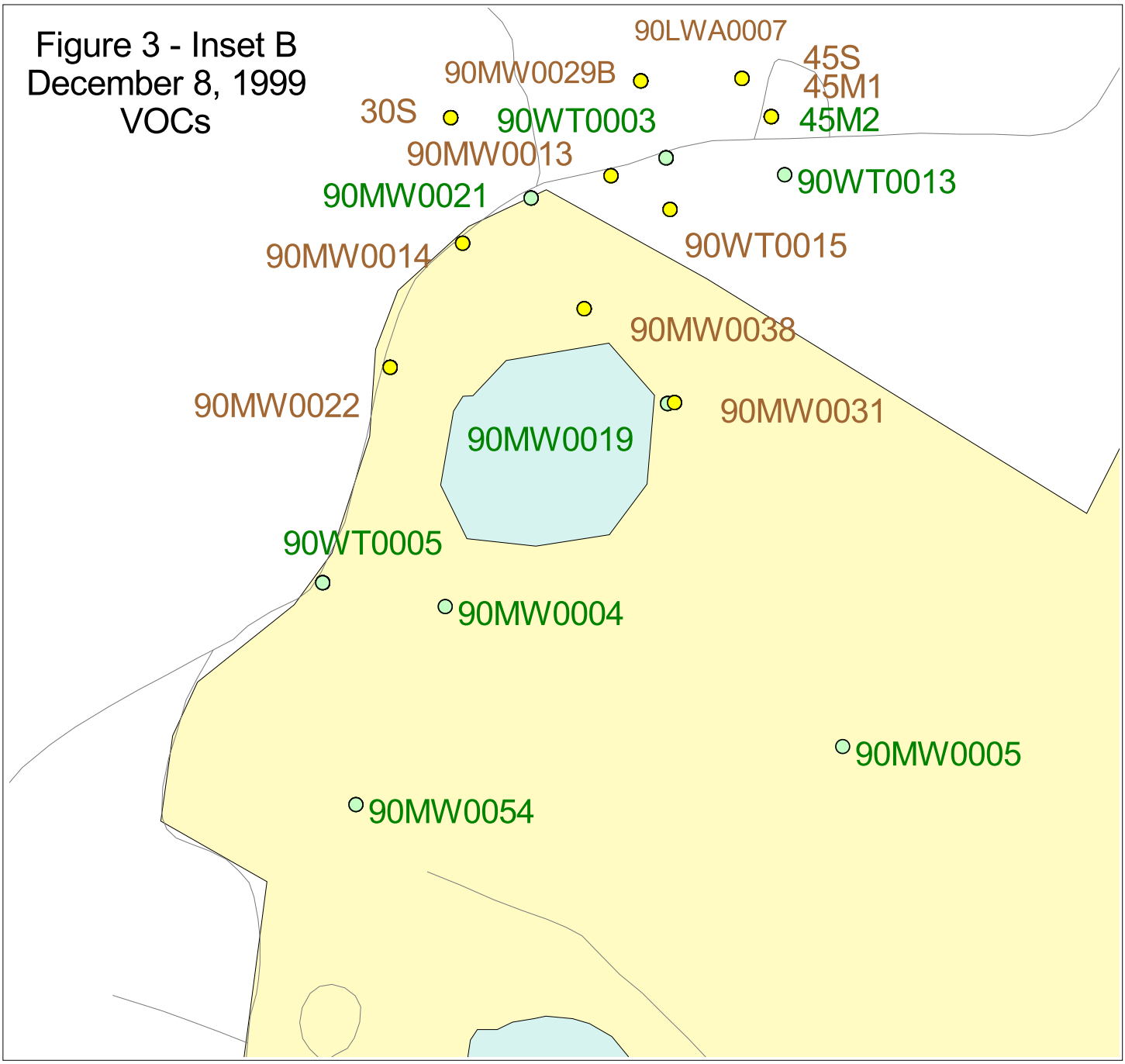
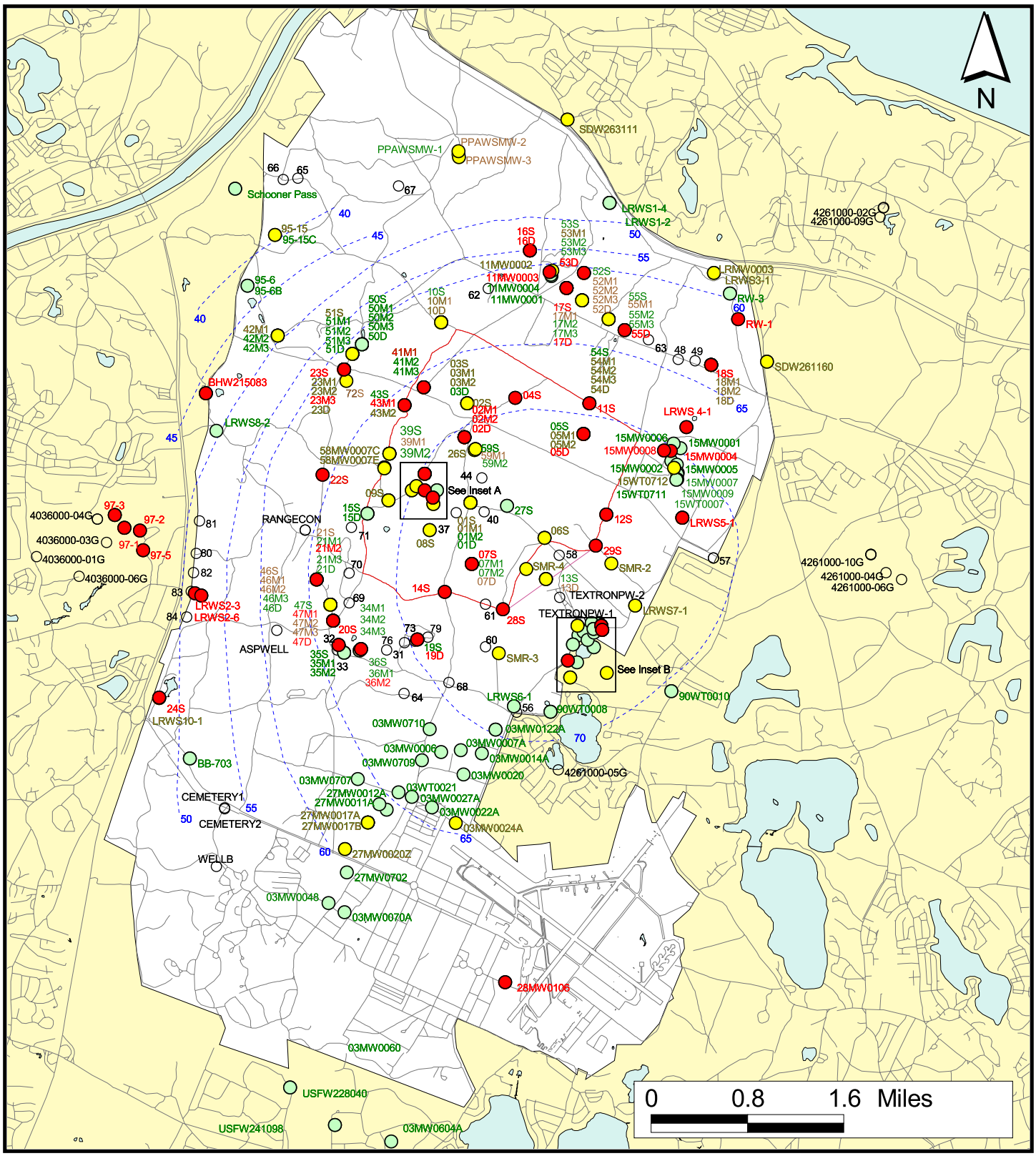


Figure 3 - Inset B
December 8, 1999
VOCs
90LWA0007
90MW0029B
45S
45M1
30S
90WT0003
45M2
90MW0013
90WT0013
90MW0021
90WT0015
90MW0014
90MW0038
90MW0022
90MW0031
90MW0019
90WT0005
90MW0004
90MW0005
90MW0054



Sources & Notes

Map Coordinates: Stateplane, NAD83, Zone 4151, Meters
Source: MASSGIS

Legend

- Validated Detection GTE MCL/HA
- Validated Detection LT MCL/HA
- Validated Non-detect
- No Data Available

Figure 4
SVOCs in Groundwater
Compared To MCL/HAs
Validated Data As Of 12/02/99

Analyte Group
4

December 8, 1999 DRAFT

L:\MMR\GIS\December99\Monthly Maps\SVOC GTE MCL\HA

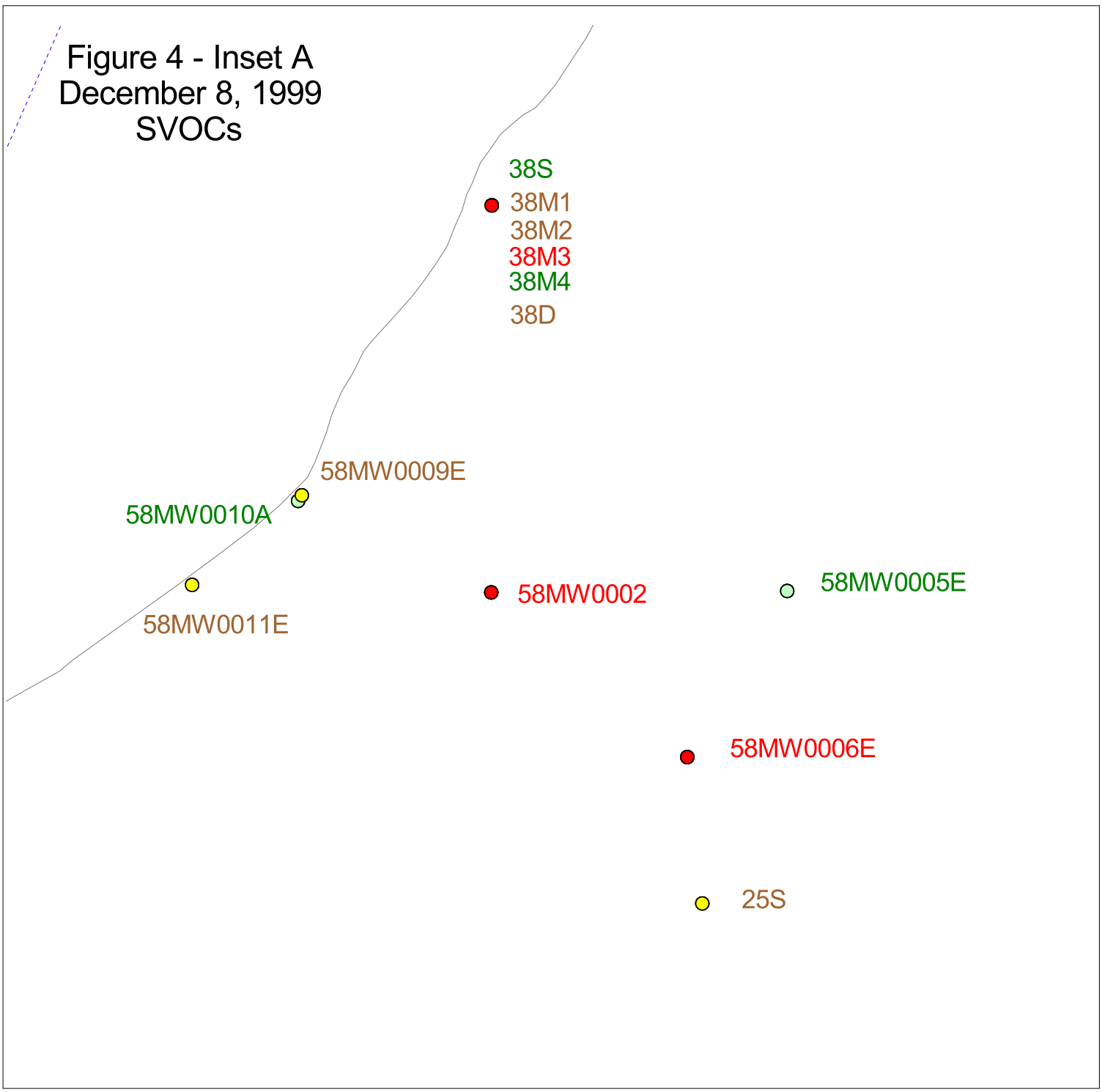


Figure 4 - Inset A
December 8, 1999
SVOCs
38S
38M1
38M2
38M3
38M4
38D
58MW0009E
58MW0010A
58MW0011E
58MW0002
58MW0005E
58MW0006E
25S

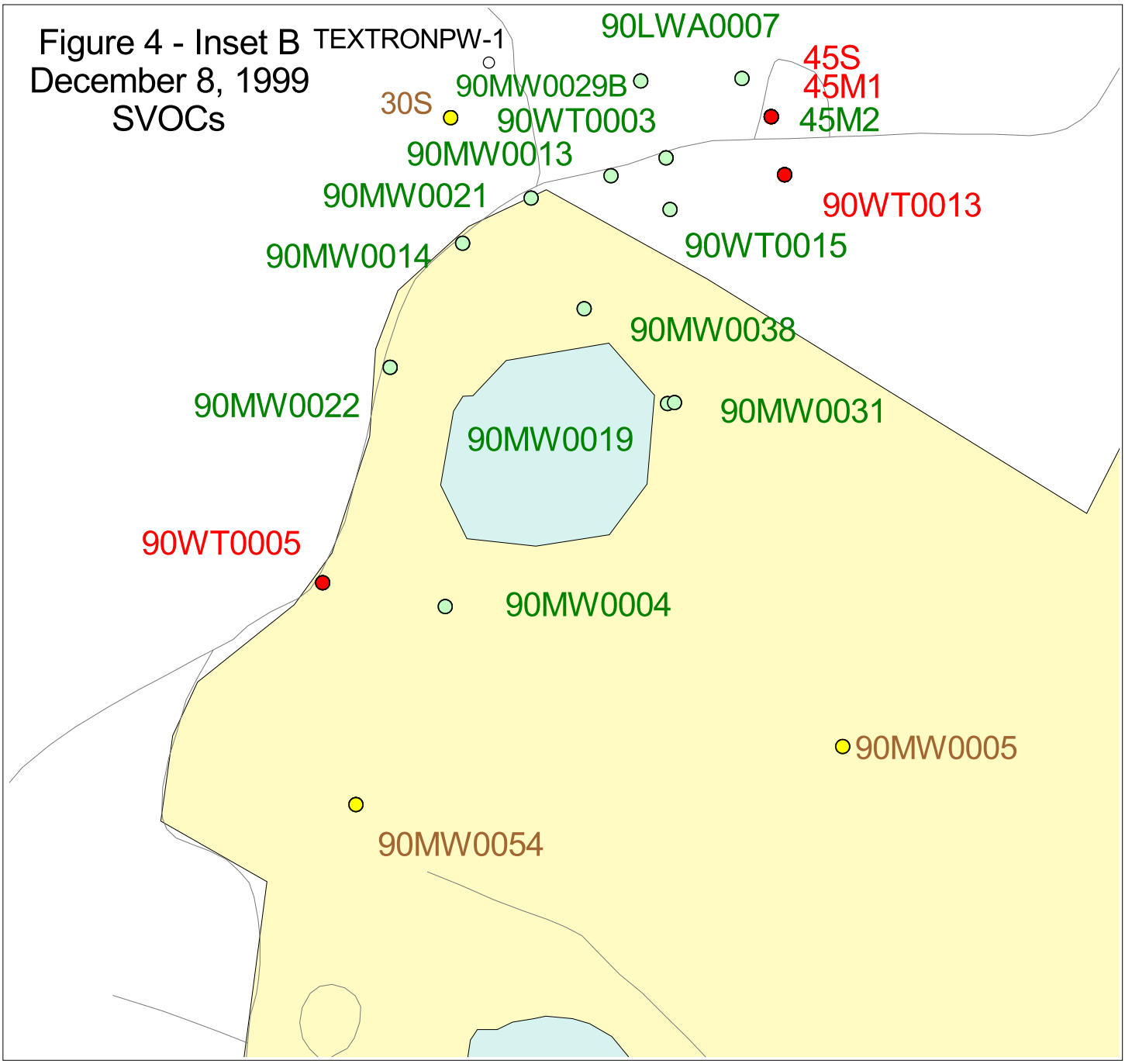
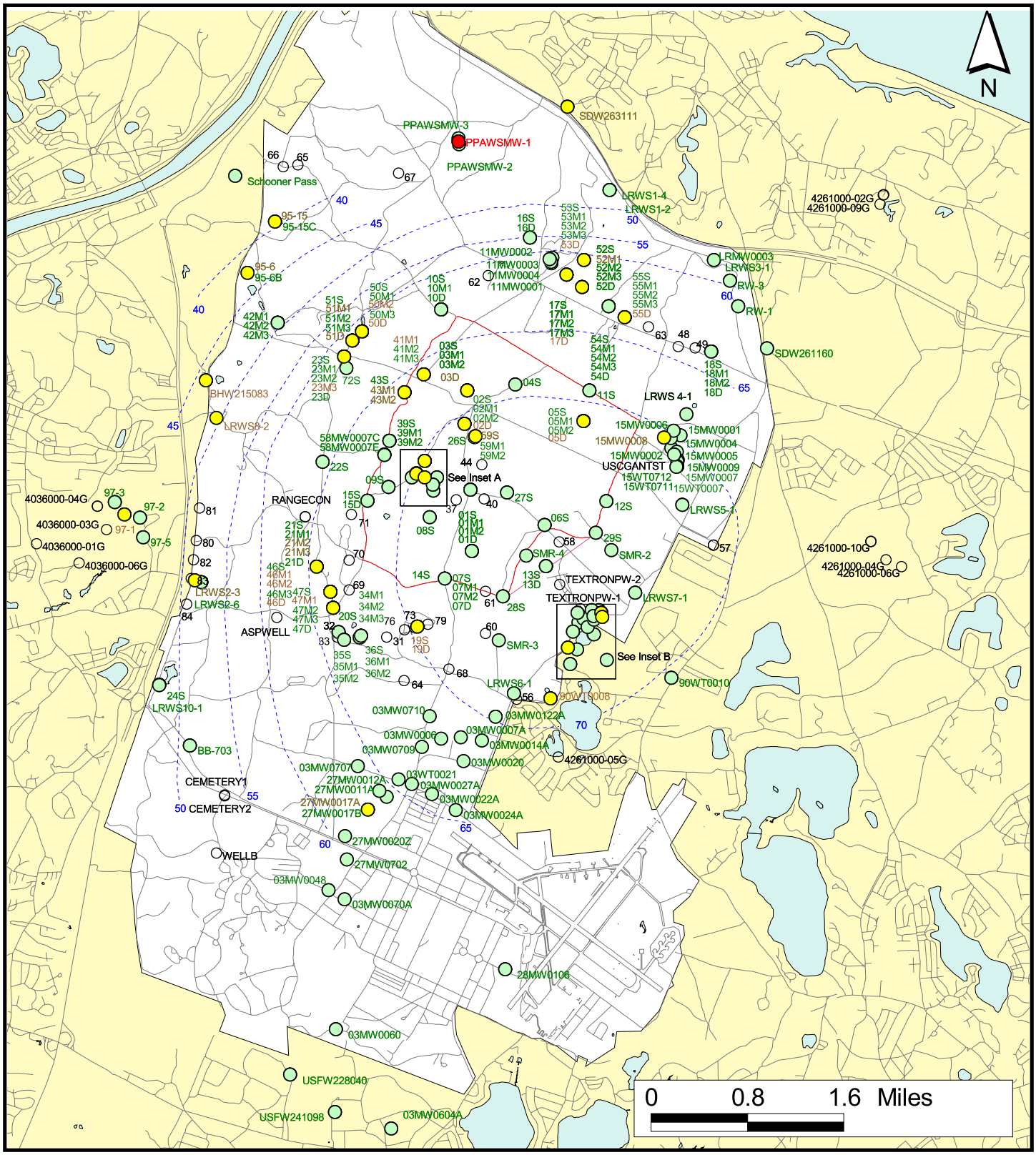


Figure 4 - Inset B
December 8, 1999
SVOCs
TEXTRONPW-1
90LWA0007
45S
45M1
45M2
30S
90MW0029B
90WT0003
90MW0013
90MW0021
90WT0013
90WT0015
90MW0014
90MW0038
90MW0022
90MW0031
90MW0019
90WT0005
90MW0004
90MW0005
90MW0054



Sources & Notes

Map Coordinates: Stateplane, NAD83, Zone 4151, Meters
Source: MASSGIS

Legend

- Validated Detection GTE MCL/HA
- Validated Detection LT MCL/HA
- Validated Non-detect
- No Data Available

Figure 5
Herbicides and Pesticides in Groundwater
Compared to MCL/HAs
Validated Data As Of 12/02/99

Analyte Group
5

December 08, 1999 DRAFT

L:\MMR\GIS\December99\Monthly Maps\HerbPest GTE MCL\HA


Figure 5 - Inset A
December 8, 1999
Pesticides/Herbicides
38S
38M1
38M2
38M3
38M4
38D
58MW0009E
58MW0010A
58MW0011E
58MW0002
58MW0005E
58MW0006E
25S

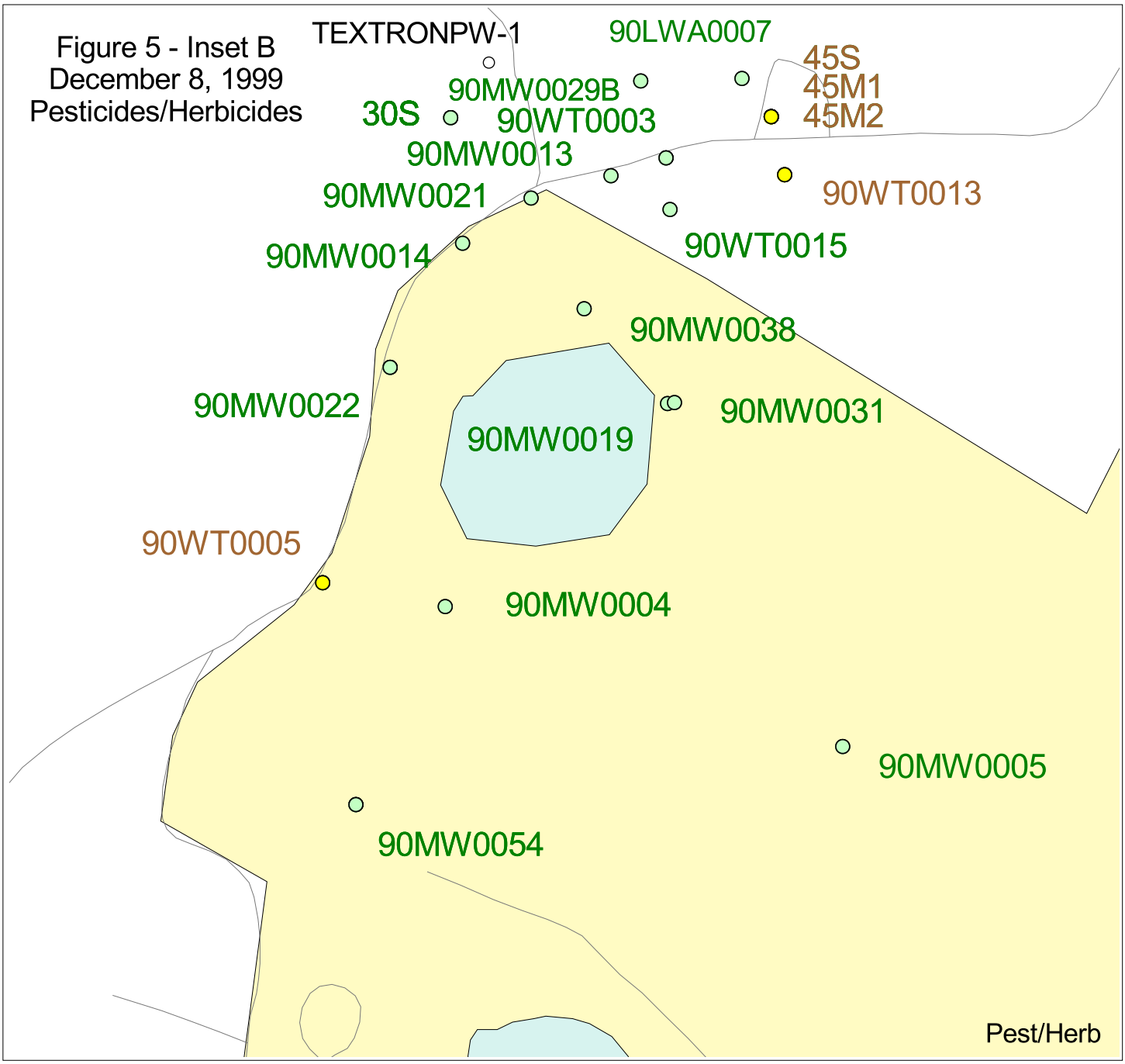
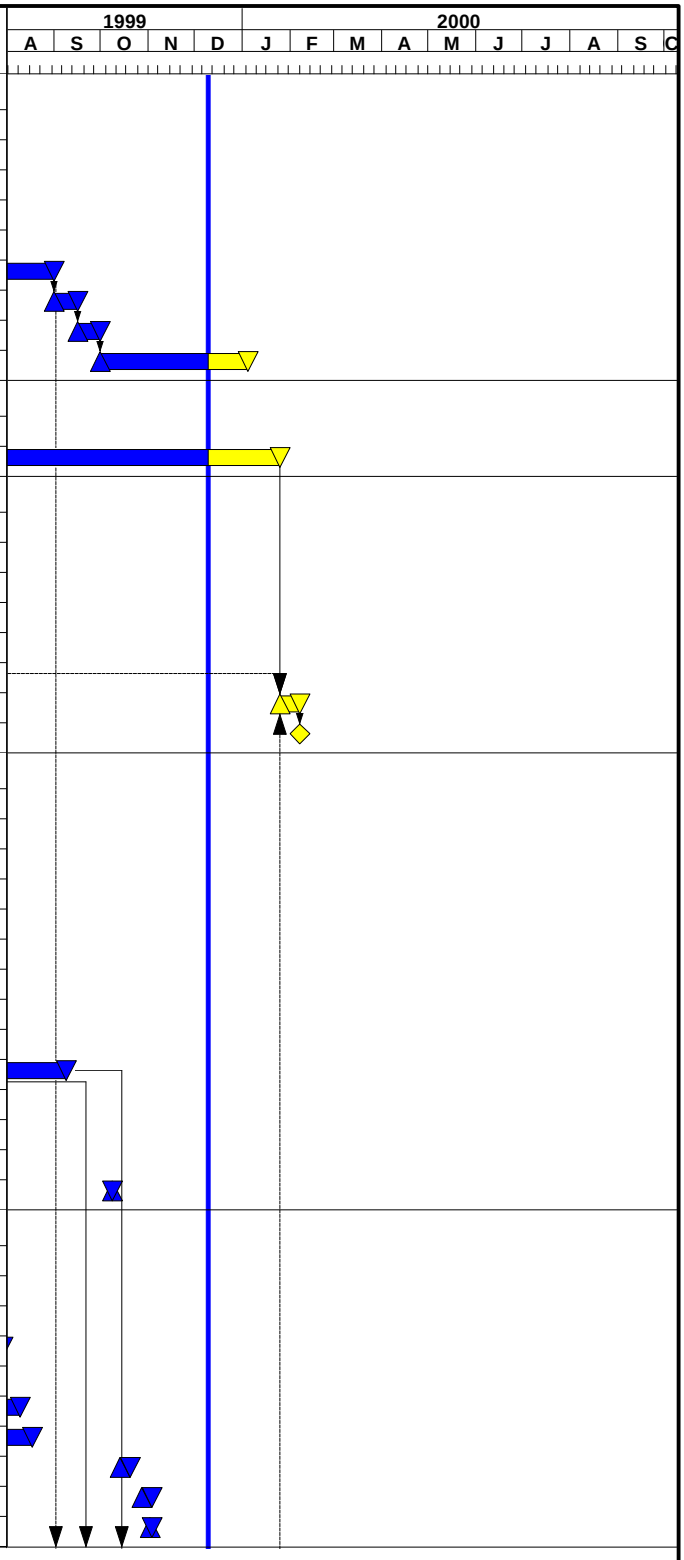


Figure 5 - Inset B
December 8, 1999
Pesticides/Herbicides
TEXTRONPW-1
90LWA0007
45S
45M1
45M2
90MW0029B
30S
90WT0003
90MW0013
90MW0021
90WT0013
90WT0015
90MW0014
90MW0038
90MW0022
90MW0031
90MW0019
90WT0005
90MW0004
90MW0005
90MW0054
Pest/Herb

Activity Description	Early Start	Early Finish
1. Receive Funding		
Appropriation of money for NGB budget	26OCT98A	
NGB Contracting ($4M)	26OCT98A	18DEC98A
Procure Supplemental Funding ($1.4M)	21DEC98A	10FEB99A
Procure Supplemental Funding ($1.0M)	11FEB99A	16APR99A
Procure Supplemental Funding ($1.6M)	16APR99A	02JUN99A
Procure Supplemental Funding ($2.1M)	02JUN99A	31AUG99A
Procure Supplemental Funding ($2.9M)	01SEP99A	16SEP99A
Procure Supplemental Funding ($1.0M)	17SEP99A	30SEP99A
Procure Supplemental Funding	01OCT99A	04JAN00
2. Evaluate Analytical Methods		
Complete Draft PEP Analytical Report	05NOV98A	30NOV98A
EPA Comments and Revisions	01DEC98A	24JAN00
3. Phase I Completion Workplan		
Prepare Phase I+ Workplan	13AUG98A	21AUG98A
Phase I+ Workplan due to EPA		21AUG98A
EPA Comments/Workplan Revisions	24AUG98A	06OCT98A
Submit Revised Workplan		06OCT98A
EPA Comments/Workplan Revisions	07OCT98A	29OCT98A
Submit Change Document		30OCT98A
Prepare Final Workplan	25JAN00	07FEB00
Submit Final Workplan		07FEB00
4. Phase I/II Installation of Wells		
Mobilization	21DEC98A	04JAN99A
USGS Modeling Well Screens	07JAN99A	01FEB99A
Prepare FSP for Far Field Wells	21DEC98A	12JAN99A
Review/Revise FSP for FF Wells	13JAN99A	12APR99A
Prepare FSP for Phase IIa Wells	21JAN99A	29JAN99A
Review/Revise FSP for Phase IIa Wells	01FEB99A	12APR99A
Install Group 1 FF Wells	06JAN99A	23MAR99A
Install Phase IIa Wells	01FEB99A	19APR99A
Mobilize for Group 2 FF Wells	02JUN99A	29JUN99A
Install Group 2 FF Wells	30JUN99A	08SEP99A
Synoptic water levels round 1	26JAN99A	26JAN99A
Synoptic water levels round 2	07APR99A	07APR99A
Synoptic water levels round 3	12JUL99A	12JUL99A
Synoptic water levels round 4	08OCT99A	08OCT99A
5. Phase I Sampling of Water Supply Wells		
Procure lab for SDWA parameters	21DEC98A	06JAN99A
Prepare QA/QC plan addendum	07JAN99A	02MAR99A
EPA review/comment	03MAR99A	10JUN99A
Sample (6a) MMR Wells DW/PEP	11JUN99A	27JUL99A
Setup split sampling for wells	08JAN99A	09JUL99A
Sample (6b) non-MMR wells PEP 1st Qtr	12JUL99A	09AUG99A
Sample (6c) MMR wells PEP 1st Qtr	12JUL99A	17AUG99A
Sample (6d) MMR wells DW/PEP 1st Yr	14OCT99A	19OCT99A
Sample (6c) MMR wells PEP 2nd Qtr	28OCT99A	03NOV99A
Sample (6b) non-MMR wells PEP 2nd Qtr	02NOV99A	03NOV99A



Project Start 14AUG98
Project Finish 17MAY01
Data Date 10DEC99
Run Date 10DEC99

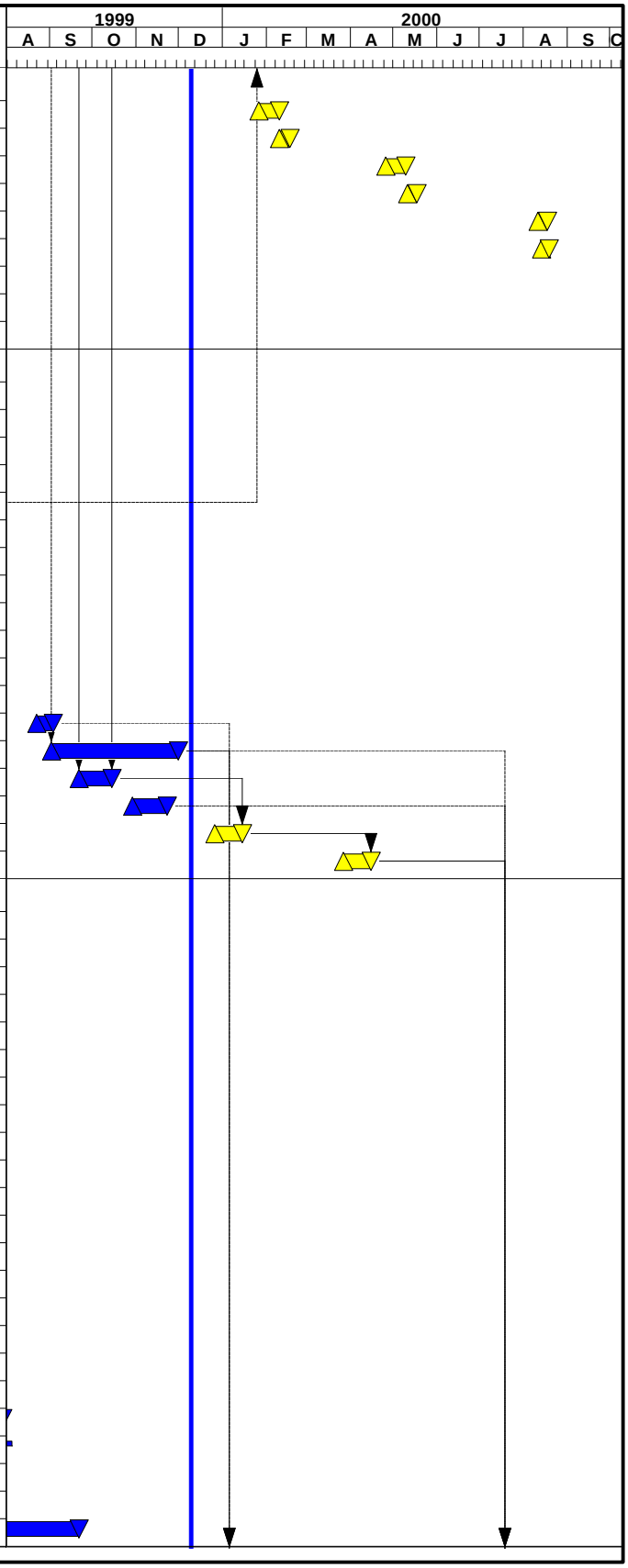
Early Bar
Progress Bar

M004

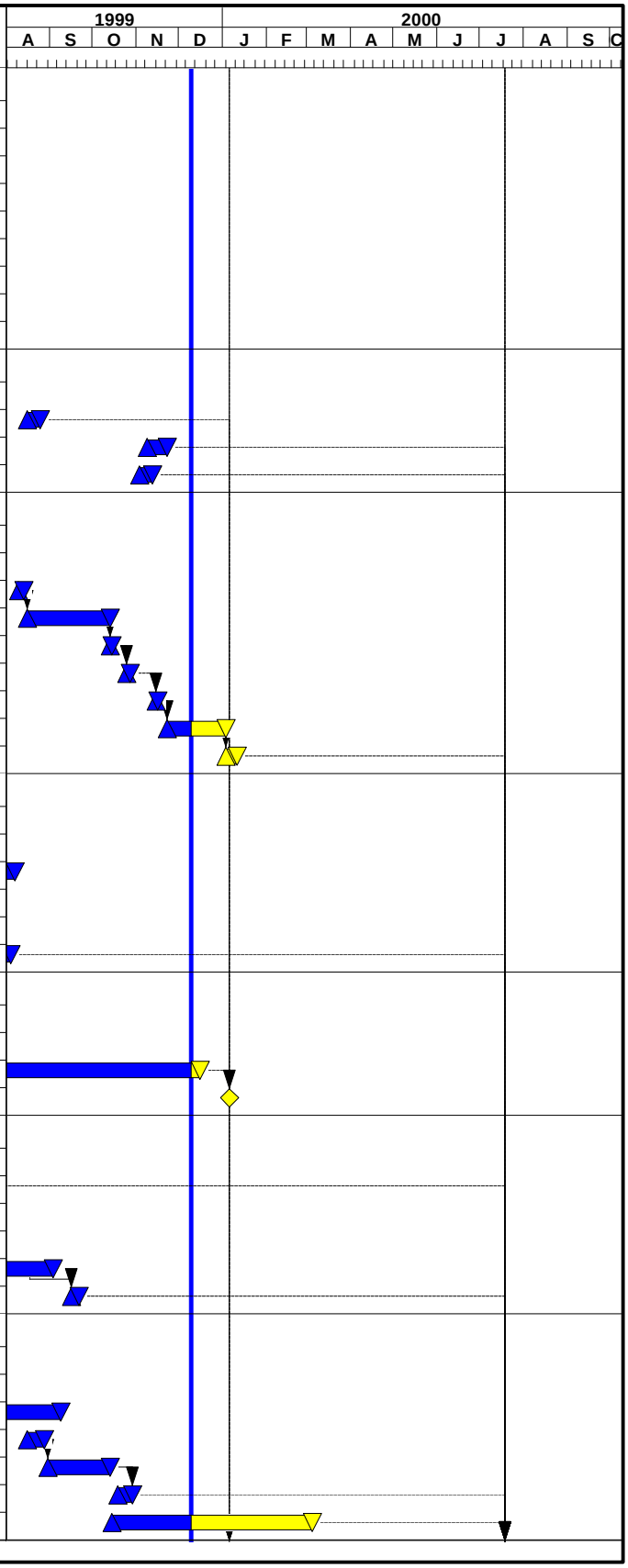
Sheet 1 of 4

Figure 6. Schedule for Completion of the Impact Area Groundwater Study as of 12/10/99

Activity Description	Early Start	Early Finish
5. Phase I Sampling of Water Supply Wells		
Sample (6b) non-MMR wells PEP 3rd Qtr	27JAN00	09FEB00*
Sample (6c) MMR wells PEP 3rd Qtr	10FEB00	17FEB00*
Sample (6b) non-MMR wells PEP 4th Qtr	26APR00	09MAY00*
Sample (6c) MMR wells PEP 4th Qtr	11MAY00	17MAY00*
Sample (6c) MMR wells PEP 5th Qtr	11AUG00	17AUG00*
Sample (6d) MMR wells DW/PEP 2nd Yr	14AUG00	18AUG00*
Sample (6c) MMR wells PEP 6th Qtr	13NOV00	17NOV00*
Sample (6c) MMR wells PEP 7th Qtr	12FEB01	16FEB01*
Sample (6c) MMR wells PEP 8th Qtr	11MAY01	17MAY01*
6. Phase I Sampling of Monitoring Wells		
Review Selection of IRP wells	05NOV98A	30NOV98A
Submit IRP well selection/rationale	30NOV98A	
EPA comments on IRP Wells	01DEC98A	19JAN99A
Change document for IRP Wells	20JAN99A	29JAN99A
EPA cond. approve IRP well changes	01FEB99A	18FEB99A
USGS model selected IRP wells	01FEB99A	11FEB99A
Changes to address MADEP comments	19FEB99A	09MAR99A
Prepare FSP for Supplemental IRP Wells	10MAR99A	22APR99A
Mobilization for Phase I Wells	21DEC98A	05JAN99A
Sample/Analyze Supplemental IRP Wells	08APR99A	22JUL99A
Sample/Analyze Phase I Wells Round 2	06JAN99A	14JUN99A
Sample/Analyze G1 FF Wells Round 1	17FEB99A	27MAY99A
Sample/Analyze G1 FF Wells Round 2	23AUG99A	02SEP99A
Sample/Analyze Phase I Wells Round 3	02SEP99A	30NOV99A
Sample/Analyze G2 FF Wells Round 1	21SEP99A	14OCT99A
Sample/Analyze G1 FF Wells Round 3	29OCT99A	22NOV99A
Sample/Analyze G2 FF Wells Round 2	27DEC99	14JAN00
Sample/Analyze G2 FF Wells Round 3	27MAR00	14APR00
7. Phase I Response Actions for Demo Area 1		
Roadbuilding for MW34	28DEC98A	04JAN99A
Install/Profile MW34	06JAN99A	18JAN99A
Roadbuilding for MW35	18JAN99A	18JAN99A
Install/Profile MW35	19JAN99A	29JAN99A
Develop/Sample/Analyze MW34	11FEB99A	19FEB99A
Develop/Sample/Analyze MW35	11FEB99A	22FEB99A
Install/Profile/Develop MW36	09MAR99A	20APR99A
Sample/Analyze MW36	05MAY99A	14MAY99A
Evaluate Groundwater Data	07MAY99A	17MAY99A
Submit GW Data/Response Plan to EPA		17MAY99A
Review/Revise Response Plan	18MAY99A	15JUL99A
UXO Clearance Demo 1	28DEC98A	13JAN99A
Standby for Demo 1 to dry up	14JAN99A	07APR99A
Mobilize ATV drill rig	08APR99A	03MAY99A
Demo 1 Soil Sampling to 15 ft	03MAY99A	07MAY99A
Soil Sample Analysis/Evaluation	04MAY99A	27MAY99A
Mobilize ATV drill rig	28MAY99A	04JUN99A
Demo 1 Soil Sampling to 40 ft	07JUN99A	09JUN99A
Soil Sample Analysis/Evaluation	08JUN99A	27JUL99A
Submit Soil Data to EPA		27JUL99A
Evaluate Pilot Testing & Remedies	21DEC98A	18MAY99A
Submit draft remedy evaluation to EPA		18MAY99A
EPA review/approve Response Plan	16JUL99A	20SEP99A



Activity Description	Early Start	Early Finish
8. Phase II (a) Workplan		
Prepare Phase II(a) Workplan	24AUG98A	11SEP98A
Submit Phase II(a) Workplan to EPA		11SEP98A
EPA Review Phase II(a) Workplan	14SEP98A	28OCT98A
Meeting to discuss Phase II(a)	04NOV98A	04NOV98A
Revise Phase II(a) workplan	05NOV98A	12NOV98A
EPA review/comment	13NOV98A	22DEC98A
Prepare change document	28DEC98A	08FEB99A
EPA approve change document	09FEB99A	05APR99A
Final Phase II(a) Workplan	06APR99A	22JUL99A
9. Phase II Investigate Exceedances		
Sample/Analyze Ph. II(a) Wells Round 1	30MAR99A	26MAY99A
Sample/Analyze Ph. II(a) Wells Round 2	16AUG99A	24AUG99A
Sample/Analyze Ph. II(a) Wells Round 3	09NOV99A	22NOV99A
Soil Sampling/Analysis for Source Areas	04NOV99A	12NOV99A
10. Phase II Characterize J Ranges		
Sampling/Analysis for J-3 Wetland	15APR99A	20APR99A
Review J-3 Wetland Results with EPA	13MAY99A	01JUL99A
Mobilization for Steel Pit	10AUG99A	13AUG99A
UXO Clearance for steel pit	16AUG99A	13OCT99A
Soil sampling/analysis for Steel Pit	14OCT99A	14OCT99A
Monitoring well installation for Steel Pit	26OCT99A	27OCT99A
Develop Well	15NOV99A	15NOV99A
Sample/Analyze monitoring well	23NOV99A	03JAN00
Review Steel Pit Results with EPA	04JAN00	10JAN00
11. Phase II Survey for Munitions Disposal		
Technology Meeting	09DEC98A	09DEC98A
Prepare Survey Work Plan	10DEC98A	01FEB99A
Review/Revise Workplan	02FEB99A	06AUG99A
Excavation/Sampling of Brick-lined Pits	19FEB99A	22FEB99A
Analysis of Brick-lined Pit Samples	23FEB99A	01JUL99A
Prepare Tech Memo for Brick-lined Pit	02JUL99A	04AUG99A
12. Phase II Characterize Training Areas		
Completion of Archives Search Report		31MAR99A
Phase II (a) Workplan for Training Areas	01APR99A	22JUL99A
EPA Review/Approve Workplan	23JUL99A	16DEC99
Begin Training Area Investigations	06JAN00*	
13. Phase II Characterize KD and U Ranges		
MIDAS search for analytes	27APR99A	06MAY99A
Soil Sampling/Analysis for KD and U	10MAY99A	17MAY99A
UXO Clearance for Monitoring Wells	28JUN99A	02JUL99A
Roadbuilding	06JUL99A	09JUL99A
Monitoring Well installations at KD and U	20JUL99A	02SEP99A
Sample/Analyze monitoring wells	17SEP99A	20SEP99A
14. Phase II Characterize Gun/Mortar Positions		
Completion of Archives Search Report		31MAR99A
Develop Field Sampling Plan	01APR99A	02JUL99A
Agencies Review FSP	06JUL99A	08SEP99A
Mobilize drilling equipment	16AUG99A	27AUG99A
Install Monitoring Wells at Gun/Mortar	30AUG99A	13OCT99A
Sample/Analyze monitoring wells	19OCT99A	28OCT99A
Soil Sampling/Analysis at Gun/Mortar	15OCT99A	03MAR00



Activity Description	Early Start	Early Finish
15. Phase II Characterize Trnch, Excvtn, Bnkr		
Completion of Archives Search Report		31MAR99A
Assessment of site features	16AUG99A	27AUG99A
Review data with EPA	19AUG99A	26AUG99A
Phase II (a) Workplan for Trenches, etc.	30AUG99A	04OCT99A
EPA Review/Approve Workplan	05OCT99A	02DEC99A
Begin Trenches Investigations	06DEC99A	
16. Phase II Sampling Groundwater at SAR		
Install Monitoring Wells at SAR	09MAR99A	23APR99A
Sample/Analyze Monitoring Wells	27MAY99A	05AUG99A
17. Phase II Characterize Mortar Targets		
Reconnaissance of Targets	16AUG99A	27AUG99A
Discuss sampling plan with EPA	19AUG99A	26AUG99A
Prepare draft FSP	30AUG99A	04OCT99A
EPA review/comment on FSP	05OCT99A	02NOV99A
Prepare final FSP	09NOV99A	02DEC99A
Begin Mortar Targets Investigations	06DEC99A	
18. Reports and Meetings		
Progress Reports	10SEP98A	10OCT00
Phase II Interim Results Report	01SEP99A	01NOV99A
Draft Interim Longterm Monitoring Report	06JAN00	02MAR00
Review Draft ILM Report	03MAR00	30MAR00
Final ILM Report	31MAR00	27APR00
Draft Phase II Compl. Work Report	08MAY00	18JUL00
Review Draft Phase II CWR	19JUL00	15AUG00
Final Phase II CWR	16AUG00	13SEP00