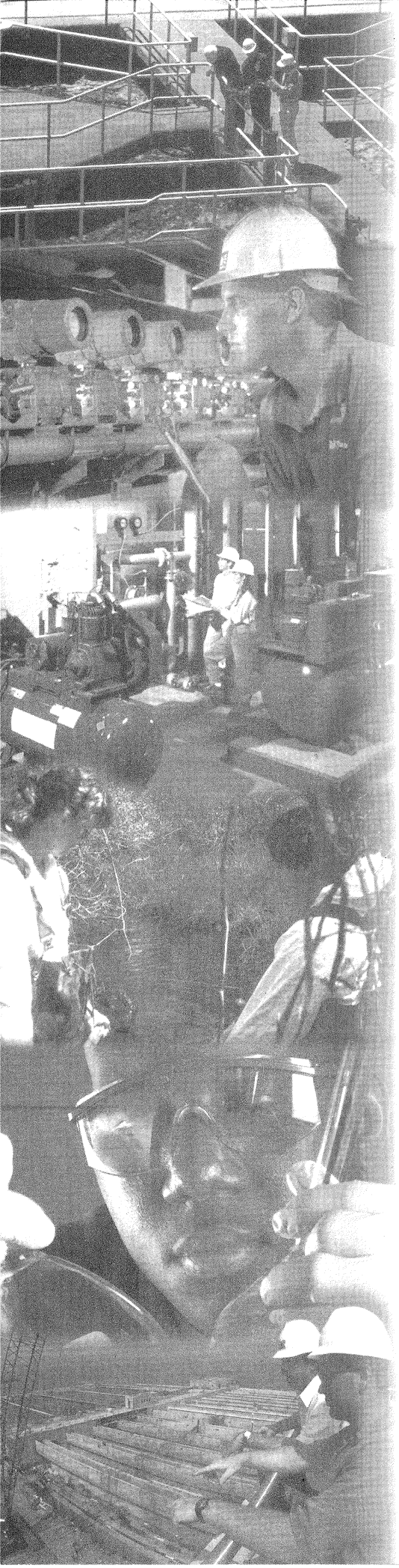

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EPA Project Officer: Diana King
EPA Work Assignment Manager: Jim Byrne

Targeted Brownfields Assessment Report

Meriden HUB Site
1 & 77 State Street and
30 & 50 East Main Street
Meriden, Connecticut

December 2004

Prepared By:

Metcalf & Eddy

860 North Main Street Extension
Wallingford,Connecticut 06410

and

701 Edgewater Drive
Wakefield, Massachusetts 01880-5371

TARGETED BROWNFIELDS ASSESSMENT REPORT
MERIDEN HUB SITE
MERIDEN, CT

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The factory part of the building has been vacant since 1993. The two smaller buildings continued to be occupied by banking institutions. The retail stores remained in operation through 2003. The bank located in the southern corner of the site was razed in 2003. The bank located in the western corner of the site remains in business.

2.3 Groundwater and Surface Water Resources

The nearest surface water bodies are Harbor Brook, Jordan Brook and Clark Brook, all of which run through culverts under the site. These brooks are all classified as "B," according to the CT DEP Water Quality Classifications Map, 1993. A "B" classification indicates the water is known or presumed to meet criteria for uses such as industrial water supply, aquatic habitat, recreation, and navigation.

According to the CT DEP Water Quality Classifications Map (CTDEP, 1993), the groundwater below the site is classified as "GB." A GB classification indicates that the groundwater is assumed to be degraded due to a variety of pollution sources.

2.4 Site Features and Utilities

The site currently consists of a large empty building that formerly contained a factory and several retail stores, and a smaller building containing a bank. The remainder of the site is a paved parking area with several islands of vegetation. The topography is fairly flat.

The utilities located at the site consist of city water and sewer, natural gas, and electric.

2.5 Environmental Studies and Information

The following sources were provided by the city of Meriden and the USEPA. Three different limited site investigations have been conducted at the site.

Milone & MacBroom. In 1997, Milone & MacBroom, Inc. was retained by the City of Meriden to conduct a study of the area to address historic flooding along Harbor Brook. Four groundwater monitoring wells were installed along the north side of the building. Soil samples were collected from the well borings and analyzed for volatile organic compounds (EPA Method 8260b), total petroleum hydrocarbons (EPA Method 418.1), and mass metals. The results of the analysis were compared to the Connecticut Remediation Standard Regulations (CTDEP, 1996). Based on the results, lead was detected at levels which exceeded the residential direct exposure criteria (RES DEC) in one of the samples. Total petroleum hydrocarbons were detected at levels that exceeded the RES DEC in three of the samples. The results are summarized in Table 1 of Appendix B. Groundwater analysis was apparently not conducted.

Nobis Engineering, Inc. In July 2001 Nobis Engineering, Inc. conducted a limited site investigation for the Army Corps of Engineers. Groundwater samples were collected from the four monitoring wells on site. The samples were collected in accordance with the USEPA low flow method (1996), and analyzed for volatile organic compounds (VOCs) (EPA method 8260), semivolatile organic compounds (SVOCs) (EPA Method 8270), polychlorinated biphenyls

(PCBs) (EPA method 8082), total extractable petroleum hydrocarbons (ETPH) (CT method ETPH), and total metals (EPA method 6010, 7000, 7470). The results of the analysis were compared to the Connecticut remediation standard regulations (CTDEP, 1996). Based on the results, vinyl chloride was detected at levels that exceeded the industrial/commercial volatilization criteria in one of the samples. Copper was detected in one of the samples at levels that exceeded the surface water protection criteria. The results are summarized in Table 2 of Appendix B.

Abacus Environmental, Inc. In October 2003, Abacus Environmental conducted a building survey for asbestos containing materials and lead based paint at the building located at 77 State Street, which formerly housed Canberra Industries and several retail stores. Bulk samples were collected from all suspect asbestos containing materials in the building, and analyzed by polarized light microscopy. Based on the laboratory results, thirteen types of asbestos containing materials were found throughout the building. These materials included two types of floor tile, eight types of mastic, hot water heater gasket, and two types of roof flashing. The report recommended that all of the asbestos containing materials be abated in accordance with current Connecticut regulations prior to demolishing the building.

The lead based paint survey was conducted as a walk-through visual inspection and a screening of painted surfaces for lead using an XRF spectrum analyzer RMD LPA-1. The XRF lead results indicate the presence of lead in eleven of the samples. Based on the CTDEP guidance document on the management and disposal of lead contaminated materials (Nov. 1994), Abacus Environmental concluded that it would be necessary to characterize lead waste prior to building demolition. The report recommended that TCLP sampling be completed prior to demolition in order to determine whether the debris waste will be above the EPA hazardous waste levels for TCLP lead for disposal purposes.

2.6 Adjacent/Nearby Properties

An environmental database search was conducted for M&E by Environmental Data Resources, Inc., (EDR). The search was performed in accordance with ASTM E 1527-97. The results from the EDR report and a subsequent search of DEP files indicated one petroleum release near the site.

In December 1996, a leaking underground storage tank that contained #2 heating oil was removed from 71 Pratt Street, located to the south of the site. A ten gallon spill was reported on December 9, 1996, and the tank was removed.

3.0 PRELIMINARY CONCEPTUAL SITE MODEL

The objective of the conceptual site model (CSM) is to provide a representation of the nature and extent of contamination in soil and groundwater at the site that can be utilized to develop subsequent environmental investigation and remedial plans. A preliminary evaluation of the areas of concern (AOCs), contaminants of concern (COCs), potential receptors, migration pathways, and data gaps is presented below.

3.1 Areas of Concern

Based on historical information and data from previous investigations, eleven preliminary AOCs where activities on site may have caused releases of contaminants were identified. The AOCs are described below and shown on Figure 2.

AOC 1 – Site-Wide Fill. Based on a review of historical topographic maps and existing soil boring data, the site has been extensively filled and reworked over the years. Fill materials reportedly consist of building debris, coal, and ash, as well as sand and gravel from unknown sources. Potential COCs include: total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), heavy metals, polychlorinated biphenyls (PCBs), pesticides and herbicides, and asbestos from building materials.

AOC 2 – Former Harbor Brook Fill. Harbor Brook once was an open channel for the full length of the site and has been completely filled. It is likely that the fill contains a higher percentage of building materials than the general site fill, as historically these materials were used to fill large depressions. In addition, the streambed may have been impacted by industrial discharges. COCs include all of those listed above for the general site fill.

AOC 3 - Former Meriden Britannia Company/International Silver Company (Insilco)
Historical research indicates that silver smithing took place at the site for over 100 years. Based on a review of the Sanborn fire insurance maps, processes on site included casting, annealing, trimming, pickling, burnishing, soldering, plating and electro plating, etching, engraving, and glass cutting. Most likely, solvents were used for cleaning and degreasing, acids and alkaline solutions were used for pickling and plating, and cutting and lubricating oils were used in the manufacturing operations. Water may have been used to cool the casting molds and wastewater containing heavy metals may have been discharged on site or into the former Harbor Brook bed. Potential COCs for the former Insilco facility area include: TPH, VOCs including chlorinated VOCs, SVOCs, heavy metals, PCBs, and asbestos from building materials.

AOC 4 - Former Dry Cleaners and Welding Shop
A dry cleaning facility and a welding shop were located on the south-central portion of the site from before the 1950s until the 1970s. During this period, the chlorinated solvent perchloroethylene (PCE), also known as tetrachloroethylene, was generally used in dry cleaning operations. Prior to that, petroleum-based solvents were used in dry cleaning. The welding shop may have used lead solder, oils and lubricants in its operation. Potential COCs include: PCE and its degradation byproducts, lead, and TPH.

AOC 5 - Former Gasoline Filling Station
A gasoline filling station was located along Pratt Street in the central portion of the site from before the 1950s until the 1970s, and likely contained underground gasoline storage tanks and dispensers that may have released gasoline into site soils and groundwater. Prior to the 1980s, gasoline was generally leaded. Auto repair activities could also have contributed to contamination at the site. Potential COCs associated with the filling station include: TPH, VOCs, PCBs, PAHs, and heavy metals including lead.

AOC 6 - Former Auto Sales and Service
An auto sales and service facility was located just south of the former Stone Street on the northern portion of the site from before the 1950s until the 1970s. Automobile service operations could have resulted in the release of petroleum products and metals. Potential COCs associated with the facility include: TPH, VOCs, PCBs, PAHs, and heavy metals.

AOC 7 - Former Machine Shop
The Frank Wheeler and Son machine building shop was located just south of the former Stone Street on the northern portion of the site from the early 1900s until between 1953 and 1970. The shop was located along the southern bank of the Harbor Brook. Machining operations typically use oils and solvents. Potential COCs associated with the facility include: TPH, VOCs, and heavy metals.

AOC 8 - Former Welding Shop
A welding shop was located just north of the former Stone Street on the northern portion of the site from the early 1900s until between 1953 and 1970. Metal cleaning operations could have resulted in the release of petroleum products, solvents, and metals. Potential COCs associated with the facility include: TPH, VOCs, and heavy metals.

AOC 9 - Former Gasoline Filling Station
A second gasoline filling station was located along State Street in the northern portion of the site from before the 1950s until the 1970s, and contained gasoline storage tanks and dispensers that may have released gasoline into site soils and groundwater. Auto repair activities could also have contributed to contamination at the site. Potential COCs associated with the filling station include: TPH, VOCs, PCBs, PAHs, and lead.

AOC 10 - Former Plumbing/Pipe Shop
A plumbing and pipe shop was located along Pratt Street on the northern portion of the site from before the 1950s until the 1970s. Oils and solvents may have been used during pipe cutting operations and machine maintenance. Potential COCs include: VOCs, TPH, PAHs, and heavy metals.

AOC 11 - Former Canberra Industries
Canberra Industries operated at the State Street facility from 1983 through 1993. Primary processes included soldering, parts washing/degreasing, etching, and photographic developing. In addition, testing of radiation detecting equipment with radiation sources was reportedly performed at the facility. A hazardous waste storage room was located at the southern-central portion of the building. A floor drain is located within the former machine shop at the southern-central portion of the building. An approximately 100-gallon hydraulic oil tank is reported to be located inside the building near the elevator. Potential COCs associated with the former Canberra building include: TPH, VOCs, SVOCs, radioactive materials, and heavy metals.

3.2 Potential Migration Pathways and Receptors

Because the site is almost completely paved or covered with buildings, potential migration pathways are limited to leaching of contaminants from soil into ground water and resulting

transport to the groundwater discharge point. Future development of the site may expand the migration pathways to include direct exposure to soil and groundwater, surface water runoff and windblown deposition of contaminated soil particles.

Currently, potential receptors appear to be limited to humans or flora and fauna that may be exposed to groundwater migrating from the site. Reportedly the area is served by public water; therefore there is little chance of local residents consuming affected groundwater. Potential future receptors include construction workers who perform intrusive activities and users of the proposed park, if constructed, to contaminated soil and groundwater, if appropriate management procedures are not in place.

3.3 Identified Data Gaps

The analytical data that was provided by the City indicates that contaminated soil was present at each of the four locations tested. The locations of the samples do not appear to be focused on specific AOCs and may represent the quality of the site fill. Therefore it appears that additional analytical data will be needed to characterize the fill as well as each of the AOCs.

There is a fair amount of historical information available to identify most AOCs, although details of specific locations are not available. The AOC areas shown on Figure 2 were estimated based on the information reviewed for the Phase I ESA.

Groundwater flow direction was assumed to be toward the former streambed or the existing culvert. This assumption needed to be investigated and confirmed in order to adequately evaluate groundwater quality.

4.0 TARGETED BROWNFIELDS ASSESSMENT OBJECTIVES

This investigation was designed to collect data. The primary objectives of the assessment of the Meriden HUB property were to:

1) Sample site soil and groundwater from select AOCs to evaluate potential contamination that may affect the city's flood control and redevelopment plans for the site;
2) Based on analytical data, evaluate weather a release of oil or hazardous materials (OHM) in AOCs was likely;
3) Compare soil and groundwater analysis results to Connecticut Remediation Standard Regulations criteria;
4) Develop additional assessment procedures and/or potential cleanup options, if warranted.

5.0 SITE INVESTIGATION

The TBA investigation was conducted in July, August and September 2004 and consisted of test pit excavations, soil borings, soil sampling, installation of monitoring wells, and groundwater sampling. Soil sampling at each location typically consisted of compositing apparent fill

materials separately from apparent native materials. VOC samples were not composited. Compositing was conducted to maximize the number of testing locations within the scope of the TBA budget.

5.1 Test Pit Excavations

On July 22, 2004, four test pits were excavated by M&E subcontractor Enpro, Inc. The purpose of the test pit excavations was to investigate subsurface structures and the quality of the soil at site. Three of the test pits were excavated in the estimated location of the former Harbor Brook bed, in order to characterize the fill. The fourth was located outside the stream bed to assess general site soils. The test pit locations are shown on Figure 2. The test pits were logged and characterized, including any evidence of impacts by OHM. OHM observations included visual appearance and field screening for total volatile organic compounds using a photoionization detector (PID). The test pit field logs are located in Appendix C.

The test pits were excavated using a 410D John Deere backhoe. Two of the test pits, TP-1 and TP-2, were excavated to 10 feet below the ground surface (bgs). TP-3 was excavated to 12 feet bgs and TP-4 was excavated to 8 feet bgs. All of the test pits were excavated to or below groundwater.

At least one sample was collected from each test pit and sent to a laboratory for analysis of SVOCs, ETPH, PCBs, metals, cyanide and asbestos.

Test Pit 1 was excavated near the southern corner of the former Canberra building. The top 5-6 feet of the pit consisted of fill materials, gravel, coarse sand, and brick pieces. Fine sand, silt and organic materials were encountered at 6-7 feet bgs, and were assumed to represent the former Harbor Brook bed. Water was seen at 8.5 feet bgs, and excavation ended at 10 feet bgs. An unmarked gas pipe was encountered at 6 feet bgs, and care was taken not to disturb it. No OHM were observed, and PID screening of the soil excavated from this test pit resulted in no response.

Test Pit 2 was located in the bank parking lot, in the former Harbor Brook. The top 8 feet of the pit consisted of fill materials, cobbles, gravel and coarse sand, along with pieces of concrete, brick and wood. This was moderately difficult to excavate due to large pieces of concrete and other fill materials, assumed to be debris from the former buildings on the site. Fine sand, silt and organic materials were encountered at 8 feet bgs, and were assumed to be the former Harbor Brook bed. Water was seen at 8.5 feet bgs. A petroleum odor was observed, and the water had an oily sheen. The PID readings were 0 ppm for all the soil excavated from this test pit.

Test Pit 3 was located on the southeastern side of the former Canberra building. Material in the pit consisted of gravel, medium to coarse sand, and a small amount of fine sand. No organic materials were observed, suggesting that it may not have been in the former Harbor Brook bed. Water was seen at 11.8 feet bgs, and excavation ended at 12 feet bgs. No OHM were observed, and the PID readings were 0 ppm for all the soil excavated from this test pit.

Test Pit 4 was located near the northern corner of the former Canberra building, in the former Harbor Brook. The top 7 feet of the pit consisted of fill materials, gravel, coarse sand, and brick

pieces. Fine sand and organic materials were encountered at 8 feet bgs, and were assumed to be the former Harbor Brook bed. Water was seen at 8 feet bgs, and excavation ended at 8 feet bgs. No OHM were observed, and the PID readings were 0 ppm for all the soil excavated from this test pit.

5.2 Soil Sampling from Borings

Soil borings were advanced using a truck-mounted hollow-stem auger drill rig on August 5th through 10th, 2004. Soil samples were collected continuously at each location using split spoon samplers. The soil borings were logged and characterized, including any evidence of impacts by OHM. OHM observations included visual appearance and field screening for total volatile organic compounds using a PID. The PID was used to screen the soil borings when they were first opened, and then again as a headspace after the soil was allowed to sit in a sealed bag for several minutes. Soil boring locations are shown on Figure 2 and soil boring logs are included in Appendix D.

Nine soil borings were conducted throughout the site. Soil samples were collected for analysis from seven of the borings. Soil samples were not obtained from two of the borings (B-103 and B-105) because refusal was encountered at 2-5 feet bgs. Boring B-103 hit refusal at 5 feet bgs, presumably due to the presence of the brook culvert. Boring B-105 hit refusal at 2 feet bgs due to the presence of reinforced concrete. This was in the area of the former INSILCO factory, thus it may have been the former factory concrete floor or footing. Two general types of soil were observed in each boring, fill soil in the top 6 to 10 feet and native soil in the deeper sections of the borings. Samples were collected from each type of soil, from each boring.

Boring MW-101 was conducted in the southern corner of the site, near the intersection of Pratt Street and East Main Street. Soil samples were collected for analysis at this location. The top 8 feet of soil consisted of medium to coarse sand and gravel, assumed to be fill materials from when the site was redeveloped. The finer sand and silt encountered below 8 feet is assumed to be native materials. No OHM were visually observed in this boring. The PID readings were 0 ppm for almost all of the boring. The PID readings taken of the headspace at 6-8 feet and 8-10 feet read 102 ppm and 78 ppm, respectively. Samples were collected at 9.5 feet for VOC analysis. Groundwater was encountered at approximately 12 feet bgs. Sampling was conducted to 16 feet bgs. MW-101 was completed as a monitoring well.

Boring MW-102 was conducted in the south central area of the site, in the center of the bank parking lot, in the former Harbor Brook. Soil samples were collected for analysis at this location. The top 10 feet of soil consisted of medium to coarse sand and gravel, assumed to be fill materials. The finer sand and silt encountered below 10 feet is assumed to be native materials. No OHM were visually observed in this boring. The PID readings were 0 ppm for both the initial and headspace readings throughout the entire boring. Groundwater was encountered at approximately 8 feet bgs. Sampling was conducted to 14 feet bgs. MW-102 was completed as a monitoring well.

Boring MW-104 was conducted in the southeastern area of the site, just southwest of the vacant building. Soil samples were collected for analysis at this location. The top 9 feet of soil

consisted of medium to coarse sand and gravel, assumed to be fill materials. The finer sand and silt encountered below 9 feet is assumed to be native materials. No OHM were visually observed in this boring. The initial PID readings were all 0 ppm. The headspace PID readings ranged from 2.0 to 4.7 ppm from the 4-14 feet sections of the boring. Groundwater was encountered at approximately 7 feet bgs. Sampling was conducted to 14 feet bgs. MW-104 was completed as a monitoring well.

Boring MW-106 was conducted near the northern corner of the site. Soil samples were collected for analysis at this location. The top 6 feet of soil consisted of medium to coarse sand and gravel, and a small amount of coal, assumed to be fill materials. The finer sand and organic materials encountered below 6 feet is assumed to be native materials. A petroleum odor was observed in the 4-6 feet section of this boring. The 4-6 feet section of the soil boring had an initial PID reading of 910 ppm, and a headspace reading of 282 ppm. Samples were collected at 5 feet for VOC analysis. The initial PID readings from the other sections of the boring were all 0 ppm. The headspace PID readings ranged from 2.0 to 4.7 ppm from the 2-12 feet sections of the boring. Groundwater was encountered at approximately 6 feet bgs. Sampling was conducted to 12 feet bgs. MW-106 was completed as a monitoring well.

Boring MW-107 was conducted in the north central area of the site, just northeast of the vacant building. Soil samples were collected for analysis at this location. The top 8 feet of soil consisted of medium to coarse sand and gravel, assumed to be fill materials. The finer sand encountered below 8 feet is assumed to be native materials. No OHM were visually observed in this boring. The initial PID readings were all 0 ppm. The headspace PID readings ranged from 1.3 to 5.6 ppm from all sections of the boring. Groundwater was encountered at approximately 7 feet bgs. Sampling was conducted to 12 feet bgs. MW-107 was completed as a monitoring well.

Boring MW-108 was conducted in the eastern corner of the site. Soil samples were collected for analysis at this location. The top 8 feet of soil consisted of medium to coarse sand and gravel, assumed to be fill materials. The finer sand encountered below 8 feet is assumed to be native materials. No OHM were visually observed in this boring. The initial PID readings were all 0 ppm. The headspace PID readings ranged from 6.8 to 15.4 ppm from all sections of the boring, except the 0-2 feet and 10-12 feet sections, which were 0 ppm. Groundwater was encountered at approximately 7 feet bgs. Sampling was conducted to 14 feet bgs. MW-108 was completed as a monitoring well.

Boring MW-109 was conducted in the east central area of the site, in the driveway to the loading dock of the vacant building. Soil samples were collected for analysis at this location. The top 7 feet of soil consisted of medium to coarse sand and gravel, and a small amount of coal, assumed to be fill materials. The finer sand and organic materials encountered below 7 feet is assumed to be native materials. A slight petroleum odor was observed in the 8-10 feet section of this boring. The 8-10 feet section had an initial PID reading of 127 ppm, and a headspace reading of 348 ppm. The headspace PID reading from the 6-8 feet section was 15.7 ppm, and the initial reading there was 0 ppm. The initial and headspace PID readings from the other sections of the boring were all 0 ppm. Groundwater was encountered at approximately 7 feet bgs. Sampling was conducted to 13 feet bgs. MW-109 was completed as a monitoring well.

5.3 Monitoring Well Installation and Groundwater Sampling

Seven overburden monitoring wells were installed at the site during the TBA field investigation. The wells are identified as MW-101, MW-102, MW-104, MW-106, MW-107, MW-108, and MW-109 on Figure 2 and were constructed in the soil boring locations bearing the same identification.

All wells were constructed using two-inch schedule-40 flush joint PVC. The monitoring wells were screened across the water table with a 10-foot section of 10-slot PVC well screen and brought flush to grade with a solid PVC riser that was capped and housed in a two-inch iron gate box. The well construction consisted of sand pack in the annular space around the PVC completed to approximately 2 feet above the top of the well screen, 1 foot of hydrated bentonite chips, sand above the bentonite, and a concrete pad with flush mount gate box. Well installation logs are included in Appendix E.

Well development was completed following installation of groundwater monitoring wells, on August 10, 2004. The completed monitoring wells were developed by pumping the wells to remove fine-grained particles until the water produced was relatively clear.

Existing monitoring well MW-3, and newly installed wells MW-102, MW-106, MW-108 and MW-109 were sampled on September 8, 2004. MW-3 was sampled since vinyl chloride was detected in the groundwater at levels that exceeded the RSR criteria when it was sampled by others in 1997. MW-102 was sampled due to its location in the former Harbor Brook. MW-106 and MW-109 were sampled because the soil borings collected from both locations had petroleum odors. MW-108 was sampled due to its location at the corner of the site. The wells were sampled using EPA low-flow methods (July, 1996). During groundwater sampling, the purge water was monitored for temperature, pH, specific conductivity, oxidation reduction potential, dissolved oxygen and turbidity (collectively referred to as field parameters). Groundwater sampling was initiated upon stabilization of these field parameters. Field sampling worksheets are included in Appendix F.

5.4 Geologic and Hydrogeologic Conditions

According to the Bedrock Geologic Map of the Meriden Quadrangle, Connecticut (1969, USGS), the Meriden HUB area is underlain by arkosic conglomerate and sandstone, medium to fine grained feldspathic sandstone and siltstone bedrock, known as the New Haven Arkose. Overburden at the site consists of approximately 6-8 feet of fill materials of medium to coarse grained sand and gravel. As noted previously, significant filling and reworking of surficial soils has likely occurred. Glacial meltwater deposits of stratified sand, gravel, silt and clay are located below the fill.

In addition to the soils encountered, a concrete slab was also encountered north of the vacant building at one-half to two feet bgs. According to the Phase I ESA, this area was formerly occupied by large factory buildings.

As shown on Figure 3, the conceptual model of groundwater flow direction being toward the former Harbor Brook bed appears to be confirmed. Flow appears to be from both the north and south to the former Harbor Brook bed, or possibly the existing Harbor Brook culvert. Due to the coarse, un-compacted nature of fill material in the stream bed it may be a more likely drain for groundwater than the culvert bed, which was likely subject to compaction during and after construction. There are currently not enough monitoring wells to conclusively determine the flow direction and drainage point.

The flow direction was evaluated by depth to groundwater measurements in wells MW-3, MW-4, MW-101, MW-102, MW-104, MW-106, MW-107, MW-108 and MW-109, and a field survey of the relative elevations of the nine well tops. Measurements were made relative to an arbitrary datum of 100.00 ft, located at the northern corner of the bank building.

6.0 ANALYTICAL DATA EVALUATION

The laboratory analytical data from the site investigation are presented and discussed in this section. Test pit soil analytical results are summarized in Table 3. Soil boring analytical results are summarized in Table 4. Groundwater analytical results are summarized in Table 5. The tables are located in Appendix B and present only detected analytes. Laboratory data sheets and data validation memoranda are provided in Appendix G. Data are compared to criteria contained in state regulations.

The Regulations of Connecticut State Agencies ("RCSA") Sections 22a-133k-1 through 22a-133k-3, inclusive, comprise the Remediation Standard Regulations ("RSRs"). The RSRs apply to investigation and remediation of properties that are being transferred and meet the definition of "establishment" in the Connecticut Property Transfer Law. The RSRs also apply to sites undergoing voluntary remediation under RCSA Section 22a-133x or Section 22a-133y, and to remedial actions required by an order of the Commissioner pursuant to Chapter 445 or 446k of the Connecticut General Statutes. The CTDEP also suggests using the RSRs for guidance on sites that do not fit these categories, but are undergoing investigation and/or remediation.

The CTDEP RSR criteria applied to the soil results are the industrial/commercial and residential direct exposure criteria and the GB pollutant mobility criteria (I/C and RES DEC and GB PMC, respectively). These criteria are presented on Tables 3 and 4 for relative comparison to detected concentrations. The CTDEP RSR criteria applied to the groundwater results are the proposed revised industrial/commercial and residential volatilization criteria (I/C VC and RES VC, respectively) (CTDEP, March 2003), and the surface water protection criteria (SWPC), which are presented on Table 5 for comparison purposes.

6.1 Test Pit Soil Samples

Soil samples were collected from four test pits and submitted for laboratory analysis. None of the soil samples from the test pits contained concentrations of PCBs or total cyanide above their detection limits. Analytical results from samples are summarized by contaminant below.

SVOCs. Concentrations of various SVOCs exceeded the I/C and RES DEC and the GB PMC in three of four test pit samples. All of these test pits were located in the former Harbor Brook area of the site. The sample collected from the other test pit (TP-3) did not contain SVOCs at concentrations above the sample-specific laboratory reporting limit of 400 ug/kg. Most of the detected compounds are in the subset of SVOCs known as polycyclic aromatic hydrocarbons (PAHs).

To further evaluate pollutant mobility issues, the sample from TP-2 was analyzed after undergoing the synthetic precipitation leaching procedure (SPLP). A few PAHs were detected, however they were all below their respective GBPMC.

Extractable Petroleum Hydrocarbons. Soil samples from all four test pits contained ETPH. Soil samples from TP-2 and TP-4 contained ETPH at concentrations that exceeded the RES DEC. Soil samples from TP-1 and TP-3 contained ETPH at concentrations that did not exceed any applicable RSR criteria.

Metals. The only metals detected at concentrations that appear to be greater than natural background levels were lead and silver. The soil sample from TP-4 contained lead at concentrations that exceeded the RES DEC, and samples from TP-2 and TP-3 contained lead concentrations that were slightly elevated, but below RSR criteria. Silver was detected at a slightly elevated concentration, well below RSR criteria, in the sample from TP-2.

SPLP analysis for metals was conducted on the soil collected from TP-4. Antimony, total chromium, lead, nickel, and vanadium were detected above quantifiable concentrations, however all concentrations were well below their respective pollutant mobility criteria.

6.2 Soil Boring Samples

Soil samples were collected from seven borings and submitted for laboratory analyses. Both shallow and deep soil samples were collected from each boring. PCBs were not detected in any of the soil samples. Analytical results are summarized by contaminant below.

VOCs. Petroleum–related VOCs were detected in two of the eight samples analyzed from soil borings. The VOCs were detected in the soil samples collected from MW-106 at a depth of five feet and in the soil sample collected from MW-109 at a depth of 10.5 ft. All detections were well below RSR criteria. No chlorinated VOCs were detected, with the exception of methylene chloride, which is commonly related to cross-contamination from laboratory procedures.

SVOCs. Compounds in the PAH subset of SVOCs were detected in seven of ten soil samples analyzed. Concentrations in two of these samples, MW 101 (0-8 ft) and MW-102 (10-14 ft), exceeded direct exposure and/or pollutant mobility criteria. The MW-101 sample contained highly elevated concentrations.

SPLP analysis for PAHs was conducted on these samples. Detected concentrations of PAHs were all well below their respective criteria.

Extractable Total Petroleum Hydrocarbons. ETPH was detected at quantifiable concentrations in eight of the nine samples analyzed. Two samples, MW-101 (0-8 ft) and MW-102 (10-14 ft) contained ETPH at concentrations that exceeded the RES DEC. The concentration of the sample from MW-109 (7-11 ft) was just below the RES DEC.

Metals. Of the fifteen metals analyzed in fourteen samples, five were detected in one or more samples at concentrations that appear to be greater than naturally occurring background levels. However no concentrations exceeded RSR criteria. The five metals whose concentrations appear to exceed naturally occurring background at one or more locations are lead, barium, mercury, silver and zinc. Lead was detected in two samples, MW-101 (0-8 ft) and MW-104 (0.5-6 ft.) at concentrations in the 300 mg/kg range; barium was detected in one sample, MW-101 (8-16 ft); mercury was detected in one sample, MW-109 (1-7 ft.); silver was detected in one sample, MW-102 (10-14 ft.); and zinc was detected in one sample, MW-106 (0.5-6 ft.).

Arsenic was detected at concentrations that exceeded the RES and I/C DEC in six of the fourteen samples. The highest concentration was 15.5 mg/kg. It should be noted that the DEC criteria for arsenic of 10 mg/kg is based on an average of naturally occurring background levels. Therefore these relatively low detections may reflect natural conditions instead of contaminant sources, even though RSR criteria were exceeded.

SPLP analysis for metals was conducted on eight soil samples. With the exception of antimony and beryllium, all of the metals analyzed for were detected in one or more samples. All concentrations were very low and none exceeded, or even approached, their respective PMC.

Cyanide. Cyanide was detected in two of the fourteen samples at quantifiable concentrations; both concentrations were well below the I/C and RES DEC for cyanide.

6.3 Groundwater

Groundwater samples were collected from five monitoring wells (MW-3, MW-102, MW-106, MW-108 and MW-109) and submitted for laboratory analyses. ETPH was not detected in any of the groundwater samples. Analytical results are summarized by parameter below.

VOCs. VOCs were detected in samples from three of the five wells, with one exceedance of RSR criteria. The sample from MW-3 contained vinyl chloride at a concentration of 8 ug/L, which exceeds the RES VC of 1.6 ug/L. The sample from MW-3 also contained trans- and cis-dichloroethene, which are parent compounds of vinyl chloride, as well as low levels of trichloroethylene, naphthalene, and 1,2,3-trichlorobenzene. The sample from MW-108 contained the chlorinated solvents trichloroethylene and tetrachloroethylene, both at concentrations well below RSR criteria. The sample from MW-109 contained low levels of trichloroethylene, as well as several petroleum-related compounds at low concentrations.

SVOCs. Two of the five groundwater samples contained detectable concentrations of the subset of SVOCs, PAHs. Phenanthrene was detected at concentrations that exceeded the SWPC in the sample collected from MW-102. All of the samples from the other monitoring wells were below the SWPC for SVOCs. No VC have been established for the detected SVOCs.

Metals. Barium, copper, lead, nickel, silver, vanadium, and zinc were detected in one or more groundwater samples. The only RSR exceedance was for the SWPC for lead, in the sample from MW-102.

Cyanide. Cyanide was detected in samples collected from MW-3 and MW-102, with the sample from MW-3 detected at a concentration that exceeded the SWPC.

6.4 Data Quality Assessment

Samples were analyzed by a directly-subcontracted laboratory. Quality control (QC) samples were also collected and submitted for laboratory analysis to monitor and evaluate laboratory and sampling performance. The field QC samples collected included trip blanks, field duplicates, and matrix spike/matrix spike duplicate samples.

M&E conducted a limited QC review/validation of analytical laboratory data in accordance with the EPA-approved FTWP (M&E, 2004). The review/validation provides an overview of the laboratory and field QC data by identifying potential QC issues and assessing common QC criteria that might affect reporting and usability of the environmental data, as well as verifying that the laboratory has met minimum data acceptance criteria established by M&E. Although the limited review/validation was based on EPA Region I data validation guidelines (U.S. EPA, 1996), it was more limited in scope. The review/validation performed by M&E consisted of completing Tier II-like forms only for applicable criteria parameters, assessing data usability, and summarizing the results in abbreviated Tier II-like memoranda. The validation memoranda are included in Appendix G.

Data found to be suspect during the validation/review process were qualified. Laboratory data forms were revised by hand to indicate any validation qualifications that supersede laboratory qualifiers and are included in the data validation memoranda. The final validation qualifiers are consistent with EPA validation guidelines. Positive results that were shown to exhibit poor precision or accuracy were qualified as approximated and flagged with a "J." Nondetect results were flagged with a "UJ" if the associated QC data did not meet applicable criteria. Positive results were not qualified if they were found to meet all validation criteria. Nondetect results that were found to meet the validation criteria were shown as the quantitation limit or detection limit followed by a "U" qualifier. Sample data that failed to meet associated QC criteria were rejected and flagged with an "R" using EPA data validation guidelines.

7.0 SUMMARY OF RSR EXCEEDANCES

This section presents a summary of locations where samples contained contaminants at concentrations that exceeded RSR criteria. Figure 4 also summarizes these findings, as well as identifies where other contaminants were detected at concentrations below RSR criteria. It is important to note that the scope of this assessment did not permit complete characterization of the site, or even individual AOCs. Therefore it is premature to completely evaluate compliance with the RSRs. The detection of contaminants in AOCs suggests that further investigation is

needed to identify potential sources of contamination within the AOCs, and evaluate RSR compliance.

7.1 Soils

- Twelve SVOC concentrations in the 0-8' sample from location MW-101, and five SVOC concentrations in the 10-14' sample from location MW-102, exceeded RSR criteria.

- ETPH concentrations exceeded the RES DEC in samples from TP-2 and TP-4, and MW-101 at both sample depths.

- Lead concentrations exceeded the RES DEC in a sample from TP-4.

- Arsenic concentrations exceeded the CTDEP RSR criteria in the 0-10' and the10-14' samples from location MW-102, in the 0-9' sample from location MW-104, in the 0-6' sample from location MW-106, and in both the 0-8' and the 8-12' samples from location MW-107.

7.2 Groundwater

- Groundwater sampled from MW-3 contained vinyl chloride at concentrations that exceeded the RES VC, and cyanide at concentrations that exceeded the SWPC.

- Lead and the PAH phenanthrene were detected at concentrations that exceed their respective SWPC in the sample collected from MW-102.

8.0 REVISED CONCEPTUAL SITE MODEL

Based on the findings of the TBA, the preliminary CSM was revised to re-evaluate the areas of concern, contaminants of concern, migration pathways and potential receptors of contamination, and to identify remaining data gaps.

8.1 Areas of Concern

The following sections summarize the findings and concerns for each AOC.

AOC 1 – Site-Wide Fill. High-level contamination was detected in only one of five sampling locations (MW-101). COCs detected in this AOC included SVOCs, ETPH, and, based on field screening, VOCs. Although widespread contamination was not detected, based on the TBA results the area cannot be eliminated from future assessment since testing was limited and other pockets of contamination may exist.

AOC 2 – Former Harbor Brook Fill. Contaminants were detected at all four testing locations in this AOC, suggesting it may have been used for industrial/commercial discharges in the past. This was confirmed by the amount of demolition fill observed in the former brook. A petroleum sheen and odor was also observed in two testing locations, TP-2 and MW-102. Phenanthrene and lead concentrations in the MW-102 groundwater sample exceeded the RSR SWPC.

General Statement of Limitations and Conditions provided in Appendix H, which are incorporated by reference into, and are an integral part of, this report submittal. This report has been prepared on behalf of, and for the exclusive use of, the U.S. Environmental Protection Agency. Any use of or reliance on M&E's report by a third party, even with M&E's consent, shall be at such party's own risk.

10.0 REFERENCES

United States Geologic Survey (USGS). 1968. *Bedrock Geological Map of the Meriden Quadrangle, Connecticut.*

United States Geologic Survey (USGS). 1962. *Surficial Geology of the Meriden Quadrangle, Connecticut.*

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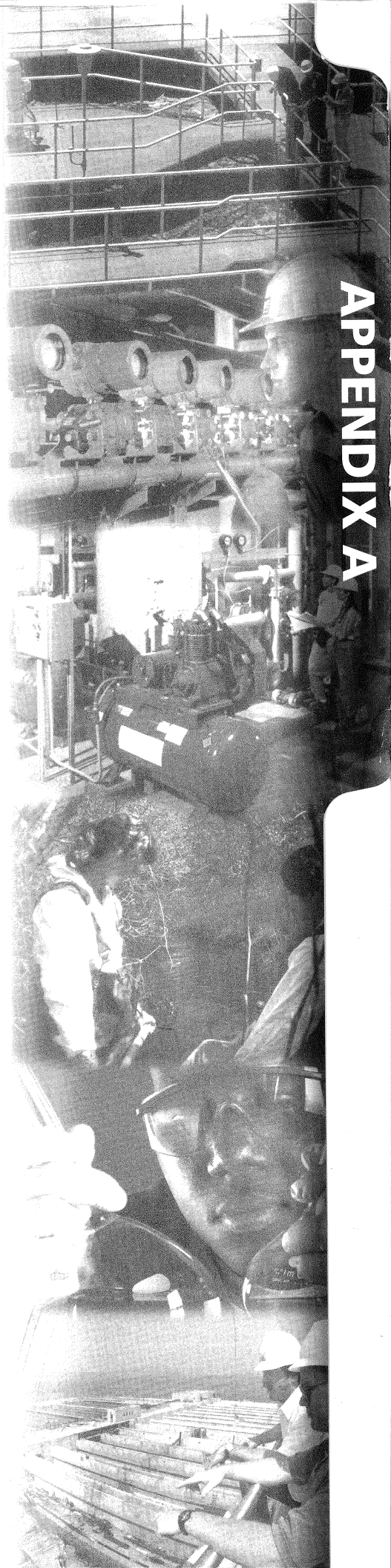
Metcalf & Eddy (M&E). *Final Field Task Work Plan for the Meriden HUB, Meriden, Connecticut - Targeted Brownfields Assessments.* Prepared for U.S. Environmental Protection Agency. June, 2004.

U.S. Environmental Protection Agency (U.S. EPA). 1996. *Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses.* December 1996.

APPENDIX A



SOURCE:
USGS QUADRANGLE;
MERIDEN, CONNECTICUT
REVISED 1992

0 2000 4000 6000

SCALE IN FEET

SCALE: 1"=2000'-0"

Metcalf & Eddy

FIGURE 1
SITE LOCATION PLAN
MERIDEN HUB
MERIDEN, CT

DATE: DEC. 2004

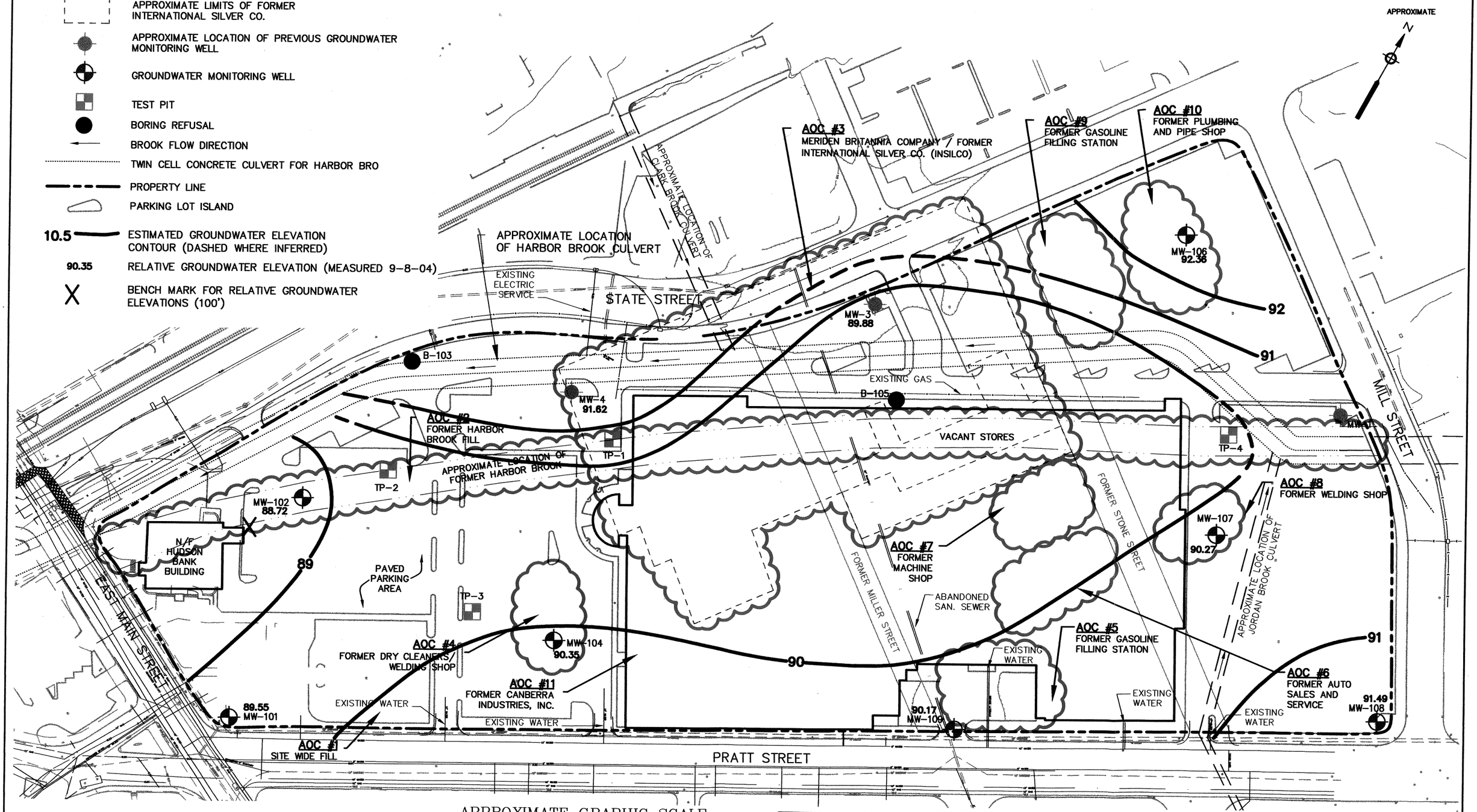
FILE: P\00100MER\C\CZMER001

APPENDIX A

FIGURES

LEGEND:

- AREA OF CONCERN
- APPROXIMATE LIMITS OF FORMER INTERNATIONAL SILVER CO.
- APPROXIMATE LOCATION OF PREVIOUS GROUNDWATER MONITORING WELL
- GROUNDWATER MONITORING WELL
- TEST PIT
- BORING REFUSAL
- BROOK FLOW DIRECTION
- TWIN CELL CONCRETE CULVERT FOR HARBOR BRO
- PROPERTY LINE
- PARKING LOT ISLAND
- 10.5 — ESTIMATED GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- 90.35 — RELATIVE GROUNDWATER ELEVATION (MEASURED 9-8-04)
- X — BENCH MARK FOR RELATIVE GROUNDWATER ELEVATIONS (100')



APPROXIMATE GRAPHIC SCALE

100' 0 50' 100' 200'

(IN FEET)
1 inch = 100 ft.

MAP REFERENCE:
MAP ENTITLED "PRELIMINARY GRADING AND CONSTRUCTION PLAN HARBOR BROOK FLOOD CONTROL PROJECT", PREPARED BY MILONE & MacBROOM, INC., SCALE 1" = 40', DATED JANUARY, 1999, SHEET NO. 15.

M&E Metcalf & Eddy

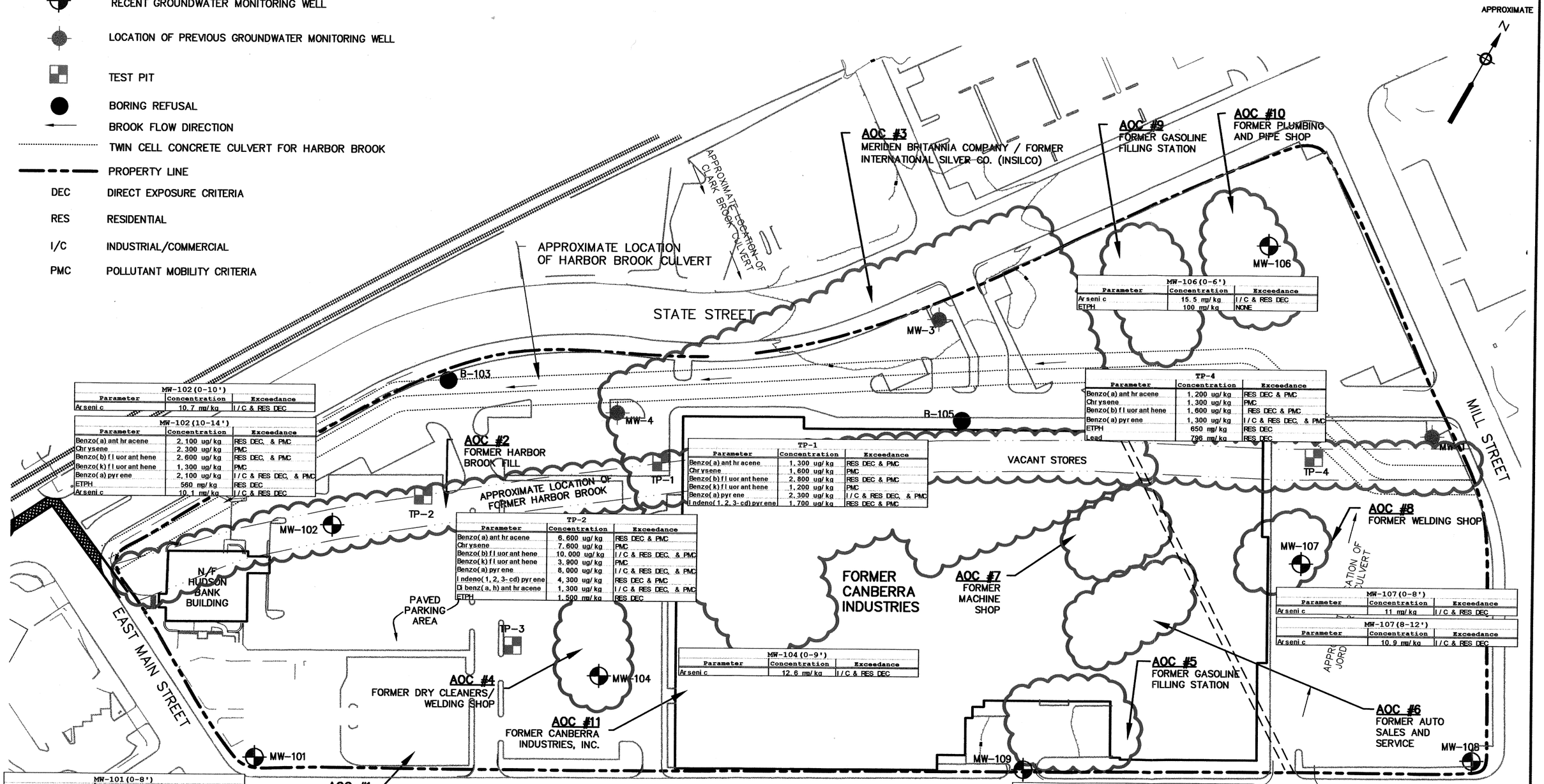
FIGURE 3
ESTIMATED GROUNDWATER ELEVATION CONTOUR MAP
MERIDEN HUB
MERIDEN, CT

DATE: DEC. 2004 | FILE: P:\00100MER\C\CZMER002d

ANSI B - 11-20-01

LEGEND:

- RECENT GROUNDWATER MONITORING WELL
- LOCATION OF PREVIOUS GROUNDWATER MONITORING WELL
- TEST PIT
- BORING REFUSAL
- BROOK FLOW DIRECTION
- TWIN CELL CONCRETE CULVERT FOR HARBOR BROOK
- PROPERTY LINE
- DEC — DIRECT EXPOSURE CRITERIA
- RES — RESIDENTIAL
- I/C — INDUSTRIAL/COMMERCIAL
- PMC — POLLUTANT MOBILITY CRITERIA



MW-106 (0-6')		
Parameter	Concentration	Exceedance
Arsenic	15.5 mg/kg	I/C & RES DEC
ETPH	100 mg/kg	NONE

TP-4		
Parameter	Concentration	Exceedance
Benzo(a)anthracene	1,200 ug/kg	RES DEC & PMC
Chrysene	1,300 ug/kg	PMC
Benzo(b)fluoranthene	1,600 ug/kg	RES DEC & PMC
Benzo(a)pyrene	1,300 ug/kg	I/C & RES DEC, & PMC
ETPH	650 mg/kg	RES DEC
Lead	796 mg/kg	RES DEC

MW-102 (0-10')		
Parameter	Concentration	Exceedance
Arsenic	10.7 mg/kg	I/C & RES DEC

MW-102 (10-14')		
Parameter	Concentration	Exceedance
Benzo(a)anthracene	2,100 ug/kg	RES DEC, & PMC
Chrysene	2,300 ug/kg	PMC
Benzo(b)fluoranthene	2,800 ug/kg	RES DEC, & PMC
Benzo(k)fluoranthene	1,300 ug/kg	PMC
Benzo(a)pyrene	2,100 ug/kg	I/C & RES DEC, & PMC
ETPH	560 mg/kg	RES DEC
Arsenic	10.1 mg/kg	I/C & RES DEC

TP-1		
Parameter	Concentration	Exceedance
Benzo(a)anthracene	1,300 ug/kg	RES DEC & PMC
Chrysene	1,600 ug/kg	PMC
Benzo(b)fluoranthene	2,800 ug/kg	RES DEC & PMC
Benzo(k)fluoranthene	1,200 ug/kg	PMC
Benzo(a)pyrene	2,300 ug/kg	I/C & RES DEC, & PMC
Indeno(1,2,3-cd)pyrene	1,700 ug/kg	RES DEC & PMC

TP-2		
Parameter	Concentration	Exceedance
Benzo(a)anthracene	6,600 ug/kg	RES DEC & PMC
Chrysene	7,600 ug/kg	PMC
Benzo(b)fluoranthene	10,000 ug/kg	I/C & RES DEC, & PMC
Benzo(k)fluoranthene	3,900 ug/kg	PMC
Benzo(a)pyrene	8,000 ug/kg	I/C & RES DEC, & PMC
Indeno(1,2,3-cd)pyrene	4,300 ug/kg	RES DEC & PMC
Dibenz(a,h)anthracene	1,300 ug/kg	I/C & RES DEC, & PMC
ETPH	1,500 mg/kg	RES DEC

MW-104 (0-9')		
Parameter	Concentration	Exceedance
Arsenic	12.6 mg/kg	I/C & RES DEC

MW-107 (0-8')		
Parameter	Concentration	Exceedance
Arsenic	11 mg/kg	I/C & RES DEC

MW-107 (8-12')		
Parameter	Concentration	Exceedance
Arsenic	10.9 mg/kg	I/C & RES DEC

MW-101 (0-8')		
Parameter	Concentration	Exceedance
Dibenzofuran	7,600 ug/kg	PMC
Phenanthrene	80,000 ug/kg	PMC
Carbazol	2,000 ug/kg	PMC
Fluoranthene	80,000 ug/kg	PMC
Pyrene	63,000 ug/kg	PMC
Benzo(a)anthracene	24,000 ug/kg	I/C & RES DEC, & PMC
Chrysene	25,000 ug/kg	PMC
Benzo(b)fluoranthene	31,000 ug/kg	I/C & RES DEC, & PMC
Benzo(k)fluoranthene	9,700 ug/kg	RES DEC & PMC
Benzo(a)pyrene	23,000 ug/kg	I/C & RES DEC, & PMC
Indeno(1,2,3-cd)pyrene	14,000 ug/kg	RES DEC & PMC
Dibenz(a,h)anthracene	4,900 ug/kg	I/C & RES DEC, & PMC
ETPH	920 mg/kg	RES DEC

MW-109 (1-7')		
Parameter	Concentration	Exceedance
ETPH	200 mg/kg	NONE

MW-109 (7-11')		
Parameter	Concentration	Exceedance
ETPH	430 mg/kg	NONE

NOTE:
ENTIRE SITE WITH EXCEPTION OF PARKING LOT "ISLANDS" IS PAVED.

APPROXIMATE GRAPHIC SCALE

100' 0 50' 100' 200'

(IN FEET)
1 inch = 100 ft.

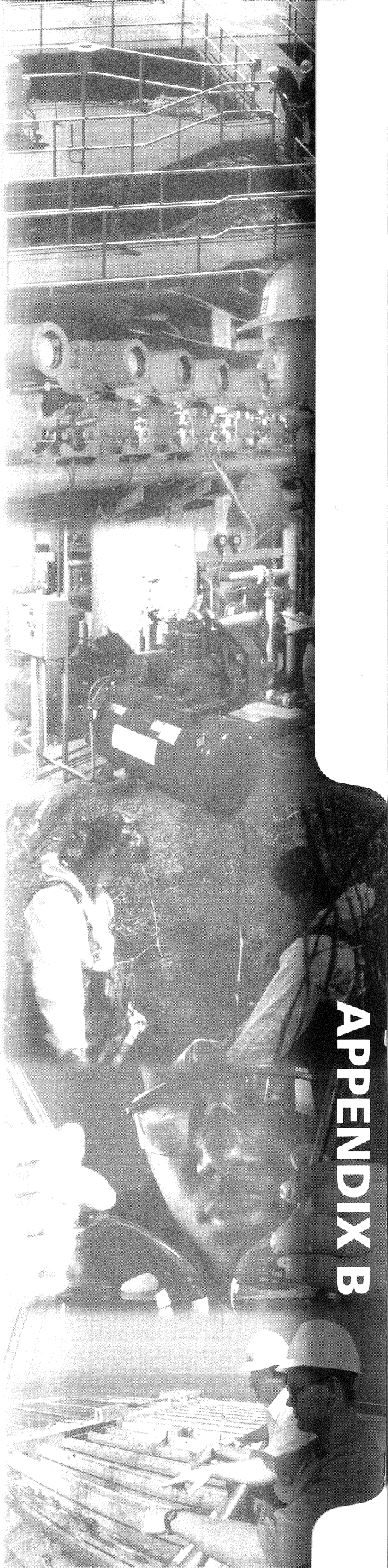
Metcalf & Eddy

FIGURE 4
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
MERIDEN HUB
MERIDEN, CT

DATE: DEC.2004 | FILE: P\00100MER\C\CZMER004

STDB - 08-04-03

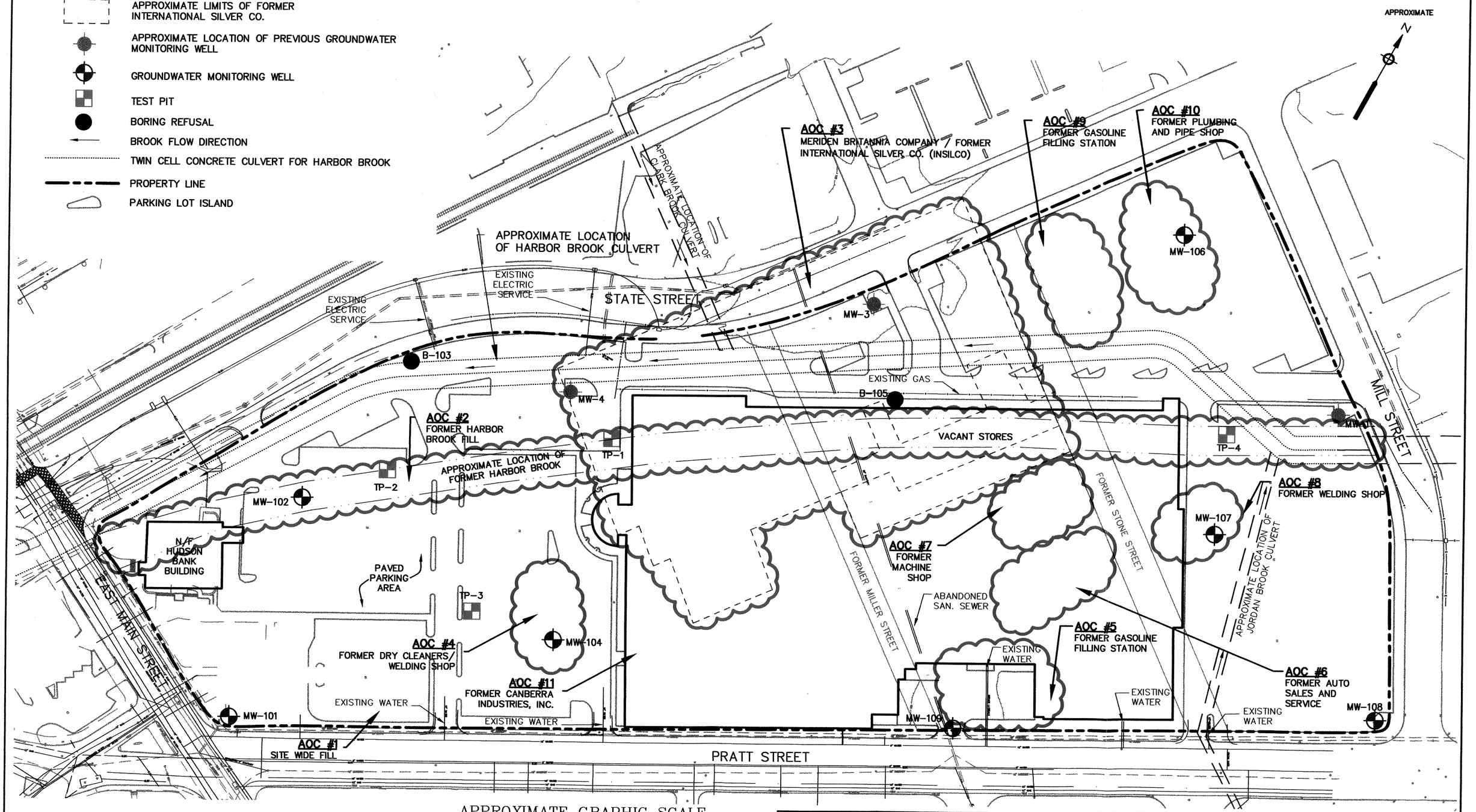
APPENDIX B



APPENDIX B

LEGEND:

- AREA OF CONCERN
- APPROXIMATE LIMITS OF FORMER INTERNATIONAL SILVER CO.
- APPROXIMATE LOCATION OF PREVIOUS GROUNDWATER MONITORING WELL
- GROUNDWATER MONITORING WELL
- TEST PIT
- BORING REFUSAL
- BROOK FLOW DIRECTION
- TWIN CELL CONCRETE CULVERT FOR HARBOR BROOK
- PROPERTY LINE
- PARKING LOT ISLAND



MAP REFERENCE:
MAP ENTITLED "PRELIMINARY GRADING AND CONSTRUCTION PLAN HARBOR BROOK FLOOD CONTROL PROJECT", PREPARED BY MILONE & MacBROOM, INC., SCALE 1" = 40', DATED JANUARY, 1999, SHEET NO. 15.

APPROXIMATE GRAPHIC SCALE

100' 0 50' 100' 200'

(IN FEET)
1 inch = 100 ft.

M&E Metcalf & Eddy

FIGURE 2. TARGETED BROWNFIELDS ASSESSMENT SAMPLE LOCATION PLAN
MERIDEN HUB
MERIDEN, CT

DATE: DEC.2004 | FILE: P:\00100MER\C\CZMER002c

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APPENDIX B

TABLES

TABLE 1
Historic/Pre-TBA Soil Sample Results
Meriden HUB Site, Meriden, Connecticut

Sample Number	MW-1 (4'-6')	MW-1 (10'-12')	MW-3 (2'-4')	MW-3 (8'-10')	MW-4 (2'-4')	MW-4 (10'-12')	MW-5 (2.5'-4.5')	MW-5 (10.5'-12.5')	CTDEP Remediation Standard Regulations		
Sample Date	5/28/1999	5/28/1999	5/28/1999	5/28/1999	5/28/1999	5/28/1999	5/28/1999	5/28/1999	Direct Exposure Criteria (mg/kg)		Pollutant Mobility
									Residential	Commercial	Criteria for GB (mg/kg)
Volatile Organic Compounds (ppm)											
sec- butylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	0.011	BDL	500	1,000	14
cis-1,2-dichloroethylene	BDL	BDL	0.13	BDL	BDL	BDL	BDL	BDL	500	1,000	14
Trichloroethylene	BDL	BDL	0.111	BDL	BDL	BDL	BDL	BDL	56	520	1
Total Petroleum Hydrocarbons (ppm)	1,096	48	<25	<25	1,148	<25	2,144	<25	500	2,500	2,500
Metals (mg/kg)											
Arsenic	7.2	9.5	4.2	3.9	3.1	4.3	3.5	1.6	10	10	NE
Silver	57.4	<0.2	4.3	6.5	0.6	0.4	0.3	<0.2	340	10,000	NE
Cadmium	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	34	1,000	NE
Chromium	18.5	7.9	12.1	10.7	16.2	13.7	12.6	10.3	NE	NE	NE
Copper	134	12.8	91	87.3	36.3	45.9	21.6	28	2,500	76,000	NE
Lead	636	12	80.5	15	24.5	8.6	19.9	5	400	1,000	NE
Mercury	1.88	0.04	0.11	0.2	0.4	1.1	0.06	<0.02	20	610	NE
Nickel	9.8	3.8	20.9	20.5	6.8	6.5	9	6.5	1,400	7,500	NE
Zinc	986	30.8	86.2	80	49.2	46	41.9	27.1	20,000	610,000	NE

TABLE 2
Historic/Pre-TBA Groundwater Sample Results
Meriden HUB Site, Meriden, Connecticut

Sample Number	MW-1 HM	MW-3 HM	MW-3 HM2	MW-4 HM	MW-5 HM	CTDEP Remediation Standard Regulations	
Sample Date	7/24/2001	7/24/2001	7/24/2001	7/24/2001	7/24/2001	Residential Volitilization Criteria (ug/l)	Surface Water Protection Criteria (ug/l)
Volatile Organic Compounds (ug/l)							
MTBE	<1	1.3	1.8	<1	<1	50,000	NE
Trichloroethene	<1	2.0	2.0	<1	<1	219	2,340
Vinyl Chloride	<1	6.1	7.3	<1	<1	2	15,750
Chloroform	1.5	<1	<1	<1	<1	287	14,100
Dichloromethane	<1	<1	<1	1.0	<1	NE	NE
cis-1,2-Dichloroethene	<1	16.1	18.3	<1	<1	NE	NE
trans1,2-Dichloroethene	<1	2.7	3.0	<1	<1	NE	NE
Total Petroleum Hydrocarbons (ug/l)	110	490	550	110	160	NE	NE
Metals (ug/l)							
Arsenic	3.0	4.0	3.0	<2	<2	NE	4
Silver	<4	<4	10.0	6.0	<4	NE	12
Copper	10	<10	<10	80	<10	NE	48
Nickel	<10	15	16	11	<10	NE	880
Lead	7	<2	3	<2	2	NE	13
Zinc	26	33	<20	61	21	NE	123
Mercury	<0.08	<0.08	<0.08	0.1	<0.08	NE	0.4

Sources: Final Preliminary Environmental Site Investigation, HUB Mall and Factory H, Meriden, Connecticut, Nobis Engineering, Inc., July 2001; and Final Report Harbor Brook Flood Control and Restoration Project, Milone & MacBroom, 1997

NE - Not Established by CTDEP

BDL - Below detection limit

Table 3. Summary Of Test Pit Analytical Data *
TBA Investigation -- Meriden Hub Site -- July 2004

LOCATION NAME	TP-1	TP-2	TP-3	TP-4		CT RSR Direct Exposure Criteria** (in same units as analysis)		CT RSR Pollutant Mobility Criteria**
SAMPLE DEPTH (ft bgs)	1 - 10'	1 - 10'	1 - 12'	1 - 8'				
% SOLIDS	66	74	82	85	82			
DATE SAMPLED	7/22/04	7/22/04	7/22/04	7/22/04	7/22/04			
COMMENTS					FD of TP-4	I/C	RES	GB
PARAMETER/ANALYTE								
SEMIVOLATILE ORGANIC COMPOUNDS -SW-846 Method 8270C (µg/kg)								
Naphthalene	500 U	320 J	400 U	390 U	400 J	2,500,000	1,000,000	56,000
2-Methylnaphthalene	500 U	270 J	400 U	390 U	260 J	2,500,000	474,000	9,800
Acenaphthylene	500 U	1,100	400 U	360 J	450	2,500,000	1,000,000	84,000
Acenaphthene	500 U	1,100	400 U	78 J	1,200 J	2,500,000	1,000,000	84,000
Dibenzofuran	500 U	510	400 U	58 J	750 J	2,500,000	270,000	5,600
Diethylphthalate	1,500	320 J	400 U	390 U	400 U	2,500,000	1,000,000	1,100,000
Fluorene	500 U	1,600	400 U	100 J	1,200 J	2,500,000	1,000,000	56,000
Phenanthrene	980 J	6,000	160 J	1,000 J	9,200 J	2,500,000	1,000,000	40,000
Anthracene	170 J	2,500	400 U	370 J	2,500 J	2,500,000	1,000,000	400,000
Carbazole	500 U	720	400 U	170 J	**1,100 J**	290,000	31,000	1,000
Fluoranthene	1,900 J	14,000 J	230 J	2,300 J	9,500 J	2,500,000	1,000,000	56,000
Pyrene	1,700 J	13,000	200 J	2,000 J	8,300 J	2,500,000	1,000,000	40,000
Benzo(a)anthracene	**1,300 J**	**6,600**	400 U	**1,200 J**	**4,100 J**	7,800	1,000	1,000
Chrysene	**1,600 J**	**7,600**	400 U	**1,300 J**	**4,200 J**	780,000	84,000	1,000
Bis(2-ethylhexyl)phthalate	500 U	65 J	400 U	52 J	42 J	410,000	44,000	11,000
Benzo(b)fluoranthene	**2,800 J**	**10,000**	130 J	**1,600 J**	**4,500 J**	7,800	1,000	1,000
Benzo(k)fluoranthene	**1,200 J**	**3,900**	58 J	630 J	**2,000 J**	78,000	8,400	1,000
Benzo(a)pyrene	**2,300 J**	**8,000**	92 J	**1,300 J**	**4,000 J**	1,000	1,000	1,000
Indeno(1,2,3-cd)pyrene	**1,700 J**	**4,300**	400 U	740 J	**2,100 J**	7,800	1,000	1,000
Dibenz(a,h)anthracene	530	**1,300**	400 U	240 J	630 J	1,000	1,000	1,000
Benzo(g,h,i)perylene	1,900	4,900	400 U	890 J	2,500 J	2,500,000	1,000,000	42,000
TOTAL PAHS	18,080	86,490	870	14,108	57,040			
TOTAL SVOCS	19,580	88,105	870	14,388	58,932			
EXTRACTABLE TOTAL PETROLEUM HYDROCARBONS - CT Method (mg/kg)								
ETPH	260	**1,500**	25	**650**	**530**	2,500	500	2,500
PCBs - SW-846 Method 8082 (µg/k	50 U	44 U	40 U	39 U	40 U	10,000	1,000	5

TABLE 3 NOTES:

* - Validated data presented. For VOCs and SVOCs, analyte presented if it was detected in at least one sample from this grouping.
** - Values shown for standards are in the same units as the analytical data.
Bold and boxed values: Concentration exceeds one or more of the RSR criteria.
CT RSR criteria ("--" indicates that no standard is available)
NE (100) Direct exposure criteria not established for total chromium. Hexavalent chromium direct exposure criteria utilized for total chrom
FD - Field Duplicate
ft bgs - feet below ground surface
J - Quantitation is approximate due to limitations identified in the quality control review.
R - Value is rejected.
U - Value reported is the sample-specific detection limit.
UJ - Sample-specific detection limit is approximate due to limitations identified in the quality control review.

Table 3. Summary Of Test Pit Analytical Data *
TBA Investigation -- Meriden Hub Site -- July 2004

LOCATION NAME	TP-1	TP-2	TP-3	TP-4		CT RSR Direct Exposure Criteria** (in same units as analysis)		CT RSR Pollutant Mobility Criteria**
SAMPLE DEPTH (ft bgs)	1 - 10'	1 - 10'	1 - 12'	1 - 8'				
% SOLIDS	66	74	82	85	82			
DATE SAMPLED	7/22/04	7/22/04	7/22/04	7/22/04	7/22/04			
COMMENTS					FD of TP-4	I/C	RES	GB
CT RSR METALS (mg/kg)								
Antimony	2.3 J	3.6 J	1.6 J	7.7 J	5.9 J	8,200	27	--
Arsenic	5.0	7.0	5.3	7.4	6.2	10	10	--
Barium	211	134	186	120	138	140,000	4,700	--
Beryllium	1.4	1.3	1.0	1.1	0.94	2	2	--
Cadmium	0.28 J	2.0 J	0.39 J	1.0 J	3.0 J	1,000	34	--
Chromium	29.6	17.1	21.5	95.0	92.0	NE (100)	NE (100)	--
Copper	326	262	181	171	260	76,000	2,500	--
Lead	39.6	230	108	**796**	**503**	1,000	500	--
Mercury	0.58 J	1.0 J	1.4 J	0.56 J	0.54 J	610	20	--
Nickel	15.2	50.0	22.9	23.2	25.0	7,500	1,400	--
Selenium	3.8	3.2	3.3	3.2	3.1	10,000	340	--
Silver	0.66 J	34.0	0.35 J	9.5	8.5	10,000	340	--
Thallium	2.1	3.2	2.0	2.2	1.7	160	5.4	--
Vanadium	66.0	69.6	50.9	56.8	41.6	14,000	470	--
Zinc	91.0 J	225 J	157 J	212 J	378 J	610,000	20,000	--
TOTAL CYANIDE (mg/kg)								
Total Cyanide	R	R	R	R	R	41,000	1,400	NE
SPLP METALS (ug/L)								
Antimony				20.9		--	--	60
Arsenic				5.5 UJ		--	--	500
Barium				46.2 UJ		--	--	10,000
Beryllium				0.29 UJ		--	--	40
Cadmium				0.12 UJ		--	--	50
Chromium				24.9		--	--	500
Copper				32.0 U		--	--	13,000
Lead				49.1 J		--	--	150
Nickel				4.5 J		--	--	1,000
Mercury				0.052 U		--	--	20
Selenium				1.7 UJ		--	--	500
Silver				1.7 UJ		--	--	360
Thallium				1.2 UJ		--	--	50
Vanadium				6.3 J		--	--	500
Zinc				40.5 UJ		--	--	50,000
SPLP PAHs (ug/L)								
Naphthalene		0.23 J				--	--	2,800
2-Methylnaphthalene		0.16 J				--	--	490
Acenaphthylene		0.10 UJ				--	--	4,200
Acenaphthene		0.10 UJ				--	--	4,200
Fluorene		0.10 UJ				--	--	2,800
Phenanthrene		0.10 UJ				--	--	2,000
Anthracene		0.10 UJ				--	--	20,000
Fluoranthene		0.10 UJ				--	--	2,800
Pyrene		0.10 UJ				--	--	2,000
Benzo(a)anthracene		0.10 UJ				--	--	0.6
Chrysene		0.10 UJ				--	--	48
Benzo(b)fluoranthene		0.10 UJ				--	--	0.8
Benzo(k)fluoranthene		0.10 UJ				--	--	5
Benzo(a)pyrene		0.10 UJ				--	--	2
Indeno(1,2,3-cd)pyrene		0.10 UJ				--	--	5
Dibenz(a,h)anthracene		0.10 UJ				--	--	5
Benzo(g,h,i)perylene		0.10 UJ				--	--	2,100

TABLE 3 NOTES:

* - Validated data presented. For VOCs and SVOCs, analyte presented if it was detected in at least one sample from this grouping.

** - Values shown for standards are in the same units as the analytical data.

Bold and boxed values: Concentration exceeds one or more of the RSR criteria.

CT RSR criteria ("--" indicates that no standard is available)

NE (100) Direct exposure criteria not established for total chromium. Hexavalent chromium direct exposure criteria utilized for total chrom

FD - Field Duplicate

ft bgs - feet below ground surface

J - Quantitation is approximate due to limitations identified in the quality control review.

R - Value is rejected.

U - Value reported is the sample-specific detection limit.

UJ - Sample-specific detection limit is approximate due to limitations identified in the quality control review.

Table 4. Summary Of Soil Boring Analytical Data *
TBA Investigation -- Meriden Hub Site -- August 2004

LOCATION NAME	MW-101				MW-102			MW-104		MW-106		MW-107		MW-108		MW-109		CT RSR Direct Exposure Criteria** (in same units as analysis)		CT RSR Pollutant Mobility Criteria**
SAMPLE DEPTH (ft bgs)	0 - 8		8 - 16		0 - 10	9	10 - 14	0.5 - 9	9 - 14	0.5 - 6	6 - 12	0.5 - 8	8 - 12	0.5 - 8	8 - 12	1 - 7	7 - 11			
VOC SAMPLE DEPTH (ft bgs)	--	--	9.5		9	--	--	--	9	5	--	7.5	--	6	--	7.5	10.5			
% SOLIDS	92	89	82	83	87	87	80	81	81	83	77	88	84	89	88	89	80			
DATE SAMPLED	8/5/04	8/5/04	8/5/04	8/5/04	8/5/04	8/5/04	8/5/04	8/6/04	8/6/04	8/6/04	8/6/04	8/6/04	8/6/04	8/9/04	8/9/04	8/9/04	8/9/04			
COMMENTS		FD		FD														I/C	RES	GB
TOTAL CYANIDE (mg/kg)																				
Total Cyanide	0.13 UJ	0.13 U	0.14 UJ		0.12 U		0.61 J	0.13 UJ	0.13 UJ	0.14 J	0.15 UJ	0.12 UJ	0.13 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.14 UJ	41,000	1400	NE
SPLP METALS (ug/L)																				
Antimony	2.0 UJ	7.2 UJ			3.7 UJ		28.4 U	10.2 UJ		2.3 UJ		4.3 UJ		4.1 UJ			9.9 UJ	--	--	60
Arsenic	4.3 J	1.6 U			2.6 J		12.6 J	4.8 J		1.6 U		1.6 U		1.6 U			3.0 J	--	--	500
Barium	53.7 UJ	128 J			39.5 UJ		121 J	155 J		143 J		142 J		133 J			188 J	--	--	10,000
Beryllium	0.15 UJ	0.15 UJ			0.15 UJ		0.15 UJ	0.15 UJ		0.15 UJ		0.15 UJ		0.15 UJ			0.15 UJ	--	--	40
Cadmium	0.10 UJ	0.10 UJ			0.10 UJ		3.1 J	0.10 UJ		1.7 J		0.10 UJ		0.10 UJ			0.17 J	--	--	50
Chromium	0.63 J	0.38 UJ			2.8 J		100	1.9 J		1.7 J		0.79 J		0.48 J			6.4 J	--	--	500
Copper	34.4 U	19.0 UJ			27.9 UJ		557	68.4		51.4 U		31.0 U		21.2 UJ			67.2	--	--	13,000
Lead	24.2	7.9 UJ			2.0 UJ		90.7	58.5		17.1		9.4 UJ		5.4 UJ			66.3	--	--	150
Mercury	0.074 J	0.074 J			0.058 U		0.056 U	0.064 J		0.14 J		0.31		0.056 U			0.10 J	--	--	20
Nickel	0.59 UJ	0.59 UJ			0.59 UJ		12.0 J	0.59 UJ		0.59 UJ		0.59 UJ		1.0 J			4.9 J	--	--	1,000
Selenium	0.98 UJ	0.98 UJ			0.98 UJ		1.9 J	0.98 UJ		0.98 UJ		0.98 UJ		0.98 UJ			0.98 UJ	--	--	500
Silver	0.91 U	0.91 U			1.4 UJ		6.5 UJ	0.91 U		0.91 U		2.4 UJ		0.91 U			0.91 U	--	--	360
Thallium	1.2 UJ	1.2 UJ			1.2 UJ		4.0 J	1.2 UJ		1.2 UJ		1.2 UJ		1.2 UJ			1.2 UJ	--	--	50
Vanadium	20.7 J	1.2 UJ			35.5 J		37.8 J	10.2 UJ		3.9 UJ		5.0 UJ		4.3 UJ			25.3 J	--	--	500
Zinc	6.2 J	2.3 UJ			2.3 UJ		288	54.6 J		386		56.1 J		22.3 J			62.1 J	--	--	50,000
SPLP PAHs (ug/L)																				
Naphthalene	37 J	28 J					0.50 J											--	--	2,800
2-Methylnaphthalene	2.8 J	2.5 J					0.094 J											--	--	490
Acenaphthylene	3.2 J	3.6 J					0.13 J											--	--	4,200
Acenaphthene	0.87 J	0.86 J					0.10 UJ											--	--	4,200
Fluorene	1.2 J	1.4 J					0.10 UJ											--	--	2,800
Phenanthrene	1.8 J	2.0 J					0.27 J											--	--	2,000
Anthracene	1.4 J	1.4 J					0.10 UJ											--	--	20,000
Fluoranthene	0.44 J	0.70 J					0.22 J											--	--	2,800
Pyrene	0.36 J	0.65 J					0.21 J											--	--	2,000
Benzo(a)anthracene	0.16 J	0.32 J					0.12 J											--	--	0.6
Chrysene	0.15 J	0.26 J					0.13 J											--	--	48
Benzo(b)fluoranthene	0.23 J	0.49 J					0.15 J											--	--	0.8
Benzo(k)fluoranthene	0.14 J	0.21 J					0.078 J											--	--	5
Benzo(a)pyrene	0.17 J	0.37 J					0.15 J											--	--	2
Indeno(1,2,3-cd)pyrene	0.13 J	0.28 J					0.095 J											--	--	5
Dibenz(a,h)anthracene	0.10 UJ	0.10 UJ					0.10 UJ											--	--	5
Benzo(g,h,i)perylene	0.17 J	0.33 J					0.12 J											--	--	2,100

TABLE 4 NOTES:

* - Validated data presented. For VOCs and SVOCs, analyte presented if it was detected in at least one sample from this grouping.
** - Values shown for standards are in the same units as the analytical data.
Bold and boxed values: Concentration exceeds one or both of the direct exposure criteria.
CT RSR criteria ("--" indicates that no standard is available)
NE (100) - Chroium: Reported concentrations are for Total Chromium. No RSR soil direct exposure criteria have been established for total chromium. Direct exposure criteria exist for hexavalent chromium and for trivalent chromium. The value in ( ) is the value for hexavalent chromium, that is lower than those for trivalent chromium.
FD - Field Duplicate
ft bgs - feet below ground surface
J - Quantitation is approximate due to limitations identified in the quality control review.
R - Value is rejected.
U - Value reported is the sample-specific detection limit.
UJ - Sample-specific detection limit is approximate due to limitations identified in the quality control review.

Table 5. Summary Of Groundwater Analytical Data *
TBA Investigation -- Meriden HUB site -- September 2004

LOCATION NAME	MW-3	MW-102	MW-106		MW-108	MW-109	CT Remediation Standard Regulations		
ELL SCREEN INTERVAL (ft bgs)	unknown	6 - 16	4 - 14		5 - 15	5 - 15		Proposed	Proposed
M&E SAMPLE ID	GW-MW-3	GW-102	GW-MW-106	GW-MW-206	GW-108	GW-109	Surface Water	Residential	Ind./Commercial
DATE SAMPLED	9/8/04	9/8/04	9/8/04	9/8/04	9/8/04	9/8/04	Protection	Volatilization	Volatilization
COMMENTS				FD			Criteria **	Criteria **	Criteria **
CT RSR METALS (µg/L)									
Antimony	1.2 U	1.5 UJ	1.2 U	1.2 U	1.2 U	1.2 U	86,000	--	--
Arsenic	1.6 U	3.0 UJ	1.6 U	1.6 U	1.6 U	1.6 U	4	--	--
Barium	213	247	193 J	188 J	372	287	--	--	--
Beryllium	0.15 U	0.15 U	0.15 U	0.15 U	1.5 UJ	0.15 U	4	--	--
Cadmium	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	6	--	--
Chromium	0.38 U	1.8 J	0.38 U	0.38 U	29.8	0.38 U	NE (110)	--	--
Copper	6.3 U	34.2	6.3 U	9.1 J	9.1 J	6.3 U	48	--	--
Lead	0.50 UJ	**17.1**	1.4 UJ	0.71 UJ	11.3	1.4 UJ	13	--	--
Mercury	0.067 U	0.075 U	0.062 U	0.066 U	0.061 U	0.062 U	0.4	--	--
Nickel	13.4 J	4.4 J	2.1 J	2.1 J	14.2 J	0.92 J	880	--	--
Selenium	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	50	--	--
Silver	1.4 UJ	0.91 U	1.4 UJ	0.91 U	0.91 U	0.91 U	12	--	--
Thallium	1.2 U	1.2 U	1.7 UJ	1.2 U	1.2 U	1.2 U	63	--	--
Vanadium	0.47 U	0.80 J	3.4 J	3.5 J	19.6 J	0.60 J	--	--	--
Zinc	14.5 J	45.9 J	4.0 J	4.4 J	40.8 J	9.1 J	123	--	--
TOTAL CYANIDE (ug/L)									
Total Cyanide	**66.5**	12.1 J	9.1 U	9.1 U	9.1 U	9.1 U	52	--	--

TABLE 5 NOTES:

* - Validated data presented. For VOCs and SVOCs, analyte presented if it was detected in at least one sample from this grouping.

** - Values shown for standards are in the same units as the analytical data.

Bold and boxed values: Concentration exceeds one or more of the criteria shown.

CT DEP Criteria ("--" indicates no standard available)

NE (110) - Volatilization criteria not established for total chromium. Criteria are established for hexavalent and trivalent chromium. Criteria in ( ) is for hexavalent chromium, which is lower than that for trivalent chromium. Analytical results are for total chromium and hence is not directly comparable to the hexavalent chromium criteria.

ft bgs - feet below ground surface

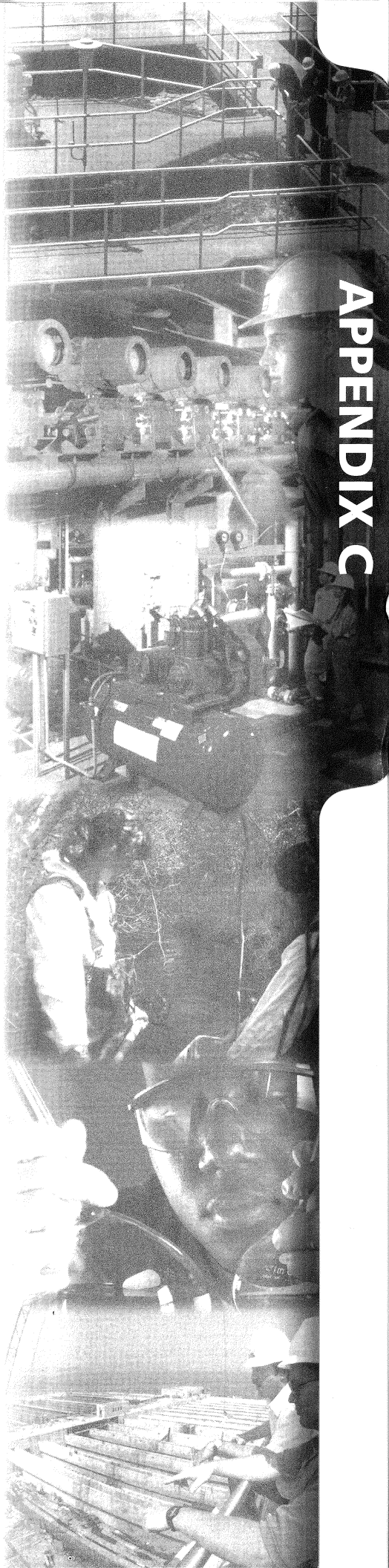
FD - Field Duplicate

J - Quantitation is approximate due to limitations identified in the quality control review.

U - Value reported is the sample-specific detection limit.

UJ - Sample-specific detection limit is approximate due to limitations identified in the quality control review.

APPENDIX C



APPENDIX C

APPENDIX C

TEST PIT LOGS

TEST PIT FIELD LOG

Metcalf & Eddy

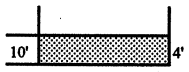
PROJECT			
DESCRIPTION	Meriden HUB	TEST PIT No.	TP-1
LOCATION	1 & 77 State St. and 30 & 50 East Main St.	FILE No.	
		DATE	7/22/2004

EXCAVATION EQUIPMENT					
ENGINEER	Nancy Gaines	CONTRACTOR	Enpro	GROUND ELEV.	
		OPERATOR	John Lowell	TIME STARTED	9:40 AM
WEATHER	sunny, mid 80's	MAKE	John Deere	MODEL 410 D	TIME COMPLETED 10:45 AM
		CAPACITY	1/2 yd^3	REACH 15 ft.	

DEPTH (feet below grade)	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
	6" asphalt, 2 layers			
1'	Brown, medium to coarse sand. Some gravel.	E		
2'	Reddish brown, medium to coarse sand. Few fine sand. Few gravel.	E	A - trace	
3'		E	A - trace	
4'	Brown, medium to coarse sand. Little gravel.	E	A - trace	
5'		E	A - trace	
6'		E	A - trace	
7'	Organic, dark brown, moist, medium to fine sand. Some fine sand.	E		
8'		E		
9'	Water at ~8.5'	E		
10'		E		
11'	End pit at 10'			
12'				
13'				
14'				
15'				
16'				

REMARKS: 2' - 6' bricks and sand fill materials

TEST PIT PLAN



NORTH

VOLUME = 512 yd^3

LEGEND:

BOULDER COUNT

SIZE RANGE CLASSIFICATION	LETTER DESIGNATION
6" - 18"	A
18" - 36"	B
36" and Larger	C

PROPORTIONS USED

TRACE (TR.) 0-10%

LITTLE (LI.) 10-20%

SOME (SO.) 20-35%

AND 30-50%

ABBREVIATIONS

F - FINE
M - MEDIUM
C - COARSE
F/M - FINE TO MEDIUM
F/C - FINE TO COARSE
V - VERY
GR. - GRAY
BN. - BROWN
YEL - YELLOW

EXCAVATION EFFORT

E__EASY
M__MODERATE
D__DIFFICULT

GROUNDWATER

ELAPSED TIME TO READING (HRS.) G.W.

TEST PIT FIELD LOG

Metcalf & Eddy

PROJECT			
DESCRIPTION	Meriden HUB	TEST PIT No.	TP-2
LOCATION	1 & 77 State St. and 30 & 50 East Main St.	FILE No.	
		DATE	7/22/2004

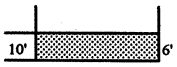
EXCAVATION EQUIPMENT

ENGINEER	Nancy Gaines	CONTRACTOR	Enpro	GROUND ELEV.	
		OPERATOR	John Lowell	TIME STARTED	11:30 AM
WEATHER	sunny, mid 80's	MAKE	John Deere	MODEL 410 D	TIME COMPLETED 2:00 PM
		CAPACITY	1/2 yd^3	REACH 15 ft.	

DEPTH (feet below grade)	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
1'	6" asphalt, 2 layers Brown, medium to coarse sand. Some gravel.	E		
2'	Reddish brown, medium to coarse sand. Few gravel.	M	A - trace	
3'	Brown, medium to coarse sand. Little gravel.	D	A - few	
4'		D	A - few	
5'		D	A - few	
6'	Brown, medium to coarse sand. Little fine sand. Trace slag.	D	A - few	
7'		M		
8'		M		
9'	Organic, dark brown, moist, medium to fine sand. Trace petroleum odor. Water at ~8.5'	M		
10'		M		
11'	End pit at 10'			
12'				
13'				
14'				
15'				
16'				

REMARKS: 2' - 6' bricks, concrete pieces, wood pieces and misc. garbage

TEST PIT PLAN



NORTH

VOLUME = 1680 yd^3

LEGEND:

BOULDER COUNT

SIZE RANGE CLASSIFICATION	LETTER DESIGNATION
6" - 18"	A
18" - 36"	B
36" and Larger	C

PROPORTIONS USED

TRACE (TR.) 0-10%

LITTLE (LI.) 10-20%

SOME (SO.) 20-35%

AND 30-50%

ABBREVIATIONS

F - FINE
M - MEDIUM
C - COARSE
F/M - FINE TO MEDIUM
F/C - FINE TO COARSE
V - VERY
GR. - GRAY
BN. - BROWN
YEL - YELLOW

EXCAVATION EFFORT

E___EASY
M___MODERATE
D___DIFFICULT

GROUNDWATER

ELAPSED TIME TO READING (HRS.) G.W.

TEST PIT FIELD LOG

Metcalf & Eddy

PROJECT			
DESCRIPTION	Meriden HUB	TEST PIT No.	TP-3
LOCATION	1 & 77 State St. and 30 & 50 East Main St.	FILE No.	
		DATE	7/22/2004

EXCAVATION EQUIPMENT					
ENGINEER	Nancy Gaines	CONTRACTOR	Enpro	GROUND ELEV.	
		OPERATOR	John Lowell	TIME STARTED	2:30 PM
WEATHER	sunny, high 80's	MAKE	John Deere	MODEL	410 D
		CAPACITY	1/2 yd^3	REACH	15 ft.
				TIME COMPLETED	3:15 PM

DEPTH (feet below grade)	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
1'	6" asphalt, 2 layers Brown, medium to coarse sand. Some gravel.	E		
2'	Brown, medium to fine sand. Few fine sand. Few gravel.	E		
3'	Brown/black medium to coarse sand. Little gravel.	E		
4'		E		
5'		E		
6'	Grey, medium to fine sand.	E		
7'	Brown, medium to coarse sand. Few fine sand.	E		
8'		E		
9'		E		
10'	Moist, medium to coarse sand. Some gravel.	E		
11'				
12'	Water at ~11.8' End pit at 12'			
13'				
14'				
15'				
16'				

REMARKS:

TEST PIT PLAN

NORTH

VOLUME = 972 yd^3

LEGEND:

BOULDER COUNT

SIZE RANGE CLASSIFICATION	LETTER DESIGNATION
6" - 18"	A
18" - 36"	B
36" and Larger	C

PROPORTIONS USED

TRACE (TR.) 0-10%

LITTLE (LI.) 10-20%

SOME (SO.) 20-35%

AND 30-50%

ABBREVIATIONS

F - FINE
M - MEDIUM
C - COARSE
F/M - FINE TO MEDIUM
F/C - FINE TO COARSE
V - VERY
GR. - GRAY
BN. - BROWN
YEL - YELLOW

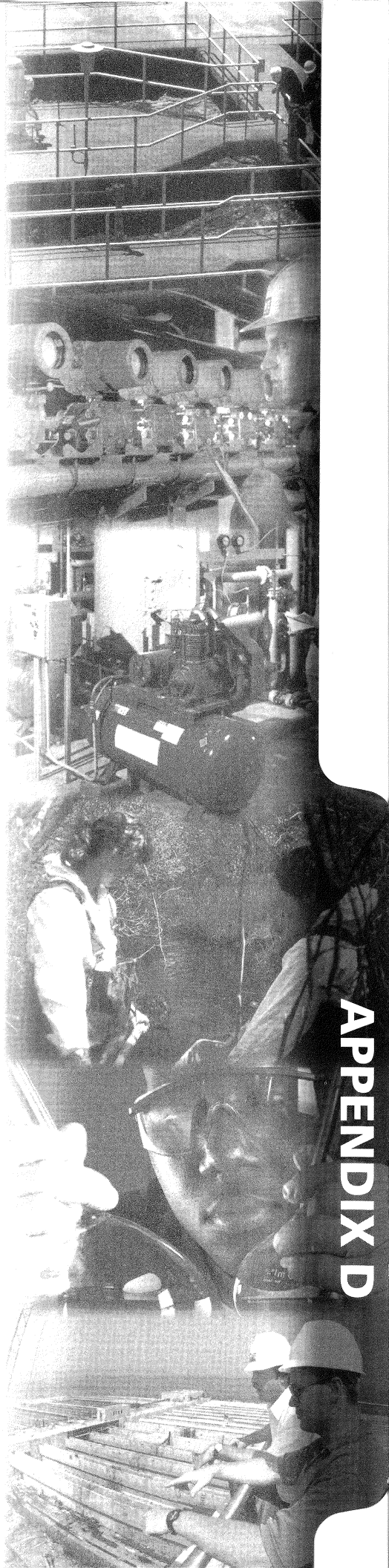
EXCAVATION EFFORT

E___EASY
M___MODERATE
D___DIFFICULT

GROUNDWATER

ELAPSED TIME TO READING (HRS.) G.W.

APPENDIX D



APPENDIX D

APPENDIX D

SOIL BORING GEOLOGIC LOGS

Metcalf & Eddy, Inc. ENGINEERS

GEOLOGIC LOG

Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	BORING NO. 101
SITE LOCATION: 1 & 77 State St and 30 & 50 East Main St. Meriden, CT	JOB NO.: # 036200100.0055.00032	Elevation: 100	Total Depth: 16'
	LOCATION: N: E:		
DRILL CONTRACTOR : New England Boring	ENG/GEO : Nancy Gaines	BEGUN : 8:00	
DRILL RIG: Truck Mounted	DRILLER : Trent Roe	FINISHED : 10:20	
Hole Size : 1'	Weather : Cloudy, 70's	Ground Water (Depth/Elev.) : ~12'	
Drilling Method : Hollow Stem Auger	Drilling Fluid : None	Top of Rock (Depth/Elev.) : N/A	

Depth (ft)	Sample Type/No.	PID (ppm) spoon/bag	Blow Count (per 6 in.) or Drilling Rate(min/ft)	Sample Recovery or REC & RQD	SAMPLE DESCRIPTION NOTE: Depths read from top of recovered sample	STRATIGRAPHIC DESCRIPTION
	SS	0/0	2, 17, 14, 11	14"	Brown, medium sand. Little gravel. Black coarse gravel.	Brown, medium to coarse sand
	SS	0/0	25, 21, 17, 11	24"	Brown, medium sand. Few gravel.	Assumed fill material
5	SS	0/0	2, 4, 3, 2	9"	Brown, medium to coarse sand. Few gravel. Moist, brown, medium sand.	
	SS	0/102	25, 24, 17, 5	15"	Brown, medium to coarse sand. Little gravel.	
	SS	0/78	4, 5, 6, 5	20"	Brown, medium sand. Little gravel. Brown, moist fine sand. Black, moist fine sand. Brown silt.	Brown, fine sand. Little silt. Little clay.
10	SS	0/0	2, 2, 3, 4	22"	Brown, medium sand. Brown, moist, fine sand. Trace gravel. Trace silt. Trace grey clay.	Assumed native material
	SS	0/0	7, 21, 17, 25	24"	Brown, fine sand. Grey silt. Little grey clay.	
15	SS	0/0	8, 8, 8, 10	24"	Brown, wet, fine sand. Little brown silt.	
20						
25						

SAMPLE TYPES: SS=SPLIT SPOON ST=SHELBY TUBE R=ROCK CORE	Trace 0 to 5% Few 5 to 10% Little 15 to 25% Some 30 to 45%	SPT Resistance Cohesionless Density: 0-4 V. Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ V. Dense	Cohesive Consistency: 0-2 V. Soft 3-4 Soft, 5-8 M/Stiff, 9-15 Stiff 16-30 V. Stiff, 31+ Hard	Approved/Date

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[Boring Logs.xls]B-101

Metcalf & Eddy, Inc. ENGINEERS

GEOLOGIC LOG

Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	BORING NO. 102
SITE LOCATION: 1 & 77 State St and 30 & 50 East Main St. Meriden, CT	JOB NO.: # 036200100.0055.00032 LOCATION: N: E:	Elevation: 98.57'	Total Depth: 16'
DRILL CONTRACTOR : New England Boring	ENG/GEO : Nancy Gaines	BEGUN : 12:55	
DRILL RIG: Truck Mounted	DRILLER : Trent Roe	FINISHED : 1:35	
Hole Size : 1'	Weather : Sunny, 80s	Ground Water (Depth/Elev.) : ~8'	
Drilling Method : Hollow Stem Auger	Drilling Fluid : None	Top of Rock (Depth/Elev.) : N/A	

Depth (ft)	Sample Type/No.	PID (ppm) spoon/bag	Blow Count (per 6 in.) or Drilling Rate(min/ft)	Sample Recovery or REC & RQD	SAMPLE DESCRIPTION NOTE: Depths read from top of recovered sample	STRATIGRAPHIC DESCRIPTION
	SS	0/0	17, 15, 18	14"	Brown, medium to coarse sand. Little gravel. Little black, coarse sand.	Brown, medium to coarse sand.
	SS	0/0	6, 5, 8, 11	8"	Dark brown, coarse sand. Little brown, medium to coarse sand. Little gravel.	Assumed fill material
5	SS	0/0	5, 7, 47, 42	11"	Moist brown, coarse sand. Some medium to coarse sand. Little gravel.	
	SS	0/0	13, 4, 7, 7	8"	Moist, brown, medium to coarse sand. Little gravel. Few coarse sand.	
	SS	0/0	3, 5, 6, 4	9"	Wet, brown, medium to coarse sand. Dark brown fine sand. Little silt. Few gravel.	
10						
	SS	0/0	1, 0, 19, 17	5"	Wet, brown, medium sand. Dark brown fine sand. Little silt. Few gravel.	Fine sand. Silt. Dark brown organics
	SS	0/0	7, 11, 12, 25	8"	Wet, brown, medium sand. Dark brown fine sand. Little silt. Few medium to coarse sand. Few gravel.	Assumed native material
15						
20						
25						

SAMPLE TYPES: SS=SPLIT SPOON ST=SHELBY TUBE R=ROCK CORE	Trace 0 to 5% Few 5 to 10% Little 15 to 25% Some 30 to 45%	SPT Resistance Cohesionless Density: 0-4 V. Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ V. Dense	Cohesive Consistency: 0-2 V. Soft 3-4 Soft, 5-8 M/Stiff, 9-15 Stiff 16-30 V. Stiff, 31+ Hard	Approved/Date

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[Boring Logs.xls]B-102

Metcalf & Eddy, Inc. ENGINEERS

GEOLOGIC LOG

M&E Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	BORING NO. 103
SITE LOCATION: 1 & 77 State St and 30 & 50 East Main St. Meriden, CT	JOB NO.: # 036200100.0055.00032	Elevation:	Total Depth: 5.5'
	LOCATION: N: E:		
DRILL CONTRACTOR : New England Boring	ENG/GEO : Nancy Gaines	BEGUN : 16:35	
DRILL RIG: Truck Mounted	DRILLER : Trent Roe	FINISHED : 17:10	
Hole Size : 1'	Weather : Sunny, 80s	Ground Water (Depth/Elev.) : N/A	
Drilling Method : Hollow Stem Auger	Drilling Fluid : None	Top of Rock (Depth/Elev.) : N/A	

Depth (ft)	Sample Type/No.	PID (ppm) spoon/bag	Blow Count (per 6 in.) or Drilling Rate(min/ft)	Sample Recovery or REC & RQD	SAMPLE DESCRIPTION NOTE: Depths read from top of recovered sample	STRATIGRAPHIC DESCRIPTION
	SS	0/0	8, 12, 12	10"	Brown, medium to coarse sand. Little gravel.	Brown, medium to coarse sand.
	SS	0/0	12, 9, 24, 20	15"	Brown medium to coarse sand. Little gravel.	Little gravel. Assumed fill material
5	SS	0/0	10, 100	11"	Brown medium to coarse sand. Few fine sand. Few gravel.	
					Refusal at 5.5', three times.	
10						
15						
20						
25						

SAMPLE TYPES: SS=SPLIT SPOON ST=SHELBY TUBE R=ROCK CORE	Trace 0 to 5% Few 5 to 10% Little 15 to 25% Some 30 to 45%	SPT Resistance Cohesionless Density: 0-4 V. Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ V. Dense	Cohesive Consistency: 0-2 V. Soft 3-4 Soft, 5-8 M/Stiff, 9-15 Stiff 16-30 V. Stiff, 31+ Hard

Approved/Date

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[Boring Logs.xls]B-103

Metcalf & Eddy, Inc.
ENGINEERS

GEOLOGIC LOG

M&E Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	BORING NO. 104
SITE LOCATION: 1 & 77 State St and 30 & 50 East Main St. Meriden, CT	JOB NO.: # 036200100.0055.00032	Elevation: 97.05'	Total Depth: 14'
	LOCATION: N: E:		
DRILL CONTRACTOR : New England Boring	ENG/GEO : Nancy Gaines	BEGUN : 7:30	
DRILL RIG: Truck Mounted	DRILLER : Trent Roe	FINISHED : 8:20	
Hole Size : 1'	Weather : Sunny, 70s	Ground Water (Depth/Elev.) : ~7'	
Drilling Method : Hollow Stem Auger	Drilling Fluid : None	Top of Rock (Depth/Elev.) : N/A	

Depth (ft)	Sample Type/No.	PID (ppm) spoon/bag	Blow Count (per 6 in.) or Drilling Rate(min/ft)	Sample Recovery or REC & RQD	SAMPLE DESCRIPTION NOTE: Depths read from top of recovered sample	STRATIGRAPHIC DESCRIPTION
	SS	0/0	6, 5, 8	17"	Moist, brown, medium to coarse sand. Some fine sand. Trace gravel.	Brown, medium to coarse sand.
	SS	0/0	4, 4, 12, 11	16"	Moist, brown, medium to coarse sand. Some fine sand. Little ash. Few gravel. Trace coal.	Brown, medium sand. Little ash.
5	SS	0/2	4, 4, 10, 11	24"	Moist, brown, medium sand. Some fine sand. Some silt. Little ash. Trace coal.	Assumed fill material
	SS	0/2.9	27, 11, 5, 6	11"	Moist brown, fine to medium sand. Some silt. Little ash. Trace green medium sand. Trace gravel.	
	SS	0/3.6	7, 10, 12, 14	24"	Wet, medium to coarse sand. Little gravel. Some fine sand. Some silt. Few brown clay. Trace green, medium sand.	Brown, fine sand. Little silt. Trace clay.
10	SS	0/4.7	8, 11, 11, 13	21"	Wet, brown, fine sand. Little silt. Trace clay. Wet, black medium sand. Few gravel.	Assumed native material
	SS	0/2.5	8, 10, 10, 12	24"	Wet, brown fine sand.	
15						
20						
25						

SAMPLE TYPES: SS=SPLIT SPOON ST=SHELBY TUBE R=ROCK CORE	Trace 0 to 5% Few 5 to 10% Little 15 to 25% Some 30 to 45%	SPT Resistance Cohesionless Density: 0-4 V. Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ V. Dense	Cohesive Consistency: 0-2 V. Soft 3-4 Soft, 5-8 M/Stiff, 9-15 Stiff 16-30 V. Stiff, 31+ Hard	Approved/Date

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[Boring Logs.xls]B-104

Metcalf & Eddy, Inc.
ENGINEERS

GEOLOGIC LOG

M&E Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	BORING NO. 105
SITE LOCATION: 1 & 77 State St and 30 & 50 East Main St. Meriden, CT	JOB NO.: # 036200100.0055.00032	Elevation:	Total Depth: 2'
	LOCATION: N: E:		
DRILL CONTRACTOR : New England Boring	ENG/GEO : Nancy Gaines	BEGUN : 9:35	
DRILL RIG: Truck Mounted	DRILLER : Trent Roe	FINISHED : 10:45	
Hole Size : 1'	Weather : Sunny, 70s	Ground Water (Depth/Elev.) : N/A	
Drilling Method : Hollow Stem Auger	Drilling Fluid : None	Top of Rock (Depth/Elev.) : N/A	

Depth (ft)	Sample Type/No.	PID (ppm) spoon/bag	Blow Count (per 6 in.) or Drilling Rate(min/ft)	Sample Recovery or REC & RQD	SAMPLE DESCRIPTION NOTE: Depths read from top of recovered sample	STRATIGRAPHIC DESCRIPTION
	SS	0/0	12, 15, 50	12"	Brown, medium to coarse sand. Little gravel.	
					Concrete at 2' in 6 different locations. Most likely old building foundation	
5						
10						
15						
20						
25						

SAMPLE TYPES: SS=SPLIT SPOON ST=SHELBY TUBE R=ROCK CORE	Trace 0 to 5% Few 5 to 10% Little 15 to 25% Some 30 to 45%	SPT Resistance Cohesionless Density: 0-4 V. Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ V. Dense	Cohesive Consistency: 0-2 V. Soft 3-4 Soft, 5-8 M/Stiff, 9-15 Stiff 16-30 V. Stiff, 31+ Hard	Approved/Date

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[Boring Logs.xls]B-105

Metcalf & Eddy, Inc.
ENGINEERS

GEOLOGIC LOG

M&E Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	BORING NO. 106
SITE LOCATION: 1 & 77 State St and 30 & 50 East Main St. Meriden, CT	JOB NO.: # 036200100.0055.00032 LOCATION: N: E:	Elevation: 97.92'	Total Depth: 12'
DRILL CONTRACTOR : New England Boring	ENG/GEO : Nancy Gaines	BEGUN : 10:50	
DRILL RIG: Truck Mounted	DRILLER : Trent Roe	FINISHED : 11:25	
Hole Size : 1'	Weather : Sunny, 70s	Ground Water (Depth/Elev.) : ~5.5'	
Drilling Method : Hollow Stem Auger	Drilling Fluid : None	Top of Rock (Depth/Elev.) : N/A	

Depth (ft)	Sample Type/No.	PID (ppm) spoon/bag	Blow Count (per 6 in.) or Drilling Rate(min/ft)	Sample Recovery or REC & RQD	SAMPLE DESCRIPTION NOTE: Depths read from top of recovered sample	STRATIGRAPHIC DESCRIPTION
	SS	0/0	8, 9, 5	8"	Brown, medium to coarse sand. Little coal. Few ash. Few gravel.	Brown, medium to coarse sand. Few gravel. Little coal. Few ash. Assumed fill material
	SS	0/3.6	5, 6, 9, 15	10"	Moist, brown, medium to coarse sand. Little gravel. Little coal. Few fine sand.	
5	SS	910/282	4, 3, 1, 1	12"	Moist brown and black, medium to coarse sand. Little wet ash. Little grey fine sand. Few silt. Few gravel. Petroleum odor.	Fine, brown, organic sand. Few gravel. Few coarse sand. Assumed native material
	SS	0/66.8	4, 1, 1, 3	20"	Moist, brown, fine sand. Little organics. Few silt. Few coarse sand. Few gravel.	
	SS	0/6.8	6, 12, 14, 13	20"	Wet, brown, coarse sand. Some gravel. Trace medium to fine sand. Trace organics.	
10	SS	0/0.5	11, 17, 14, 10	24"	Wet, brown, medium to coarse sand. Some coarse sand. Little gravel. Little fine sand. Few silt.	
15						
20						
25						

SAMPLE TYPES: SS=SPLIT SPOON ST=SHELBY TUBE R=ROCK CORE	Trace 0 to 5% Few 5 to 10% Little 15 to 25% Some 30 to 45%	SPT Resistance Cohesionless Density: 0-4 V. Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ V. Dense	Cohesive Consistency: 0-2 V. Soft 3-4 Soft, 5-8 M/Stiff, 9-15 Stiff 16-30 V. Stiff, 31+ Hard	Approved/Date

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[Boring Logs.xls]B-106

Metcalf & Eddy, Inc.
ENGINEERS

GEOLOGIC LOG

M&E Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	BORING NO. 107
SITE LOCATION: 1 & 77 State St and 30 & 50 East Main St. Meriden, CT	JOB NO.: # 036200100.0055.00032	Elevation: 98.09'	Total Depth: 12'
	LOCATION: N: E:		
DRILL CONTRACTOR : New England Boring	ENG/GEO : Nancy Gaines	BEGUN : 14:15	
DRILL RIG: Truck Mounted	DRILLER : Trent Roe	FINISHED : 15:00	
Hole Size : 1'	Weather : Sunny, 70s	Ground Water (Depth/Elev.) : ~7.5'	
Drilling Method : Hollow Stem Auger	Drilling Fluid : None	Top of Rock (Depth/Elev.) : N/A	

Depth (ft)	Sample Type/No.	PID (ppm) spoon/bag	Blow Count (per 6 in.) or Drilling Rate(min/ft)	Sample Recovery or REC & RQD	SAMPLE DESCRIPTION NOTE: Depths read from top of recovered sample	STRATIGRAPHIC DESCRIPTION
	SS	0/1.3	11, 14, 8	8"	Brown, medium to coarse sand. Little gravel. Trace fine sand. Trace coal.	Brown medium sand. Trace fine sand.
	SS	0/5.6	4, 3, 3, 3	12"	Brown, medium sand. Few gravel. Trace fine sand. Trace coal. Trace ash.	Assumed fill material
5	SS	0/4.6	4, 21, 13, 16	14"	Moist brown, medium sand. Few fine sand. Trace gravel.	
	SS	0/3.3	16, 16, 14, 14	24"	Moist, brown, medium to coarse sand. Few fine sand. Few gravel.	
	SS	0/1.8	12, 14, 13, 13	24"	Wet, brown, medium to coarse sand. Little gravel. Few coarse sand.	Medium to coarse sand. Little gravel.
10	SS	0/2.2	9, 12, 15, 17	6"	Wet, brown, medium to coarse sand. Little gravel. Little coarse sand.	Assumed native material
15						
20						
25						

SAMPLE TYPES: SS=SPLIT SPOON ST=SHELBY TUBE R=ROCK CORE	Trace 0 to 5% Few 5 to 10% Little 15 to 25% Some 30 to 45%	SPT Resistance Cohesionless Density: 0-4 V. Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ V. Dense	Cohesive Consistency: 0-2 V. Soft 3-4 Soft, 5-8 M/Stiff, 9-15 Stiff 16-30 V. Stiff, 31+ Hard

Approved/Date

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[Boring Logs.xls]B-107

Metcalf & Eddy, Inc.
ENGINEERS

GEOLOGIC LOG

Metcalf & Eddy

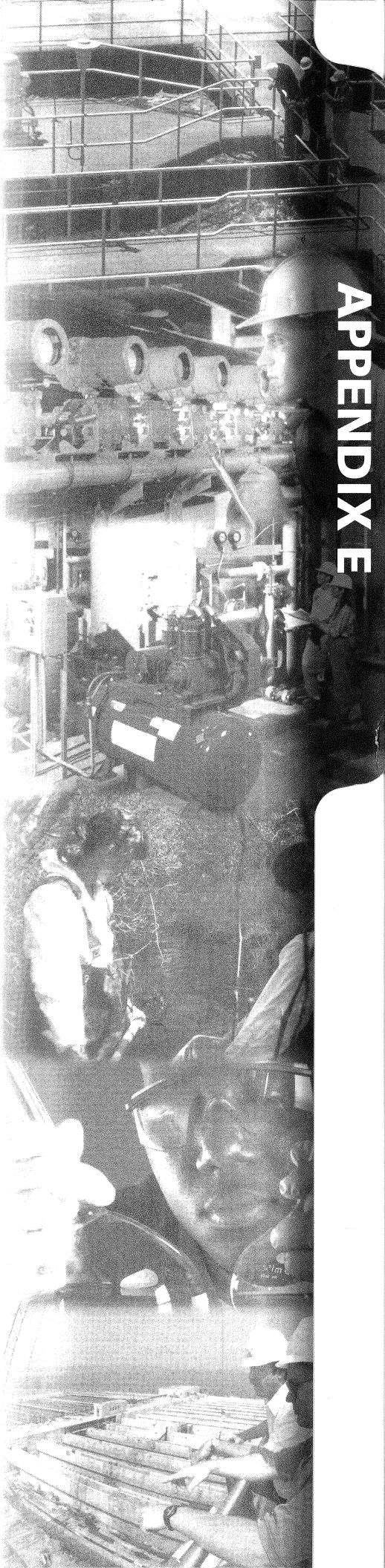
PROJECT : Meriden HUB		SHEET 1 of 1	BORING NO. 108
SITE LOCATION: 1 & 77 State St and 30 & 50 East Main St. Meriden, CT	JOB NO.: # 036200100.0055.00032	Elevation: 98.09'	Total Depth: 12'
	LOCATION: N: E:		
DRILL CONTRACTOR : New England Boring	ENG/GEO : Nancy Gaines	BEGUN : 7:45	
DRILL RIG: Truck Mounted	DRILLER : Trent Roe	FINISHED : 8:25	
Hole Size : 1'	Weather : Sunny, 70s	Ground Water (Depth/Elev.) : ~7.5'	
Drilling Method : Hollow Stem Auger	Drilling Fluid : None	Top of Rock (Depth/Elev.) : N/A	

Depth (ft)	Sample Type/No.	PID (ppm) spoon/bag	Blow Count (per 6 in.) or Drilling Rate(min/ft)	Sample Recovery or REC & RQD	SAMPLE DESCRIPTION NOTE: Depths read from top of recovered sample	STRATIGRAPHIC DESCRIPTION
	SS	0/0	8, 10, 8	12"	Brown, medium sand. Red medium sand. Few fine sand. Few gravel.	Brown, medium sand. Little fine sand. Few gravel. Assumed fill material
	SS	0/9.4	10, 8, 10, 12	18"	Brown, medium sand. Little fine sand. Few gravel.	
5	SS	0/6.8	13, 14, 10, 19	20"	Moist brown, medium sand. Little grey fine to medium sand. Trace grael.	
	SS	0/10.1	8, 9, 10, 13	24"	Wet, brown, medium to fine sand. Little gravel. Little fine sand.	Brown, medium to fine sand. Little fine sand. Little gravel Assumed native material
	SS	0/15.4	18, 17, 16, 19	24"	Wet, brown, medium to fine sand. Little fine sand. Little gravel.	
10	SS	0/12.9	26, 22, 20, 17	24"	Wet, brown, medium to fine sand. Little fine sand. Little gravel.	
	SS	0/0	36, 20, 17, 13	12"	Wet, brown, medium to fine sand. Little gravel.	
15						
20						
25						

SAMPLE TYPES: SS=SPLIT SPOON ST=SHELBY TUBE R=ROCK CORE	Trace 0 to 5% Few 5 to 10% Little 15 to 25% Some 30 to 45%	SPT Resistance Cohesionless Density: 0-4 V. Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ V. Dense	Cohesive Consistency: 0-2 V. Soft 3-4 Soft, 5-8 M/Stiff, 9-15 Stiff 16-30 V. Stiff, 31+ Hard	Approved/Date

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[Boring Logs.xls]B-108

APPENDIX E



APPENDIX E

APPENDIX E

MONITORING WELL INSTALLATION LOGS

Metcalf & Eddy, Inc.
ENGINEERS

MONITORING WELL CONSTRUCTION DETAIL

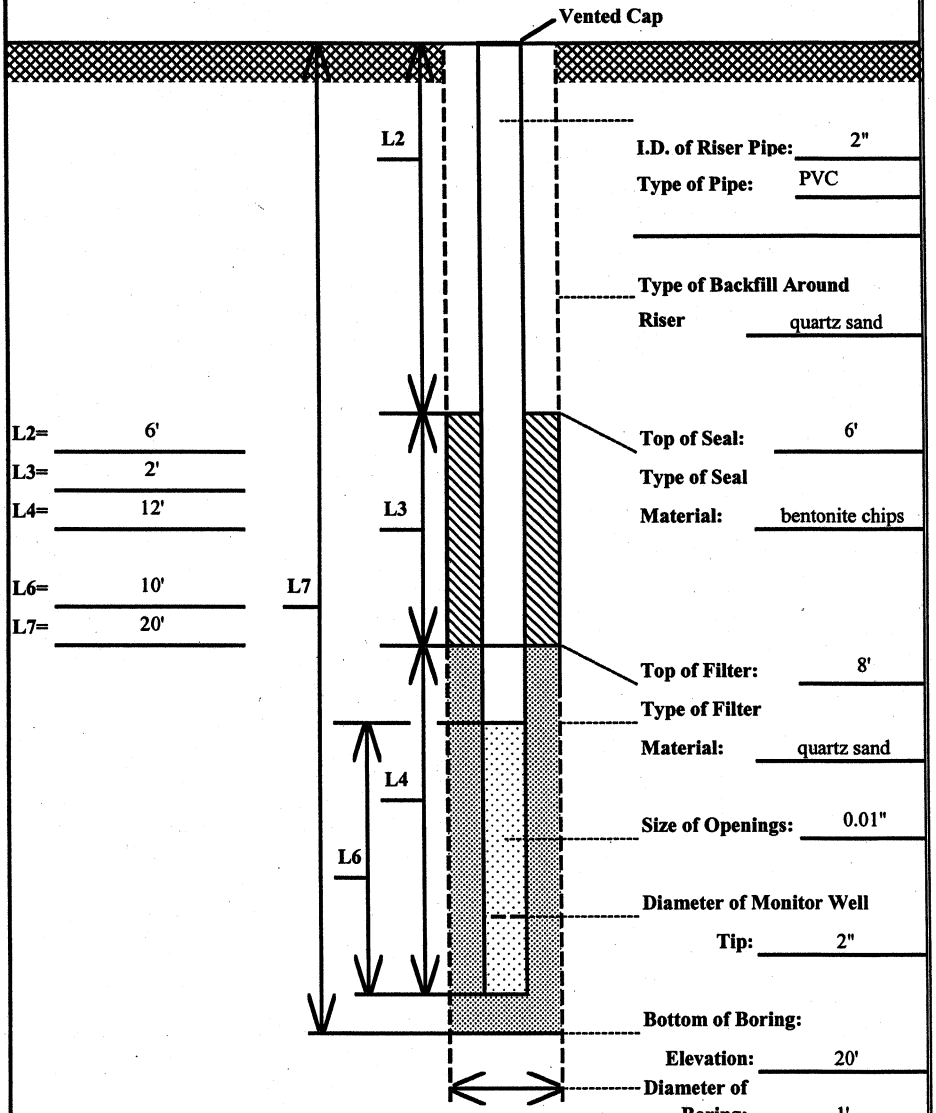
Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	WELL NO. MW-101
SITE LOCATION 1&77 State Street and 30 & 50 East Main Street Meriden, Connecticut	JOB NO: 036200100.0055.00032 LOCATION: N: E:		Elevation: 100.02' / Total Depth: 20'
DRILL CONTRACTOR : New England Boring	ENG/GEO: Nancy Gaines	DRILLER : Trent Roe	DATE : August 5, 2004
INSTALLATION METHOD: 4" Hollow Stem Auger			TIME : 10:20
TYPE OF MONITORING WELL Overburden			Ground Water (Depth/Elev.) : ~12'

MATERIALS USED

Ground Elevation : _____

Top of Riser Elevation : _____



L2= 6'
L3= 2'
L4= 12'
L6= 10'
L7= 20'

REMARKS : _____

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[MW Logs.xls]MW-101

Metcalf & Eddy, Inc.
ENGINEERS

MONITORING WELL CONSTRUCTION DETAIL

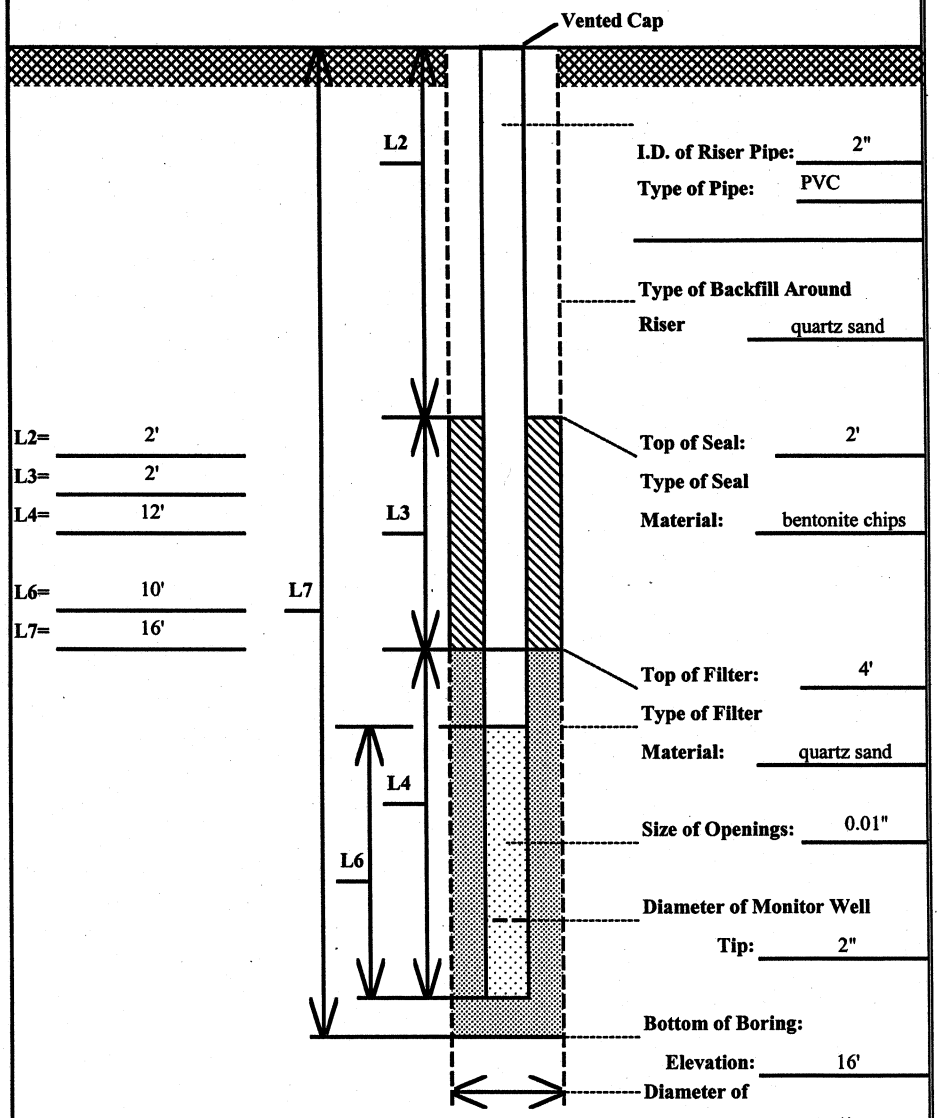
Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	WELL NO. MW-102
SITE LOCATION 1&77 State Street and 30 & 50 East Main Street Meriden, Connecticut	JOB NO: 036200100.0055.00032 LOCATION: N: E:		Elevation: 98.57' Total Depth: 16'
DRILL CONTRACTOR : New England Boring	ENG/GEO: Nancy Gaines	DRILLER : Trent Roe	DATE : August 5, 2004
INSTALLATION METHOD: 4" Hollow Stem Auger			TIME : 13:40
TYPE OF MONITORING WELL Overburden			Ground Water (Depth/Elev.) : ~8'

MATERIALS USED

Ground Elevation : _____

Top of Riser Elevation : _____



L2= 2'
L3= 2'
L4= 12'
L6= 10'
L7= 16'

I.D. of Riser Pipe: 2"
Type of Pipe: PVC

Type of Backfill Around Riser: quartz sand

Top of Seal: 2'
Type of Seal Material: bentonite chips

Top of Filter: 4'
Type of Filter Material: quartz sand

Size of Openings: 0.01"

Diameter of Monitor Well Tip: 2"

Bottom of Boring: Elevation: 16'

Diameter of Boring: 1'

REMARKS : _____

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[MW Logs.xls]MW-102

Metcalf & Eddy, Inc.
ENGINEERS

MONITORING WELL CONSTRUCTION DETAIL

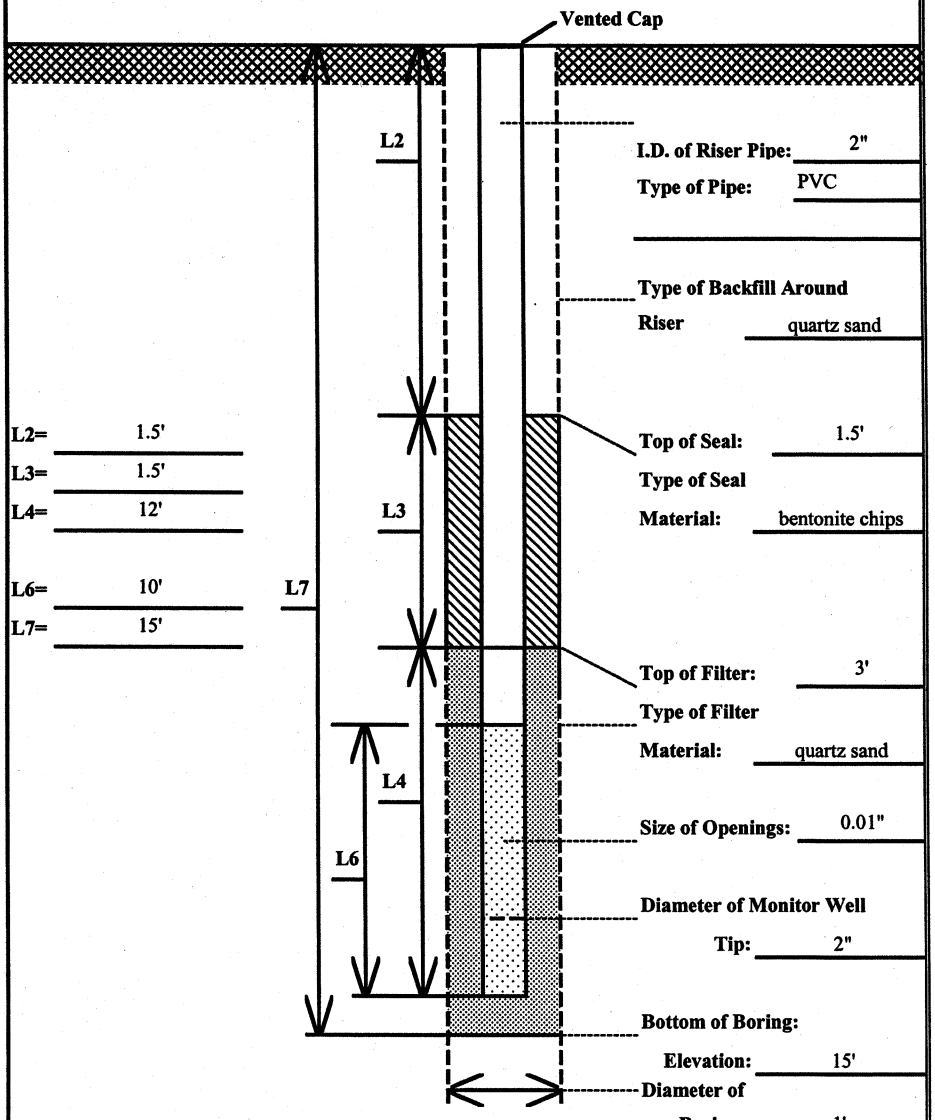
Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	WELL NO. MW-104
SITE LOCATION 1&77 State Street and 30 & 50 East Main Street Meriden, Connecticut	JOB NO: 036200100.0055.00032 LOCATION: N: E:		Elevation: 97.05' Total Depth: 15'
DRILL CONTRACTOR : New England Boring	ENG/GEO: Nancy Gaines	DRILLER : Trent Roe	DATE : August 6, 2004
INSTALLATION METHOD: 4" Hollow Stem Auger			TIME : 8:20
TYPE OF MONITORING WELL Overburden			Ground Water (Depth/Elev.) : ~7'

MATERIALS USED

Ground Elevation :

Top of Riser Elevation :



L2= 1.5'
L3= 1.5'
L4= 12'
L6= 10'
L7= 15'

REMARKS :

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[MW Logs.xls]MW-104

Metcalf & Eddy, Inc.
ENGINEERS

MONITORING WELL CONSTRUCTION DETAIL

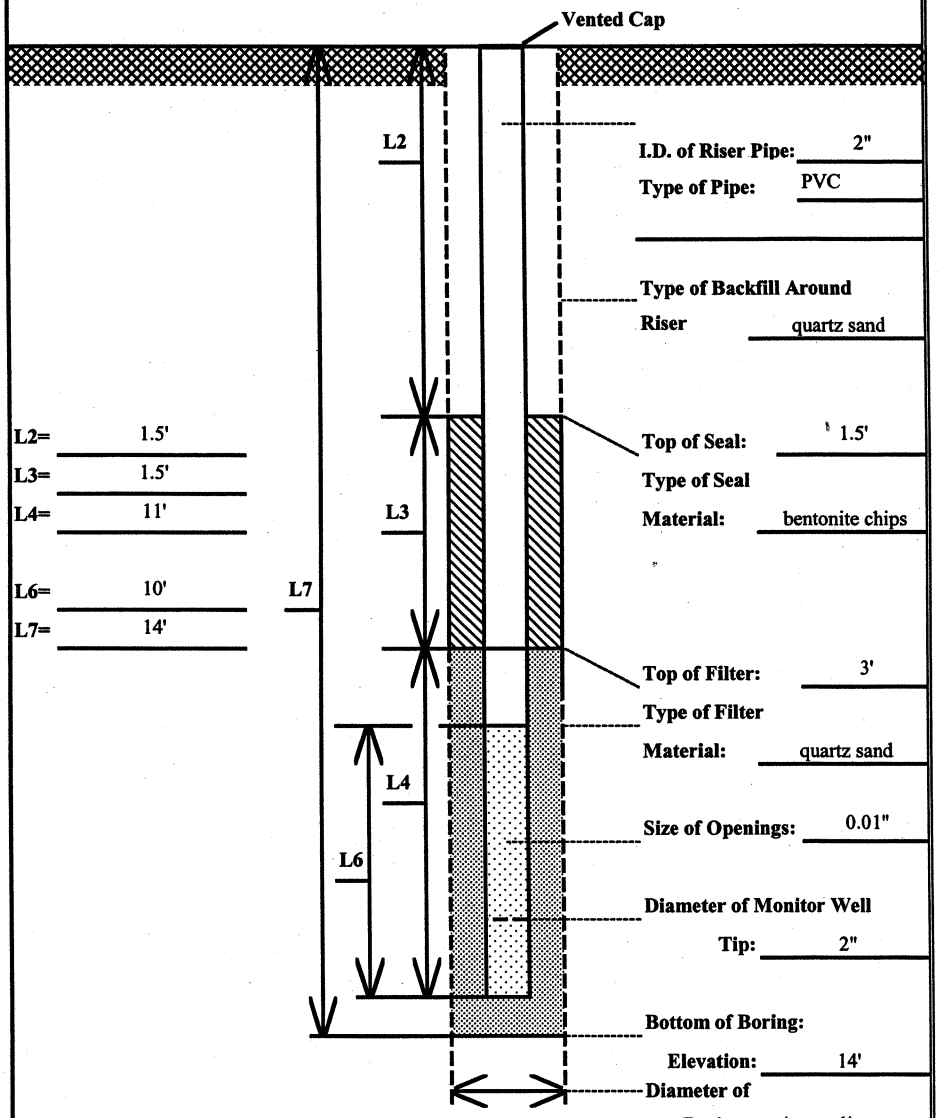
Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	WELL NO. MW-106
SITE LOCATION 1&77 State Street and 30 & 50 East Main Street Meriden, Connecticut	JOB NO: 036200100.0055.00032 LOCATION: N: E:		Elevation: 97.92' Total Depth: 14'
DRILL CONTRACTOR : New England Boring	ENG/GEO: Nancy Gaines	DRILLER : Trent Roe	DATE : August 6, 2004
INSTALLATION METHOD: 4" Hollow Stem Auger			TIME : 11:30
TYPE OF MONITORING WELL Overburden			Ground Water (Depth/Elev.) : ~5.5'

MATERIALS USED

Ground Elevation : _____

Top of Riser Elevation : _____



L2= 1.5'
L3= 1.5'
L4= 11'
L6= 10'
L7= 14'

REMARKS : _____

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[MW Logs.xls]MW-106

Metcalf & Eddy, Inc.
ENGINEERS

MONITORING WELL CONSTRUCTION DETAIL

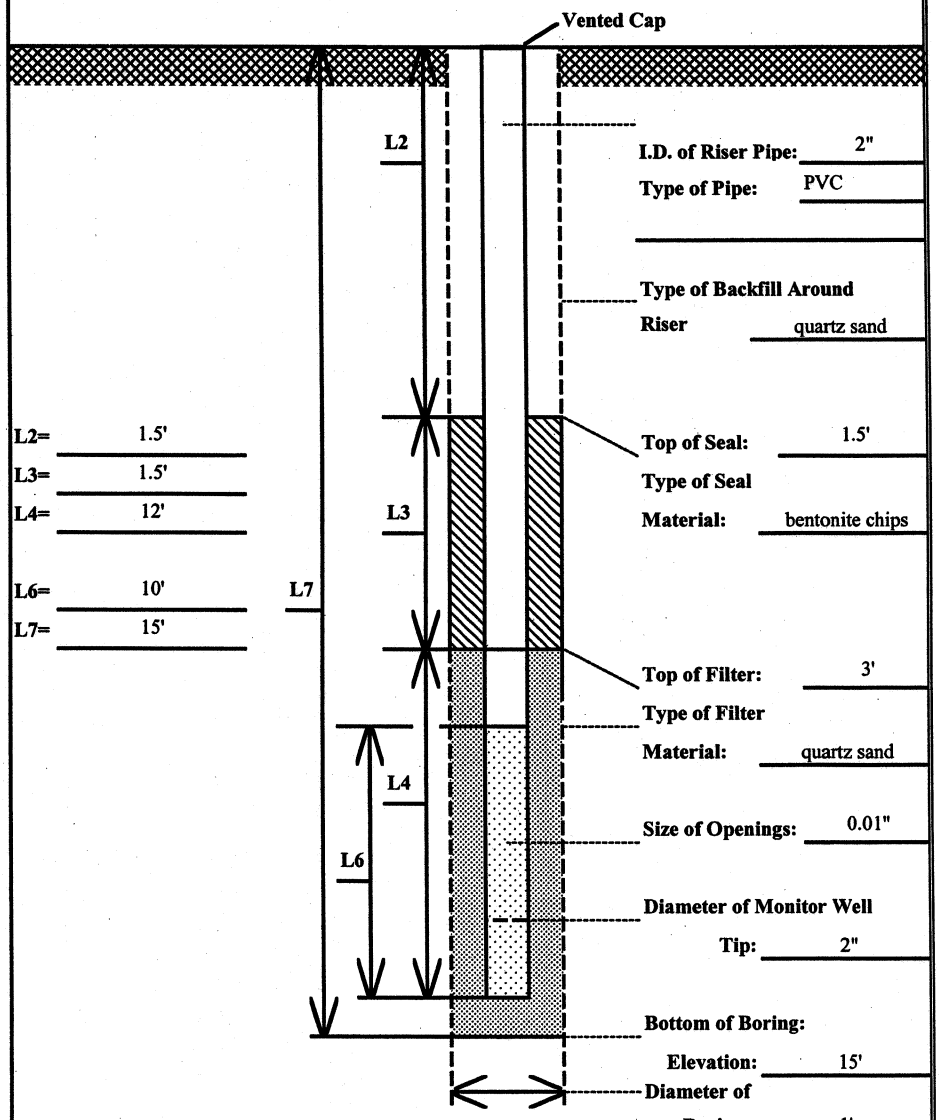
M&E Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	WELL NO. MW-107
SITE LOCATION 1&77 State Street and 30 & 50 East Main Street Meriden, Connecticut	JOB NO: 036200100.0055.00032 LOCATION: N: E:		Elevation: 98.09' Total Depth: 15'
DRILL CONTRACTOR : New England Boring	ENG/GEO: Nancy Gaines	DRILLER : Trent Roe	DATE : August 6, 2004
INSTALLATION METHOD: 4" Hollow Stem Auger			TIME : 15:05
TYPE OF MONITORING WELL Overburden			Ground Water (Depth/Elev.) : 7.5'

MATERIALS USED

Ground Elevation : _____

Top of Riser Elevation : _____



L2= 1.5'
L3= 1.5'
L4= 12'
L6= 10'
L7= 15'

REMARKS : _____

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[MW Logs.xls]MW-107

Metcalf & Eddy, Inc.
ENGINEERS

MONITORING WELL CONSTRUCTION DETAIL

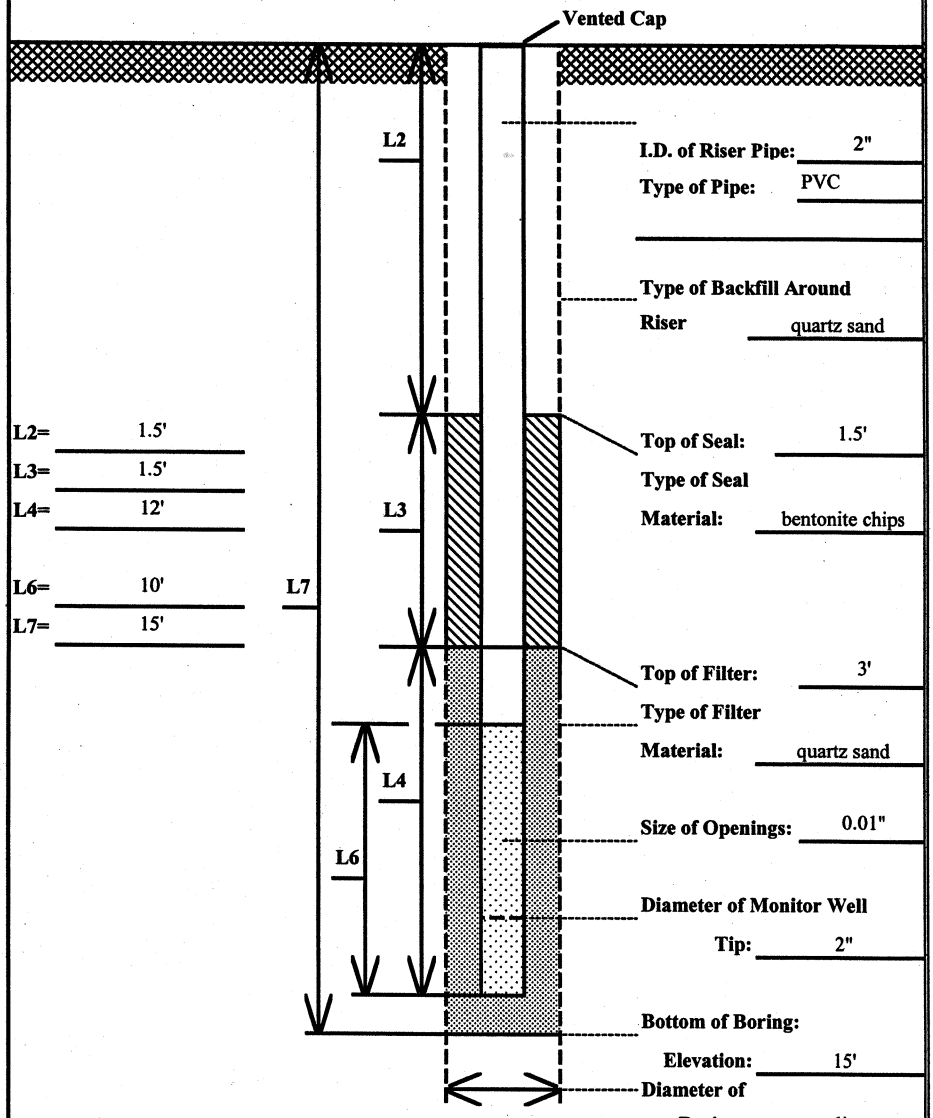
Metcalf & Eddy

PROJECT : Meriden HUB		SHEET 1 of 1	WELL NO. MW-109
SITE LOCATION 1&77 State Street and 30 & 50 East Main Street Meriden, Connecticut	JOB NO: 036200100.0055.00032 LOCATION: N: E:		Elevation: 98.09' Total Depth: 15'
DRILL CONTRACTOR : New England Boring	ENG/GEO: Nancy Gaines	DRILLER : Trent Roe	DATE : August 9, 2004
INSTALLATION METHOD: 4" Hollow Stem Auger			TIME : 11:10
TYPE OF MONITORING WELL Overburden			Ground Water (Depth/Elev.) : ~7.5'

MATERIALS USED

Ground Elevation : _____

Top of Riser Elevation : _____

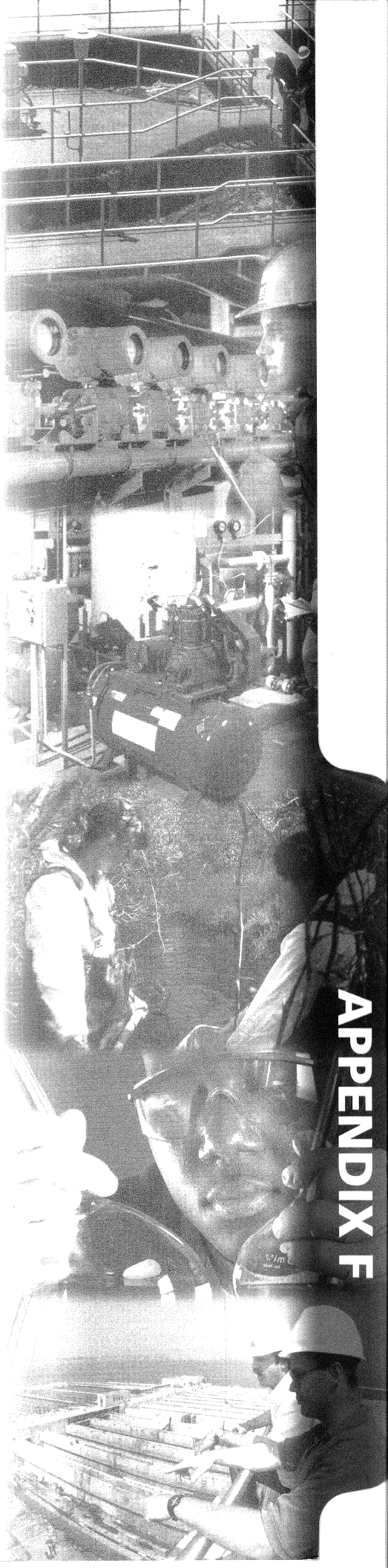


L2= 1.5'
L3= 1.5'
L4= 12'
L6= 10'
L7= 15'

REMARKS : _____

P:\036200100 (EPA Brownfields)\Meriden HUB\Phase II\[MW Logs.xls]MW-109

APPENDIX F


APPENDIX F

APPENDIX F

GROUNDWATER FIELD SAMPLING WORKSHEETS

METCALF & EDDY, INC.
30 Harvard Mill Square
Wakefield, MA 01880
(617) 246-5200

M&E
AQUA ALLIANCE

WELL DEVELOPMENT DATA SHEET

Project Name: Meridem HUB Brownfield site
Well ID: MW - 101
Site Name:
Date Developed: 8/10/04
Job No.:
Development Method: peristaltic

Developer's Name (s):
page of

PID headspace reading: 1.4 ppm

Time (military)	Water Level (ft below ref pt)	pH	ORP (mV)	Specific Cond. (µmhos/cm)	Temp. °C	DO (mg/L)	Turbidity (NTU)	Flowrate Rate (ml/min)
1018	9.57 ft. to top of PVC							
	10.47 ft. to top of well							
	20.25 ft. from top of well to bottom of well							
	9.78 ft. of standing water x 0.617 liters/ft. = 6 liters (1 well volume) or 1.6 gal.							
	from top of well							
1037	10.67	6.92	—	935	67.7	—	57.39	104
	reduced flow rate to 70 ml/min depth to water at 1059 is 11.11 ft							
	still drawing down at lowest possible flow rate							
	increased flow rate and lower tubing to bottom of well							
	surged well to try to remove as much fines as possible							
1157	stop purging, water running clear							
	total volume removed = ~ 4.75 gallons							

Well Purging-Field Water Quality Measurement Form

Location (Site/Facility Name): Meriden HUB

Well # MW-102 Date: 9/8/2004

Field Personnel: N. Gaines

Sampling Organization: M&E

Identify Measuring Point (MP): TOS

Screen Interval	Top	Bottom
From MP in feet:	7.43	17.43

Pump Intake depth (ft below MP): 12.43

Purging Device; (pump type): bladder pump

Weather: rainy, 70°

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. °C	Spec. Cond.[2] µS/cm	pH s.u.	ORP/ Eh[3] mv	DO mg/L	Turb-idity NTU	Comments
11:45	8.90		180		22.32	1635	6.76	-106.1	6.52		
11:50	8.92		180		22.47	1651	6.76	-104.7	1.53		
11:55	8.90		160		22.48	1668	6.76	-104.1	1.01		
12:00	8.90		160		22.43	1682	6.76	-101.6	1.43		
12:05	8.90		160		22.46	1691	6.76	-100.6	1.40		
12:10	8.90		160		22.49	1700	6.76	-99.0	1.37		
12:15	8.90		160		22.46	1708	6.76	-97.6	1.35		
12:20	8.90		160		22.39	1712	6.75	-95.6	1.30		
12:25	8.90		160		22.32	1712	6.76	-95.7	1.26		
12:30	8.90		160		22.27	1713	6.76	-94.4	1.21		
12:35	8.90		160		22.31	1718	6.76	-93.6	1.13		
12:40	8.90		160		22.37	1719	6.77	-92.4	1.13	11.5	
12:43	8.90		160		22.35	1721	6.77	-92.2	1.12	10.9	
12:46	8.90		160	5gal.	22.33	1727	6.77	-92.1	1.10	11.2	
Sampled at 12:50											

1. Pump dial setting (for example: hertz, cycles/min, etc)
2. µSiemens per cm (same as µmhos/cm at 25°C
3. Oxidation reduction potential (standard for Eh)

Well Purging-Field Water Quality Measurement Form

Location (Site/Facility Name):	Meriden HUB	Screen Interval	Top: 4' / Bottom: 14'
Well #	MW-3	Date: 9/8/2004	From MP in feet: 4' / 14'
Field Personnel:	C. Castleberry	Pump Intake depth (ft below MP):	12' from top of steel
Sampling Organization:	M&E	Purging Device; (pump type):	bladder pump
Identify Measuring Point (MP):	TOS	Weather:	overcast, drizzle

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. °C	Spec. Cond.[2] µS/cm	pH s.u.	ORP/ Eh[3] mv	DO mg/L	Turb-idity NTU	Comments
1140	6.20	4 cycles/min	408		19.65	388	6.59	23.0	2.93	—	
1149	6.20		480		19.90	392	6.55	14.0	2.55	—	
1154	6.20		332		20.18	414	6.51	5.9	2.48	—	
1159	6.20		328		20.29	440	6.48	-5.2	2.45	—	
1204	6.20		320		20.27	475	6.46	-17.2	2.42	—	
1209	6.20		324		20.26	493	6.46	-19.2	2.39	—	
1214	6.20		288		20.30	505	6.45	-21.3	2.37	—	
1219	6.20		328		20.25	521	6.45	-22.3	2.33	—	
1224	6.20		320		20.22	535	6.45	-22.7	-2.17	—	
1229	6.20		320		20.24	545	6.45	-23.6	-2.28	—	
1234	6.20		320		20.23	555	6.45	-24.9	-2.39	—	
1239	6.20		324		20.24	567	6.45	-26.2	-2.64	—	
1255	6.20		320		20.27	595	6.45	-28.2	-3.73	3.69	
1258	6.20		288		20.31	599	6.46	-28.9	-3.76	2.46	
1301	6.20		304		20.29	604	6.46	-29.2	-3.81	2.50	
1304	6.20		308		20.27	607	6.46	-29.8	-3.91	2.35	
sample time: 1310											

1. Pump dial setting (for example: hertz, cycles/min, etc)
2. µSiemens per cm (same as µmhos/cm at 25°C
3. Oxidation reduction potential (standard for Eh)

METCALF & EDDY, INC.
30 Harvard Mill Square
Wakefield, MA 01880
(617) 246-5200

M&E
AQUA ALLIANCE

WELL DEVELOPMENT DATA SHEET

Project Name: Brownfields
Site Name: Meriden HUB
Job No.: 200100-0055-00032

Well ID: MW-106
Date Developed: 8/10/04
Development Method: peristaltic

Developer's Name (s): C. Castleberry

page of

PID headspace reading: 136 ppm

Time (military)	Water Level (ft below ref pt)	pH	ORP (mV)	Specific Cond. (µmhos/cm)	Temp. °C	DO (mg/L)	Turbidity (NTU)	Flowrate Rate (ml/min)
	5.13 ft.	from top of PVC	to water					
	5.56 ft.	from top of well	to water					
	12.50 ft.	to bottom of well	~~x 0.617 liters/ft.~~					
	6.94 ft.	of water in well	x 0.617 liters/ft. = 4.28 liters or 1.13 gallons (one well volume)					
1250	started purging							
1345	stopped purging, 5 gallons removed, water is still turbid when tubing is shaken							

Metcalf & Eddy, Inc.
30 Harvard Mill Square
Wakefield, MA 01990
(781) 246-5200

M&E AQUA ALLIANCE

LOW FLOW MONITORING WELL SAMPLING WORKSHEET

Job Name: Meriden HWB Job No.: 200100-0055-00032 Samplers: C. Castleberry

Well ID: MW-10b Date Sampled: 9/8/04 Arrival Time: 1446 Depart. Time: _____

Well secure upon arrival? (Yes) / No PID Readings (ppm) 0.0 Breathing Zone 0.0 Well Headspace

Depth of water from T.O.C./T.O.PVC 5.20 ft

YSI ID No. 02 F08 69 A1

Turbidimeter ID No. Lamotte 2020 4745-4903

Other ID No. —

Purging Method bladder pump

Purge: Time Start 1454 End 1555

~~Well Diameter: _____ inches _____ ft (dia)~~

~~Depth of well from T.O.C./T.O.PVC _____ ft~~

~~Depth of water from T.O.C./T.O.PVC _____ ft~~

~~Feet of standing water _____ ft~~

~~Volume of standing water _____ gal~~

	Time	Water Level (feet)	pH	ORP (mV)	Temp (°C)	Sp. Cond (µs/cm)	DO (mg/l)	Turbidity (NTU)	Flow Rate (ml/min)
Initial Reading	1458	5.61	6.67	166.3	20.50	788	1.59	392	264
Final Reading	1550	5.81	6.65	90.8	20.26	765	-7.85	15.7	272

Sample Collection: Time Start: 1555 End: _____ Samples Preserved: (Yes) / No

Field dup. sample time = 1615

Sample Characteristics (circle all applicable)

Describe odor:	(none)	sulfide	fishy	musty	petroleum		_____
Describe color:	(colorless)	black	brown	orange	red		_____
Describe appearance:	turbid	silty	sand	clay	floaters	sheen	_____
	(clear)	multiphase	foaming	slimy	algae		_____

Organic Layer? _____ Length? _____ Floating or Sinking or Other? _____

Comments _____

Test Papers: Lead Acetate: neg. Potassium Iodine: neg.

Metcalf & Eddy, Inc.
30 Harvard Mill Square
Wakefield, MA 01990
(781) 246-5200

MONITORING WELL SAMPLING WORKSHEET (ADDITIONAL PAGES)

Job Name: Meridian HUB Job No.: 200100-0055-00032 Samplers: C. Castleberry

Well ID: MW-106 Date Sampled: 9/8/04

Time (military)	Water Level (feet)	pH	ORP (mV)	Temp (°C)	Specific Conductivity (µs/cm)	DO (mg/l)	Turbidity (NTU)	Flow Rate (ml/min)
1518	5.61	6.63	176.1	20.33	770	-3.90	133	268
1523	5.61	6.64	160.9	20.30	767	-6.85	53.5	264
1527	5.61	6.64	155.1	20.28	766	-8.14	40.9	264
1531	5.61	6.65	140.2	20.26	765	-8.81	31.2	272
1535	5.61	6.66	120.4	20.31	764	-8.59	21.3	256
1539	5.61	6.66	111.4	20.28	765	-8.51	8.34	272
1543	5.61	6.65	99.5	20.32	764	-8.25	17.2	272
1547	5.61	6.65	95.1	20.28	765	-8.13	16.0	272
1550	5.61	6.65	90.8	20.26	765	-7.85	15.7	272
		Field duplicate collected - called MW-206						

Well Purging-Field Water Quality Measurement Form

Location (Site/Facility Name): Meriden HUB

Well # MW-108 Date: 9/8/2004

Field Personnel: Nancy Gaines

Sampling Organization: M&E

Identify Measuring Point (MP): TOS

Screen Interval	Top	Bottom
From MP in feet:	6.91	16.91

Pump Intake depth (ft below MP): 11.91

Purging Device; (pump type): bladder pump

Weather: cloudy, 70°

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. °C	Spec. Cond.[2] µS/cm	pH s.u.	ORP/ Eh[3] mv	DO mg/L	Turb-idity NTU	Comments
14:30	6.36		100		20.47	729	6.75	-86.4	1.38	1389	Lemotte 2020
14:35	6.52		80		20.64	735	6.75	-78.4	2.33	1030	Turbidity meter
14:40	6.70		50		21.35	740	6.76	-63.6	2.36	917	will not read
14:45	6.74		50		20.81	739	6.74	-61.2	2.27	1080	samples since
14:50	6.65		60		20.86	742	6.72	-44.7	2.19	1058	they are too
14:55	6.70		60		21.18	750	6.73	-24.5	2.12	1016	high. Turbidity
15:00	6.72		60		21.18	749	6.73	-18.1	1.48	1043	reading are from
15:05	6.72		75		21.34	752	6.73	-9.4	1.91	1070	YSI
15:10	6.70		80		20.82	743	6.73	13.0	1.80	1081	
15:15	6.70		80		20.67	741	6.73	17.4	1.73	1049	
15:20	6.70		80		20.60	741	6.74	24.6	1.60	843	
15:25	6.70		80		20.62	741	6.75	38.8	0.93	805	
15:30	6.70		80	4gal.	20.58	742	6.75	36.0	1.39	867	

Sampled at 15:35

1. Pump dial setting (for example: hertz, cycles/min, etc)
2. µSiemens per cm (same as µmhos/cm at 25°C
3. Oxidation reduction potential (standard for Eh)

METCALF & EDDY, INC.
30 Harvard Mill Square
Wakefield, MA 01880
(617) 246-5200

M&E AQUA ALLIANCE

WELL DEVELOPMENT DATA SHEET

Project Name: Brown Fields
Site Name: Meriden HUB
Job No.: 200100 - 0055 - 00032

Well ID: MW-109
Date Developed: 8/10/04
Development Method: peristaltic

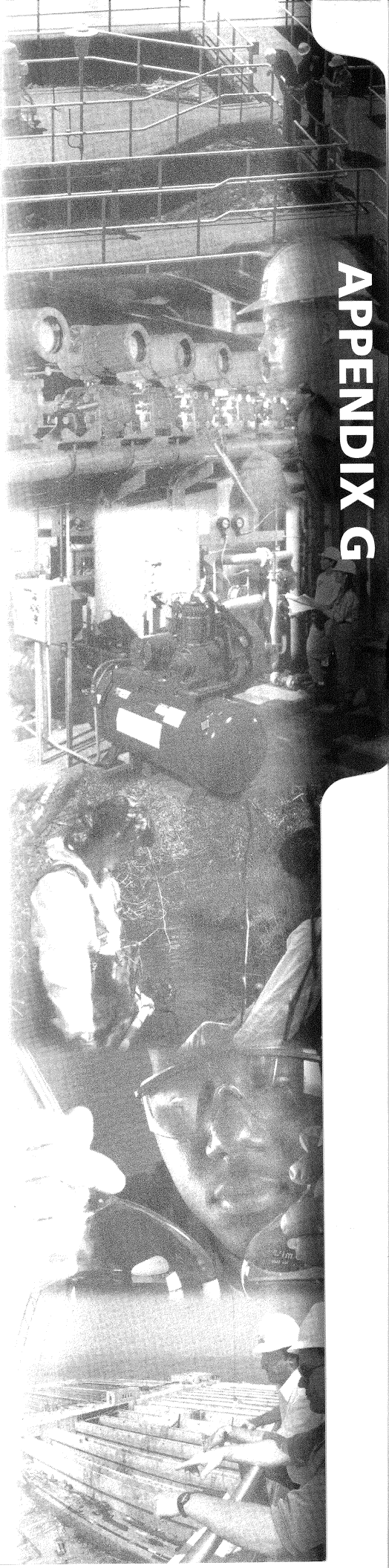
Developer's Name (s): C. Castleberry

page of

PID headspace reading: 263 ppm

Time (military)	Water Level (ft below ref pt)	pH	ORP (mV)	Specific Cond. (µmhos/cm)	Temp. °C	DO (mg/L)	Turbidity (NTU)	Flowrate Rate (ml/min)
	6.79 to	top of	PVC					
	7.55 to	top of	well					
	~15 ft.	to bottom	of well					
	7.45 ft.	of standing	water in well x	0.617 liters/ft = 4.6 liters or 1.2 gal/one well volu				
1420	started	pumping						
1520	stopped	pumping	~ 60 gallons purged					

APPENDIX G



APPENDIX G

LABORATORY DATA SHEETS AND DATA VALIDATION MEMORANDA

Memorandum

Metcalf & Eddy

PROJECT NO:	036200100.0055.00033	**DATE:** October 27, 2004	
TO:	Meriden HUB	**OFFICE:** Wakefield	
FROM:	P. DiMattei	**COMPANY:** Metcalf & Eddy, Inc.	
REVIEWED BY:	D. Truini		
CC:	B. Weir, N. Thurber, D. Laferte (memo only)		

SUBJECT: Limited QC Review/Modified Tier II-Like Review
SVOCs, SPLP PAHs, PCBs, ETPH, Mercury, Cyanide, Metals, and SPLP Metals
Mitkem Corporation, Warwick, Rhode Island
Project #C0786/MC0786

On July 22, 2004, five soil samples were collected at the Meriden HUB site, located in Meriden, Connecticut by Metcalf & Eddy, Inc. (M&E) field personnel. The sampling was performed as part of the TBA Response Action Contract (RAC) Work Assignment (WA) #155-SIBZ-0100. The samples were submitted to Mitkem Corporation located in Warwick, Rhode Island for the analysis of semivolatile organic compounds (SVOCs) according to *SW-846 Method 8270C, Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS),* for polychlorinated biphenyls (PCBs) according to *SW-846 Method 8082, Polychlorinated Biphenyls (PCBs) by Gas Chromatography,* for extractable total petroleum hydrocarbons (ETPHs) according to the Connecticut method entitled *Analysis of Extractable Total Petroleum Hydrocarbons (ETPH) Using Methylene Chloride Gas Chromatograph/Flame Ionization Detection,* for mercury according to *SW-846 Method 7471A, Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)*, for cyanide according to *SW-846 Method 9014, Titrimetric and Manual Spectrophotometric Determinative Methods for Cyanide,* and for metals according to *SW-846 Method 6010B, Inductively Coupled Plasma-Atomic Emission Spectrometry.* Based on the initial screening results, two soil samples required extraction according to *SW-846 Method 1312, Synthetic Precipitation Leaching Procedure.* One of these two leachate samples was analyzed for polyaromatic hydrocarbons (PAHs) in the selected ion monitoring (SIM) mode according to *SW-846 Method 8270C, Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)* and the remaining sample was analyzed for mercury and metals according to *SW-846 Methods 7470A, Mercury in Liquid Waste (Manual Cold Vapor Technique)* and *6010B, Inductively Coupled Plasma-Atomic Emission Spectrometry*, respectively. All samples were received by the laboratory on July 23, 2004. The data package was received in the M&E office on September 23, 2004.

M&E reviewed the data in accordance with the EPA-approved Final Field Task Work Plan for the site, and the guidance received from EPA Work Assignment Manager, Mr. James Byrne, in a September 17, 1999 letter to former M&E Work Assignment Manager, Barb Wyskowski. The data review included:

	•	Data Completeness
	•	Preservation and Technical Holding Times
*	•	GC/MS and GC/ECD Instrument Performance Check
	•	Initial and Continuing Calibrations
	•	Blank Analysis Results
	•	Inductively Coupled Plasma (ICP) Interference Check Sample Results
*	•	Surrogate Compounds
	•	Internal Standards
	•	Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Recoveries
	•	Laboratory Duplicate Sample Results
	•	Field Duplicate Sample Results
	•	Laboratory Control Sample (LCS) Results
NA	•	Furnace Atomic Absorption Results
NA	•	ICP Serial Dilution Analysis Results
	•	Compound Quantitation and Reported Quantitation Limits
NA	•	Semivolatile and Pesticide/PCB Cleanup
NA	•	Performance Evaluation (PE) Sample Results

*	=	All criteria met for this parameter
NA	=	Not applicable and/or no information was provided by the laboratory

Note: Worksheets are not included for parameters that have met criteria or for criteria that are not applicable to the method and/or to the modified Tier II-like review.

Included in Attachment I is a copy of the chain-of-custody (COC) record. Included in Attachment II are the result summary sheets, annotated with qualifiers, if necessary, as detailed in this memorandum. Included in Attachment III are communication logs. Included in Attachment IV are the data validation worksheets.

Data Completeness

Clarification of some ETPH and metals issues were required (see Attachment III for details). The laboratory was contacted on October 15, 2004 and these items were adequately addressed in the resubmittal response received from the laboratory on October 22, 2004.

Preservation and Holding Times

SPLP PAHs

The 14-day extraction holding time criterion from SPLP extraction to PAH preparative extraction for SPLP sample TP-2 was exceeded by 4 days. The positive and nondetect PAH results in this sample were qualified as estimated (J and UJ, respectively) due to possible sample degradation.

Initial and Continuing Calibrations

SVOCs

The following table summarizes the compounds in the initial calibration (IC) that failed to meet acceptance criterion of ≤15 percent relative standard deviation (%RSD), the associated samples, and the actions taken:

Instrument	S3
Calibration Date	IC 7/27/04
Compound	
2,4-dimethylphenol	19.6
hexachlorocyclopentadiene	19.3
2,4-dinitrophenol	38.0
4,6-dinitro-2-methylphenol	29.8
pentachlorophenol	16.4
Associated Samples	All SVOC soil samples.

Actions: %RSD>15%: Estimate (UJ) nondetect results.

SPLP PAHs

The following table summarizes the compounds in the IC that failed to meet acceptance criterion of ≤15%RSD, compounds in the continuing calibration (CC) that failed to meet acceptance criterion of ≤20 percent difference (%D), the associated sample, and the actions taken:

Instrument	S1	S1
Calibration Date	IC 8/19/04	CC 8/19/04
Compound		
benzo(b)fluoranthene	16.0	-
fluorene	-	-21.6
indeno(1,2,3-cd)pyrene	16.5	-
dibenz(a,h)anthracene	16.1	-
Associated Samples	SPLP sample TP-2.	SPLP sample TP-2.

– - QC acceptance criteria were not exceeded for this compound

Actions: %RSD>15%: Estimate (UJ) nondetect results.
%D>20%: Estimate (UJ) nondetect results.

PCBs

The following table summarizes the compounds in the CC that failed to meet acceptance criterion of ≤15%D, the associated sample, and the actions taken:

Column	RTXCLPPEST
Calibration Date	CC 7/29/04 (ending calibration)
Compound	
Aroclor 1016 peak 1	20
Aroclor 1016 peak 2	20
Aroclor 1016 peak 3	20
Associated Samples	All PCB soil samples.

Actions: %D>15%: Estimate (UJ) nondetect results.

Note: Apply actions for Aroclor 1016 calibration exceedances to Aroclor 1221, Aroclor 1232, Aroclor 1242, and Aroclor 1248 and for Aroclor 1260 calibration exceedances to Aroclor 1254 since these multi-component compounds elute within similar retention times and similar responses would be expected.

Based on a review of the Aroclor 1016 results reported for the above failed CC (found value exceeded the expected value), it was determined that there was evidence of increased instrument sensitivity on the affected column. Therefore, since the Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, and Aroclor 1248 results in all soil samples were not detectable and the CC %D criteria were met on the remaining column, no validation actions were taken.

Blanks

ETPH

The following table summarizes the level of blank contamination detected in the laboratory blanks. If a contaminant was detected in more than one blank, the highest concentration was used to qualify associated sample results.

Compound	Maximum Concentration (mg/Kg)	Blank Action Level (BAL) (mg/Kg)	Reporting Limit (mg/Kg)	Samples Affected/Actions
ETPH	1.8	9.0	12	All samples results were >BAL; No actions required.

Sample results were qualified as follows:

- If sample result was >reporting limit and <BAL, the result was qualified as a nondetect (U) at the reported concentration
- If the sample result was <reporting limit and <BAL, the results was qualified as a nondetect (U) at the reporting limit
- If the sample results was >BAL, qualification of the data was not required.

Metals and Cyanide

All metals and cyanide instrument blank results associated with the soil samples were reported to the aqueous method detection limits (MDLs) instead of the soil MDLs. No actions were taken for any of the metals other than to note this discrepancy since the aqueous and soil MDLs were similar for all analytes. The cyanide aqueous MDL was approximately 3x higher than the soil MDL (any low level instrument blank contamination would not be detectable in association with the soils since the higher aqueous MDL was reported on the summary forms). However the cyanide results in all soil samples were nondetect and therefore would not have been affected by blank contamination. No validation actions were taken.

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the soil samples. If a contaminant was detected in more than one blank, the highest concentration was used to qualify associated sample results.

Analyte	Maximum Concentration (µg/L)	Blank Action Level (BAL) (mg/Kg)	Samples Affected/Actions
antimony	5.3	1.3	All samples results were >BAL; No actions required.
arsenic	1.8	0.45	All samples results were >BAL; No actions required.
barium	27.6	6.9	All samples results were >BAL; No actions required.
beryllium	0.5	0.125	All samples results were >BAL; No actions required.
cadmium	-0.24	-0.06	All samples results were >BAL; No actions required.
chromium	1.5	0.38	All samples results were >BAL; No actions required.
copper	32.7	8.2	All samples results were >BAL; No actions required.
lead	1.6	0.40	All samples results were >BAL; No actions required.
nickel	1.5	0.38	All samples results were >BAL; No actions required.
selenium	4.1	1.0	All samples results were >BAL; No actions required.
silver	1.2	0.3	All samples results were >BAL; No actions required.
thallium	4.6	1.2	All samples results were >BAL; No actions required.
zinc	26.2	6.6	All samples results were >BAL; No actions required.

Sample results were qualified as follows for positive blank contamination:

- If the sample result was >method detection limit (MDL) and <BAL, the result was qualified as a nondetect (U) at the reported value
- If the sample result was >BAL, qualification of the data was not required.

Sample results were qualified as follows for negative blank contamination:

- If the sample result was > MDL and <absolute value of the negative BAL, the result was qualified as estimated (J)
- If the sample result was nondetect, the result was qualified as estimated (UJ)
- If the sample result was >the absolute value of the negative BAL, qualification of the data was not required.

SPLP Metals

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the SPLP sample. If a contaminant was detected in more than one blank, the highest concentration was used to qualify associated sample results.

Analyte	Maximum Concentration (µg/L)	Blank Action Level (BAL) (µg/L)	Samples Affected/Actions
antimony	2.9	14.5	All samples results were >BAL; No actions required.
arsenic	1.8	9.0	Qualify as nondetect (U)at the reported value in TP-4.
barium	12.9	64.5	Qualify as nondetect (U)at the reported value in TP-4.
beryllium	0.5	2.5	Qualify as nondetect (U)at the reported value in TP-4.
cadmium	0.1	0.5	Qualify as nondetect (U)at the reported value in TP-4.
copper	16.9	84.5	Qualify as nondetect (U)at the reported value in TP-4.
lead	1.6	8.0	All samples results were >BAL; No actions required.
nickel	0.824	4.1	All samples results were >BAL; No actions required.
selenium	4.1	20.5	Qualify as nondetect (U)at the reported value in TP-4.
silver	1.2	6.0	Qualify as nondetect (U)at the reported value in TP-4.
thallium	4.6	23.0	Result was not detected; No actions required.
zinc	23.6	118	Qualify as nondetect (U)at the reported value in TP-4.

Sample results were qualified as follows:

- If the sample result was >method detection limit (MDL) and <BAL, the results was qualified as a nondetect (U) at the reported value
- If the sample result was >BAL, qualification of the data was not required.

Inductively Coupled Plasma (ICP) Interference Check Sample Results

Metals and SPLP Metals

Due to the limited nature of this review (lack of raw data), an in-depth review of the ICSA solution exceedances was not possible. The validator reviewed the ICSA results to determine whether there were any gross exceedances (unspiked analytes at concentrations >reporting limit). Lead was detected in the ICSA solution at concentrations greater than the reporting limit. However, no actions were taken since the significance of this interference could not be evaluated for the soil and SPLP samples due to lack of raw data.

Internal Standards

SVOCs

The following table summarizes the internal standard (IS) results that failed to meet the area count acceptance criterion, the associated sample and the actions taken:

Sample ID	IS	IS Area	Acceptance Criterion	Action
TP-2(DL)	1,4-dichlorobenzene-d_4	163911	237524-950096	No action required. The associated compounds were not reported from this dilution analysis.
	naphthalene-d_8	643663	891330-3565318	
	acenapthene-d_{10}	384516	473264-1893054	
	phenanthrene-d_{10}	667145	771313-3085252	Qualify as estimated (J) the positive fluoranthene result in

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

SVOCs

Sample TP-1 was analyzed as the SVOC soil MS/MSD sample in this data set. The MS/MSD compounds that did not meet the percent recovery (%R) and/or relative percent difference (RPD) acceptance criteria and actions taken are summarized in the following table:

Compound	MS %R	MSD %R	%RPD	QC limits		Actions
				%R	%RPD	
phenanthrene	125	-	52	70-115	40	Qualify as estimated (J) the positive result in sample TP-1.
fluoranthene	176	-	63	64-121	40	Qualify as estimated (J) the positive result in sample TP-1.
pyrene	168	-	58	66-120	40	Qualify as estimated (J) the positive result in sample TP-1.
benzo(a)anthracene	172	132	-	50-129	-	Qualify as estimated (J) the positive result in sample TP-1.
chrysene	164	-	-	41-150	-	Qualify as estimated (J) the positive result in sample TP-1.
benzo(b)fluoranthene	188	144	-	61-129	-	Qualify as estimated (J) the positive result in sample TP-1.
benzo(k)fluoranthene	136	-	-	62-130	-	Qualify as estimated (J) the positive result in sample TP-1.
benzo(a)pyrene	184	148	-	66-119	-	Qualify as estimated (J) the positive result in sample TP-1.
indeno(1,2,3-cd)pyrene	132	-	-	56-128	-	Qualify as estimated (J) the positive result in sample TP-1.
4-bromophenylphenylether	-	64	-	66-110	-	Qualify as estimated (UJ) the nondetect result in sample TP-1.
di-n-butyl phthalate	-	68	-	70-120	-	Qualify as estimated (UJ) the nondetect result in sample TP-1.
di-n-octyl phthalate	-	68	-	69-137	-	Qualify as estimated (UJ) the nondetect result in sample TP-1.

-- QC acceptance criteria were not exceeded for this compound

Metals and Cyanide

Sample TP-1 was analyzed as the soil metals and cyanide MS sample in this data set. The analytes that did not meet acceptance criteria of 75-125%R and the actions taken are summarized in the table below:

Analyte	Spiked Sample Result (mg/kg)	Sample Result (mg/kg)	Matrix Spike %R	Affected Samples/Action
antimony	11.9	2.31	30.2	Qualify as estimated (J)the positive antimony result in all soil samples.
cyanide	0.16 U	0.16 U	0	Qualify as rejected (R) the nondetect cyanide results in all soil samples.

Laboratory Duplicate Sample Results

Metals and Cyanide

Sample TP-1 was analyzed as the soil metals and cyanide laboratory duplicate sample in this data set. The analytes that did not meet the laboratory duplicate relative percent difference (RPD) criterion of ≤ 35% for analytes >5x reporting limit or the absolute difference criterion of >2x reporting limit for those analytes <5x reporting limit, and the actions taken are summarized in the following table:

Analyte	TP-1 (mg/Kg)	TP-1 Dup (mg/Kg)	%RPD	Actions
mercury	0.5801	0.9004	43.3	Qualify as estimated (J) the positive results in all soil samples.

Field Duplicate Sample Results

SVOCs

The compounds that did not meet the field duplicate RPD criterion of ≤ 50 in the field duplicate pair TP-4/TP-CS-4 and the actions taken are summarized in the following table:

Compound	TP-4 (µg/Kg)	TP-CS-4 (µg/Kg)	%RPD	Actions
acenaphthene	78	1200	176	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
dibenzofuran	58	750	171	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
fluorene	100	1200	169	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
phenanthrene	1000	9200	161	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.

Compound	TP-4 (µg/Kg)	TP-CS-4 (µg/Kg)	%RPD	Actions
anthracene	370	2500	172	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
carbazole	170	1100	146	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
fluoranthene	2300	9500	122	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
pyrene	2000	8300	122	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
benzo(a)anthracene	1200	4100	109	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
chrysene	1300	4200	105	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
benzo(b)fluoranthene	1600	4500	95	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
benzo(k)fluoranthene	630	2000	104	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
benzo(a)pyrene	1300	4000	102	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
indeno(1,2,3-cd)pyrene	740	2100	96	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
dibenz(a,h)anthracene	240	630	90	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.
benzo(g,h,i)perylene	890	2500	95	Qualify as estimated (J) the positive results in samples TP-4 and TP-CS-4.

Metals and Cyanide

The analytes for field duplicate pair TP-4/TP-CS-4 that did not meet the field duplicate RPD criterion of ≤ 50% for analytes >5x reporting limit or the absolute difference criterion of >4x reporting limit for those analytes <5x reporting limit, and the actions taken are summarized in the following table:

Analyte	TP-4 (mg/Kg)	TP-CS-4 (mg/Kg)	%RPD	Actions
cadmium	1.0	3.0	100	Qualify as estimated (J) the positive results in all soil samples.
zinc	212	378	56.3	Qualify as estimated (J) the positive results in all soil samples.

Laboratory Control Sample (LCS) Results

SPLP Metals

According to the laboratory case narrative, the aqueous LCS associated with the SPLP analyses was not spiked with arsenic, cadmium, lead, selenium, and thallium. The positive and nondetect arsenic, cadmium, lead, selenium, and thallium results in SPLP sample TP-4 were qualified as estimated (J and UJ, respectively) due to lack of LCS information.

Compound Quantitation and Reported Quantitation Limits

SVOCs

The following samples were diluted (dilution listed in parenthesis) based on the results exceeding the calibration range in the original sample analysis:

Sample	Compounds from Dilution Analysis
TP-2	(2x) for phenanthrene, pyrene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene
TP-CS-4	(2x) for phenanthrene, fluoranthene, pyrene

ETPH.

The following samples were diluted (dilution listed in parenthesis) based on the results exceeding the calibration range in the original sample analysis:

Sample	Compounds from Dilution Analysis
TP-1	(10x) for ETPH
TP-2	(10x) for ETPH
TP-4	(10x) for ETPH
TP-CS-4	(10x) for ETPH

Metals and Cyanide

The following table summarizes the positive and blank-qualified metal results that were less than the reporting limit but greater than the MDL. These listed results are qualified as estimated (J) due to uncertainty in the quantitation at concentrations less than the reporting limit. Note that the overall qualification for the blank qualified metal results is estimated, nondetect (UJ).

Sample	Affected Analytes
TP-1	cadmium, silver
TP-3	silver

SPLP Metals

The following table summarizes the positive and blank-qualified metal results that were less than the reporting limit but greater than the MDL. These listed results are qualified as estimated (J) due to uncertainty in the quantitation at concentrations less than the reporting limit. Note that the overall qualification for the blank qualified metal results is estimated, nondetect (UJ).

Sample	Affected Analytes
TP-4	arsenic, barium, beryllium, cadmium, nickel, selenium, silver, vanadium, zinc

Attachment I

Chain-of-Custody

M&E Metcalf & Eddy

CHAIN OF CUSTODY FORM

Job/Project Name: Meriden HUB

Job/Project Location: East Main St. & State St. Meriden, CT

Job/Project Number: 0362100100.0055.00032

Samplers: (Signatures) [signature]

Recorder: (Signature) [signature]

Date: 7/22/04

Lab (Samples Sent To): MiKem Corp.

SAMPLING Date	SAMPLING Time	SAMPLE NUMBER	SAMPLE LOCATION	MATRIX: Water	MATRIX: Soil	COMPOSITE/GRAB	PRESERVATIVE (Y/N)	ANALYSIS REQUESTED: TPH	SVOCs	Cyanide	CTRSR Metals	PCBs	Total #	COMMENTS
7/22/04	11:15	TP-1	Test Pit 1		X	G	N	X	X	X	X	X	2	4 Jars acid - 7/2
7/22/04	1:45	TP-2	Test Pit 2		X	G	N	X	X	X	X	X	2	
7/22/04	3:15	TP-3	Test Pit 3		X	C	N	X	X	X	X	X	2	
7/22/04	4:55	TP-4	Test Pit 4		X	C	N	X	X	X	X	X	2	
7/22/04	4:55	TP-CS-4	Test Pit 4		X	C	N	X	X	X	X	X	2	
														50

Relinquished By: (Signature)	Date:	Time:	Relinquished By: (Signature)	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
[signature]	7/23/04	1:25					
Relinquished By: (Signature)	Date:	Time:	Relinquished By: (Signature)	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
Relinquished By: (Signature)	Date:	Time:	Received for Lab By: (Signature)	Date:	Time:	Comments:	
			[signature]	7-23-04	1:25	Please hold samples for possible SPLP analysis in the future.	

Method of Shipment: Courier

Distribution: **Original** to Lab. **Copy 1** to Field Files, **Copy 2** to Project Manager

Attachment II

Sample Result Summary Sheets

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-I

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-01A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9575

Level: (low/med) LOW Date Received: 07/23/04

% Moisture: 34 decanted: (Y/N) N Date Extracted: 07/26/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/28/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EDP 1/13/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	500	U
111-44-4	bis(2-Chloroethyl)Ether	500	U
95-57-8	2-Chlorophenol	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
95-50-1	1,2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	2,2'-oxybis(1-Chloropropane)	500	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-di-n-propylamine	500	U
67-72-1	Hexachloroethane	500	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	UJ
120-83-2	2,4-Dichlorophenol	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U
91-20-3	Naphthalene	500	U
106-47-8	4-Chloroaniline	500	U
111-91-1	bis(2-Chloroethoxy)methane	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-Methylphenol	500	U
91-57-6	2-Methylnaphthalene	500	U
77-47-4	Hexachlorocyclopentadiene	500	UJ
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	500	U
208-96-8	Acenaphthylene	500	U
606-20-2	2,6-Dinitrotoluene	500	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	500	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-I

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-01A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9575

Level: (low/med) LOW Date Received: 07/23/04

% Moisture: 34 decanted: (Y/N) N Date Extracted: 07/26/04

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EJD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	UJ
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	500	U
121-14-2	2,4-Dinitrotoluene	500	U
84-66-2	Diethylphthalate	1500	
7005-72-3	4-Chlorophenyl-phenylether	500	U
86-73-7	Fluorene	500	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	UJ
86-30-6	N-Nitrosodiphenylamine (1)	500	U
101-55-3	4-Bromophenyl-phenylether	500	UJ
118-74-1	Hexachlorobenzene	500	U
87-86-5	Pentachlorophenol	1000	UJ
85-01-8	Phenanthrene	980	
120-12-7	Anthracene	170	J
86-74-8	Carbazole	500	U
84-74-2	Di-n-butylphthalate	500	UJ
206-44-0	Fluoranthene	1900	
129-00-0	Pyrene	1700	
85-68-7	Butylbenzylphthalate	500	U
91-94-1	3,3'-Dichlorobenzidine	500	U
56-55-3	Benzo(a)anthracene	1300	
218-01-9	Chrysene	1600	
117-81-7	bis(2-Ethylhexyl)phthalate	500	U
117-84-0	Di-n-octylphthalate	500	UJ
205-99-2	Benzo(b)fluoranthene	2800	J
207-08-9	Benzo(k)fluoranthene	1200	J
50-32-8	Benzo(a)pyrene	2300	J
193-39-5	Indeno(1,2,3-cd)pyrene	1700	J
53-70-3	Dibenzo(a,h)anthracene	530	
191-24-2	Benzo(g,h,i)perylene	1900	

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-2

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-02A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: S3C9580

Level: (low/med) LOW Date Received: 07/23/04

% Moisture: 26 decanted: (Y/N) N Date Extracted: 07/26/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/28/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EAD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	440	U
111-44-4	bis(2-Chloroethyl)Ether	440	U
95-57-8	2-Chlorophenol	440	U
541-73-1	1,3-Dichlorobenzene	440	U
106-46-7	1,4-Dichlorobenzene	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	2,2'-oxybis(1-Chloropropane)	440	U
106-44-5	4-Methylphenol	440	U
621-64-7	N-Nitroso-di-n-propylamine	440	U
67-72-1	Hexachloroethane	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	UJ
120-83-2	2,4-Dichlorophenol	440	U
120-82-1	1,2,4-Trichlorobenzene	440	U
91-20-3	Naphthalene	320	J
106-47-8	4-Chloroaniline	440	U
111-91-1	bis(2-Chloroethoxy)methane	440	U
87-68-3	Hexachlorobutadiene	440	U
59-50-7	4-Chloro-3-Methylphenol	440	U
91-57-6	2-Methylnaphthalene	270	J
77-47-4	Hexachlorocyclopentadiene	440	UJ
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	900	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	900	U
131-11-3	Dimethylphthalate	440	U
208-96-8	Acenaphthylene	1100	
606-20-2	2,6-Dinitrotoluene	440	U
99-09-2	3-Nitroaniline	900	U
83-32-9	Acenaphthene	1100	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-2

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-02A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: S3C9580

Level: (low/med) LOW Date Received: 07/23/04

% Moisture: 26 decanted: (Y/N) N Date Extracted: 07/26/04

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

ED 1/13/C

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	900	U J
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	510	
121-14-2	2,4-Dinitrotoluene	440	U
84-66-2	Diethylphthalate	320	J
7005-72-3	4-Chlorophenyl-phenylether	440	U
86-73-7	Fluorene	1600	
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U J
86-30-6	N-Nitrosodiphenylamine (1)	440	U
101-55-3	4-Bromophenyl-phenylether	440	U
118-74-1	Hexachlorobenzene	440	U
87-86-5	Pentachlorophenol	900	U J
85-01-8	Phenanthrene	6000	
120-12-7	Anthracene	2500	
86-74-8	Carbazole	720	
84-74-2	Di-n-butylphthalate	440	U
206-44-0	Fluoranthene	14,000 ~~11000~~	~~E~~ J
129-00-0	Pyrene	13,000 ~~10000~~	~~E~~
85-68-7	Butylbenzylphthalate	440	U
91-94-1	3,3'-Dichlorobenzidine	440	U
56-55-3	Benzo(a)anthracene	6600	
218-01-9	Chrysene	7600 ~~7500~~	~~E~~
117-81-7	bis(2-Ethylhexyl)phthalate	65	J
117-84-0	Di-n-octylphthalate	440	U
205-99-2	Benzo(b)fluoranthene	10,000 ~~8500~~	~~E~~
207-08-9	Benzo(k)fluoranthene	3900	
50-32-8	Benzo(a)pyrene	8000 ~~7200~~	~~E~~
193-39-5	Indeno(1,2,3-cd)pyrene	4300	
53-70-3	Dibenzo(a,h)anthracene	1300	
191-24-2	Benzo(g,h,i)perylene	4900	

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-03A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9574

Level: (low/med) LOW Date Received: 07/23/04

% Moisture: 18 decanted: (Y/N) N Date Extracted: 07/26/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/28/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EAD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)Ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	UJ
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-Methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	UJ
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	810	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	810	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	810	U
83-32-9	Acenaphthene	400	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-03A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9574

Level: (low/med) LOW Date Received: 07/23/04

% Moisture: 18 decanted: (Y/N) N Date Extracted: 07/26/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/28/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	810	UJ
100-02-7	4-Nitrophenol	810	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	810	U
534-52-1	4,6-Dinitro-2-methylphenol	810	UJ
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	810	UJ
85-01-8	Phenanthrene	160	J
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	230	J
129-00-0	Pyrene	200	J
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a)anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	400	U
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	130	J
207-08-9	Benzo(k)fluoranthene	58	J
50-32-8	Benzo(a)pyrene	92	J
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) - Cannot be separated from Diphenylamine

EJD 11/30

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-4

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-04A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9581

Level: (low/med) LOW Date Received: 07/23/04

% Moisture: 15 decanted: (Y/N) N Date Extracted: 07/26/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/28/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

SD 1/13/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-di-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U J
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	U
111-91-1	bis(2-Chloroethoxy)methane	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-Methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U J
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	780	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	780	U
131-11-3	Dimethylphthalate	390	U
208-96-8	Acenaphthylene	360	J
606-20-2	2,6-Dinitrotoluene	390	U
99-09-2	3-Nitroaniline	780	U
83-32-9	Acenaphthene	78	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-4

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-04A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9581

Level: (low/med) LOW Date Received: 07/23/04

% Moisture: 15 decanted: (Y/N) N Date Extracted: 07/26/04

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EJD 11/30/

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	780	U J
100-02-7	4-Nitrophenol	780	U
132-64-9	Dibenzofuran	58	J
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethylphthalate	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
86-73-7	Fluorene	100	J
100-01-6	4-Nitroaniline	780	U
534-52-1	4,6-Dinitro-2-methylphenol	780	U J
86-30-6	N-Nitrosodiphenylamine (1)	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	780	U J
85-01-8	Phenanthrene	1000	J
120-12-7	Anthracene	370	J
86-74-8	Carbazole	170	J
84-74-2	Di-n-butylphthalate	390	U
206-44-0	Fluoranthene	2300	J
129-00-0	Pyrene	2000	J
85-68-7	Butylbenzylphthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)anthracene	1200	J
218-01-9	Chrysene	1300	J
117-81-7	bis(2-Ethylhexyl)phthalate	52	J
117-84-0	Di-n-octylphthalate	390	U
205-99-2	Benzo(b)fluoranthene	1600	J
207-08-9	Benzo(k)fluoranthene	630	J
50-32-8	Benzo(a)pyrene	1300	J
193-39-5	Indeno(1,2,3-cd)pyrene	740	J
53-70-3	Dibenzo(a,h)anthracene	240	J
191-24-2	Benzo(g,h,i)perylene	890	J

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-CS-4

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-05A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9582

Level: (low/med) LOW Date Received: 07/23/04

% Moisture: 18 decanted: (Y/N) N Date Extracted: 07/26/04

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EJB 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)Ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U J
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	J
106-47-8	4-Chloroaniline	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-Methylphenol	400	U
91-57-6	2-Methylnaphthalene	260	J
77-47-4	Hexachlorocyclopentadiene	400	U J
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	810	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	810	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	450	
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	810	U
83-32-9	Acenaphthene	1200	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-CS-4

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-05A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9582

Level: (low/med) LOW Date Received: 07/23/04

% Moisture: 18 decanted: (Y/N) N Date Extracted: 07/26/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/28/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

SAP 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	810	UJ
100-02-7	4-Nitrophenol	810	U
132-64-9	Dibenzofuran	750	J
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	1200	J
100-01-6	4-Nitroaniline	810	U
534-52-1	4,6-Dinitro-2-methylphenol	810	UJ
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	810	UJ
85-01-8	Phenanthrene	9200 ~~8200~~	~~E~~ J
120-12-7	Anthracene	2500	J
86-74-8	Carbazole	1100	J
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	9500 ~~8400~~	~~E~~ J
129-00-0	Pyrene	8300 ~~7400~~	~~E~~ J
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a)anthracene	4100	J
218-01-9	Chrysene	4200	J
117-81-7	bis(2-Ethylhexyl)phthalate	42	J
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	4500	J
207-08-9	Benzo(k)fluoranthene	2000	J
50-32-8	Benzo(a)pyrene	4000	J
193-39-5	Indeno(1,2,3-cd)pyrene	2100	J
53-70-3	Dibenzo(a,h)anthracene	630	J
191-24-2	Benzo(g,h,i)perylene	2500	J

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-2

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) WATER Lab Sample ID: C0786-02A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S1E0849

Level: (low/med) LOW Date Received: 07/23/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/16/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/19/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

SP 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.23	J
91-57-6	2-Methylnaphthalene	0.16	
208-96-8	Acenaphthylene	0.10	U
83-32-9	Acenaphthene	0.10	U
86-73-7	Fluorene	0.10	U
85-01-8	Phenanthrene	0.10	U
120-12-7	Anthracene	0.10	U
206-44-0	Fluoranthene	0.10	U
129-00-0	Pyrene	0.10	U
56-55-3	Benzo(a)anthracene	0.10	U
218-01-9	Chrysene	0.10	U
205-99-2	Benzo(b)fluoranthene	0.10	U
207-08-9	Benzo(k)fluoranthene	0.10	U
50-32-8	Benzo(a)pyrene	0.10	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	U
53-70-3	Dibenzo(a,h)anthracene	0.10	U
191-24-2	Benzo(g,h,i)perylene	0.10	U

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TP-3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-03A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2E0273F

% Moisture: 18 decanted: (Y/N) N Date Received: 07/23/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/26/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 07/29/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	40	U
11104-28-2------	Aroclor-1221	40	U
11141-16-5------	Aroclor-1232	40	U
53469-21-9------	Aroclor-1242	40	U
12672-29-6------	Aroclor-1248	40	U
11097-69-1------	Aroclor-1254	40	U
11096-82-5------	Aroclor-1260	40	U

SD 11/30

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TP-4

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-04A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2E0274F

% Moisture: 15 decanted: (Y/N) N Date Received: 07/23/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/26/04

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

EJD 11/3/04

FORM I PCB

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TP-CS-4

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0786

Matrix: (soil/water) SOIL Lab Sample ID: C0786-05A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2E0275F

% Moisture: 18 decanted: (Y/N) N Date Received: 07/23/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/26/04

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U

11/30

Mitkem Corporation

Date: *10-Aug-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: TP-I
Lab ID: C0786-01

Project: M&E Connecticut Brownfields
Collection Date: 07/22/04 11:15

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
CT ETPH BY GC-FID							
Extractable Total Petroleum Hydrocarbon	260		180	mg/Kg	10	07/28/2004 17:55	13665
Surr: para-Terphenyl	68.6		16-127	%REC	10	07/28/2004 17:55	13665

CTETPH_S

ED 11/3/04

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *10-Aug-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: TP-2
Lab ID: C0786-02

Project: M&E Connecticut Brownfields
Collection Date: 07/22/04 13:45

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
CT ETPH BY GC-FID				**CTETPH_S**			
Extractable Total Petroleum Hydrocarbon	1500		160	mg/Kg	10	07/28/2004 19:49	1366
Surr: para-Terphenyl	99.6		16-127	%REC	10	07/28/2004 19:49	1366

EJD 11/3/04

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *10-Aug-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: TP-3
Lab ID: C0786-03

Project: M&E Connecticut Brownfields
Collection Date: 07/22/04 15:15

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
CT ETPH BY GC-FID							
Extractable Total Petroleum Hydrocarbon			CTETPH_S				
	25		15	mg/Kg	1	07/28/2004 20:28	1366
Surr: para-Terphenyl	66.4		16-127	%REC	1	07/28/2004 20:28	1366

EAD 11/3/04

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *10-Aug-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: TP-4
Lab ID: C0786-04

Project: M&E Connecticut Brownfields
Collection Date: 07/22/04 16:55

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch I
CT ETPH BY GC-FID				CTETPH_S			
Extractable Total Petroleum Hydrocarbon	650		140	mg/Kg	10	07/28/2004 21:06	136
Surr: para-Terphenyl	83.4		16-127	%REC	10	07/28/2004 21:06	136

EDD
11/3/04

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *10-Aug-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: TP-CS-4
Lab ID: C0786-05

Project: M&E Connecticut Brownfields
Collection Date: 07/22/04 16:55

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch II
CT ETPH BY GC-FID				CTETPH_S			
Extractable Total Petroleum Hydrocarbon	530		150	mg/Kg	10	07/28/2007 21:44	1366
Surr: para-Terphenyl	60.4		16-127	%REC	10	07/28/2007 21:44	1366

11/13/04

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

TP-I

Lab Name: Mitkem Corporation Contract: 360010017

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0786

Matrix (soil/water): SOIL Lab Sample ID: C0786-01

Level (low/med): MED Date Received: 07/23/04

% Solids: 66.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	2.3		N* J	P
7440-38-2	Arsenic	5.0			P
7440-39-3	Barium	211			P
7440-41-7	Beryllium	1.4			P
7440-43-9	Cadmium	0.28	B	J	P
7440-47-3	Chromium	29.6			P
7440-50-8	Copper	326			P
7439-92-1	Lead	39.6			P
7440-02-0	Nickel	15.2			P
7782-49-2	Selenium	3.8			P
7440-22-4	Silver	0.66	B	J	P
7440-28-0	Thallium	2.1			P
7440-62-2	Vanadium	66.0			P
7440-66-6	Zinc	91.0		J	P
7439-97-6	Mercury	0.58		J	CV
	Cyanide	~~0.16 U~~		N	CA

EJP 11/3/04

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

TP-2

Lab Name: Mitkem Corporation Contract: 360010017

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0786

Matrix (soil/water): SOIL Lab Sample ID: C0786-02

Level (low/med): MED Date Received: 07/23/04

% Solids: 74.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

EJD 11/3/04

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	3.6	N	J	P
7440-38-2	Arsenic	7.0			P
7440-39-3	Barium	134			P
7440-41-7	Beryllium	1.3			P
7440-43-9	Cadmium	2.0		J	P
7440-47-3	Chromium	17.1			P
7440-50-8	Copper	262			P
7439-92-1	Lead	230			P
7440-02-0	Nickel	50.0			P
7782-49-2	Selenium	3.2			P
7440-22-4	Silver	34.0			P
7440-28-0	Thallium	3.2			P
7440-62-2	Vanadium	69.6			P
7440-66-6	Zinc	225		J	P
7439-97-6	Mercury	1.0		J	CV
	Cyanide	~~0.14 U~~	N		CA

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

TP-3

Lab Name: Mitkem Corporation

Contract: 360010017

Lab Code: MITKEM Case No.

SAS No.:

SDG No.: MC0786

Matrix (soil/water): SOIL

Lab Sample ID: C0786-03

Level (low/med): MED

Date Received: 07/23/04

% Solids: 82.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.6		~~N~~ J	P
7440-38-2	Arsenic	5.3			P
7440-39-3	Barium	186			P
7440-41-7	Beryllium	1.0			P
7440-43-9	Cadmium	0.39		J	P
7440-47-3	Chromium	21.5			P
7440-50-8	Copper	181			P
7439-92-1	Lead	108			P
7440-02-0	Nickel	22.9			P
7782-49-2	Selenium	3.3			P
7440-22-4	Silver	0.35	~~B~~	~~W~~ J	P
7440-28-0	Thallium	2.0			P
7440-62-2	Vanadium	50.9			P
7440-66-6	Zinc	157		J	P
7439-97-6	Mercury	1.4		~~*~~ J	CV
	Cyanide	~~0.14~~	~~U~~	~~N~~ R	CA

EAP 11/3/04

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

TP-4

Lab Name: Mitkem Corporation Contract: 360010017

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0786

Matrix (soil/water): SOIL Lab Sample ID: C0786-04

Level (low/med): MED Date Received: 07/23/04

% Solids: 85.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	7.7		~~N~~ J	P
7440-38-2	Arsenic	7.4			P
7440-39-3	Barium	120			P
7440-41-7	Beryllium	1.1			P
7440-43-9	Cadmium	1.0		J	P
7440-47-3	Chromium	95.0			P
7440-50-8	Copper	171			P
7439-92-1	Lead	796			P
7440-02-0	Nickel	23.2			P
7782-49-2	Selenium	3.2			P
7440-22-4	Silver	9.5			P
7440-28-0	Thallium	2.2			P
7440-62-2	Vanadium	56.8			P
7440-66-6	Zinc	212		J	P
7439-97-6	Mercury	0.56		J	CV
	Cyanide	~~0.12 U~~		~~N~~	CA

11/3/04

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

TP-CS-4

Lab Name: Mitkem Corporation Contract: 360010017

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0786

Matrix (soil/water): SOIL Lab Sample ID: C0786-05

Level (low/med): MED Date Received: 07/23/04

% Solids: 82.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	5.9		~~N~~ J	P
7440-38-2	Arsenic	6.2			P
7440-39-3	Barium	138			P
7440-41-7	Beryllium	0.94			P
7440-43-9	Cadmium	3.0		J	P
7440-47-3	Chromium	92.0			P
7440-50-8	Copper	260			P
7439-92-1	Lead	503			P
7440-02-0	Nickel	25.0			P
7782-49-2	Selenium	3.1			P
7440-22-4	Silver	8.5			P
7440-28-0	Thallium	1.7		~~U~~	P
7440-62-2	Vanadium	41.6			P
7440-66-6	Zinc	378		J	P
7439-97-6	Mercury	0.54		J	CV
	Cyanide	~~0.13~~	~~U~~	~~NR~~	CA

EAD 11/3/04

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

TP-4

Lab Name: Mitkem Corporation Contract: 360010017

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0786

Matrix (soil/water): SOIL Lab Sample ID: C0786-04

Level (low/med): MED Date Received: 07/23/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	20.9			P
7440-38-2	Arsenic	5.5	~~B~~	u J	P
7440-39-3	Barium	46.2	~~B~~	u J	P
7440-41-7	Beryllium	0.29	~~B~~	u J	P
7440-43-9	Cadmium	0.12	~~B~~	u J	P
7440-47-3	Chromium	24.9			P
7440-50-8	Copper	32.0		u	P
7439-92-1	Lead	49.1		J	P
7440-02-0	Nickel	4.5	~~B~~	J	P
7782-49-2	Selenium	1.7	~~B~~	u J	P
7440-22-4	Silver	1.7	~~B~~	u J	P
7440-28-0	Thallium	1.2	U	J	P
7440-62-2	Vanadium	6.3	~~B~~	J	P
7440-66-6	Zinc	40.5	~~B~~	u J	P
7439-97-6	Mercury	0.052	U		CV

ELD 11/3/04

Comments: SPLP

FORM I - IN

SW846 0109

Memorandum

Metcalf & Eddy

PROJECT NO: 036200100.0055.00033
DATE: October 28, 2004
TO: Meriden HUB
OFFICE: Wakefield
FROM: P. DiMattei
COMPANY: Metcalf & Eddy, Inc.
REVIEWED BY: D. Truini
CC: B. Weir, N. Thurber, D. Laferte (memo only)

SUBJECT: Limited QC Review/Modified Tier II-Like Review
VOCs, SVOCs, SPLP PAHs, PCBs, ETPH, Mercury, Cyanide, Metals, and SPLP Metals
Mitkem Corporation, Warwick, Rhode Island
Project #C0886/MC0886

On August 5 and 6, 2004, 22 soil samples were collected at the Meriden HUB site, located in Meriden, Connecticut by Metcalf & Eddy, Inc. (M&E) field personnel. The sampling was performed as part of the TBA Response Action Contract (RAC) Work Assignment (WA) #155-SIBZ-0100. The samples were submitted to Mitkem Corporation located in Warwick, Rhode Island for the analysis of volatile organic compounds according to *SW-846 Method 8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)*, for semivolatile organic compounds (SVOCs) according to *SW-846 Method 8270C, Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS),* for polychlorinated biphenyls (PCBs) according to *SW-846 Method 8082, Polychlorinated Biphenyls (PCBs) by Gas Chromatography,* for extractable total petroleum hydrocarbons (ETPHs) according to the Connecticut method entitled *Analysis of Extractable Total Petroleum Hydrocarbons (ETPH) Using Methylene Chloride Gas Chromatograph/Flame Ionization Detection,* for mercury according to *SW-846 Method 7471A, Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)*, for cyanide according to *SW-846 Method 9014, Titrimetric and Manual Spectrophotometric Determinative Methods for Cyanide,* and for metals according to *SW-846 Method 6010B, Inductively Coupled Plasma-Atomic Emission Spectrometry.* Based on the initial screening results, eight soil samples required extraction according to *SW-846 Method 1312, Synthetic Precipitation Leaching Procedure.* Three of these eight leachate samples was analyzed for polyaromatic hydrocarbons (PAHs) in the selected ion monitoring (SIM) mode according to *SW-846 Method 8270C, Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)* and seven of the eight leachate samples were analyzed for mercury and metals according to *SW-846 Methods 7470A, Mercury in Liquid Waste (Manual Cold Vapor Technique)* and *6010B, Inductively Coupled Plasma-Atomic Emission Spectrometry*, respectively. All samples were received by the laboratory on July 23, 2004. The data package was received in the M&E office on September 23, 2004.

M&E reviewed the data in accordance with the EPA-approved Final Field Task Work Plan for the site, and the guidance received from EPA Work Assignment Manager, Mr. James Byrne, in a September 17, 1999 letter to former M&E Work Assignment Manager, Barb Wyskowski. The data review included:

	•	Data Completeness
	•	Preservation and Technical Holding Times
*	•	GC/MS and GC/ECD Instrument Performance Check
	•	Initial and Continuing Calibrations
	•	Blank Analysis Results
	•	Inductively Coupled Plasma (ICP) Interference Check Sample Results
	•	Surrogate Compounds
	•	Internal Standards
	•	Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Recoveries
	•	Laboratory Duplicate Sample Results
	•	Field Duplicate Sample Results
*	•	Laboratory Control Sample (LCS) Results
NA	•	Furnace Atomic Absorption Results
	•	ICP Serial Dilution Analysis Results
	•	Compound Quantitation and Reported Quantitation Limits
NA	•	Semivolatile and Pesticide/PCB Cleanup
NA	•	Performance Evaluation (PE) Sample Results

*	=	All criteria met for this parameter
NA	=	Not applicable and/or no information was provided by the laboratory

Note: Worksheets are not included for parameters that have met criteria or for criteria that are not applicable to the method and/or to the modified Tier II-like review.

Included in Attachment I is a copy of the chain-of-custody (COC) record. Included in Attachment II are the result summary sheets, annotated with qualifiers, if necessary, as detailed in this memorandum. Included in Attachment III are communication logs. Included in Attachment IV are the data validation worksheets.

Data Completeness

Clarification of some VOC, ETPH, and metals issues were required (see Attachment III for details). The laboratory was contacted on October 15, 2004 and these items were adequately addressed in the resubmittal response received from the laboratory on October 22, 2004.

It was noted in the laboratory case narrative that the sample identified as SB-AS-CS-0-8 on the COC was labeled as SB-AS-CS-0-4 on the bottle container. The laboratory reported this sample according to the COC sample identification (*i.e.* SB-AS-CS-0-8) on all reporting forms.

It was noted in the field sampler's log book that a trip blank sample (TP-01) was collected in association with the VOC samples in this data package. This sample was not listed on the COC nor did the laboratory receive this sample

Preservation and Holding Times

SPLP PAHs

The 14-day extraction holding time criterion from SPLP extraction to PAH preparative extraction for SPLP samples SB-A-0-8, SB-A-CS-0-8, and SB-B-10-14 were exceeded by 1 day. The positive and nondetect PAH results in these samples were qualified as estimated (J and UJ, respectively) due to possible sample degradation.

Initial and Continuing Calibrations

VOCs

The following table summarizes the compounds in the initial calibration (IC) and/or continuing calibration (CC) that failed to meet acceptance criterion of ≤15 percent relative standard deviation (%RSD) for the IC or ≤20 percent difference (%D) for the CC, the associated samples, and the actions taken:

Instrument	V5	V5
Calibration Date	IC 8/9/04	CC 8/18/04
Compound		
bromomethane	22.6	-
acetone	38.5	-
isopropylbenzene[1]	21.3	-
naphthalene	28.5	-
o-xylene	18.4	-
n-propylbenzene[1]	16.4	-
1,3,5-trimethylbenzene	15.8	-
4-isopropyltoluene	15.5	-
sec-butylbenzene[1]	17.2	-
n-butylbenzene[1]	16.1	-
cis-1,3-dichloropropene	15.8	-
vinyl acetate	-	36.1
2-butanone	-	25.7
2-hexanone	-	29.4
Associated Samples	SB-A-9.5, SB-A-CS-9.5, SB-B-9, SB-D-9, SB-G-7.5, SB-F-5	SB-A-9.5, SB-A-CS-9.5, SB-B-9, SB-D-9, SB-F-5, SB-G-7.5

– - QC acceptance criteria were not exceeded for this compound.

Actions: %RSD>15%: Estimate (J and UJ) positive and nondetect results.
%D>20%: Estimate (J and UJ) positive and nondetect results.

Note [1]. The isopropylbenzene, n-propylbenzene, n-butylbenzene, and sec-butylbenzene results in sample SB-F-5 were reported from the dilution analysis for which all calibration criteria were met; therefore, no actions were required for these compounds in this sample.

SVOCs

The following table summarizes the compounds in the IC and/or CC that failed to meet the IC acceptance criterion of %RSD≤15% or CC acceptance criterion of %D≤20, the associated samples, and the actions taken:

Instrument	S3	S3
Calibration Date	IC 8/9/04	CC 8/10/04
Compound		
hexachlorocyclopentadiene	-	-33.9
2,4-dinitrophenol	31.3	-43.4
4,6-dinitro-2-methylphenol	18.4	-24.3
pentachlorophenol	21.4	-
3,3'-dichlorobenzidine	15.6	24.2
Associated Samples	All SVOC samples	All SVOC samples except SB-A-0-8 (DL) and SB-A-CS-0-8 (DL)

– - QC acceptance criteria were not exceeded for this compound

Actions: %RSD>15%: Estimate (UJ) nondetect results.
%D>20%: Estimate (UJ) nondetect results.

SPLP PAHs

The following table summarizes the compounds in the IC and/or CC that failed to meet the IC acceptance criterion of %RSD≤15% or CC acceptance criterion of %D≤20, the associated samples, and the actions taken:

Instrument	S1	S1
Calibration Date	IC 8/19/04	CC 8/25/04
Compound		
benzo(b)fluoranthene	16.0	27.9
indeno(1,2,3-cd)pyrene	16.5	29.8
dibenz(a,h)anthracene	16.1	29.6
Associated Samples	All SPLP PAH samples	SB-A-0-8, SB-A-CS-0-8, SB-B-10-14

Actions: %RSD>15%: Estimate (J and UJ) positive and nondetect results.
%D>20%: Estimate (J and UJ) positive and nondetect results.

PCBs

The following table summarizes the compounds in the CC that failed to meet the acceptance criterion of %D≤15%, the associated samples, and the actions taken:

Column	RTXCLPPEST	RTXCLPPEST	RTXCLPPEST
Calibration Date	CC 8/12/04 8:39 beginning calibration	CC 8/12/04 19:17 middle calibration	CC 8/13/04 5:16 ending calibration
Compound			
Aroclor 1016 peak 1	20	20	20
Aroclor 1016 peak 2	20	20	20
Aroclor 1016 peak 3	20	20	20
Aroclor 1260 peak 1	20	-	-
Aroclor 1260 peak 2	20	-	-
Aroclor 1260 peak 3	20	-	-
Associated Samples	SB-AS-0-8, SB-AD-8-16, SB-AS-CS-0-8, SB-BS-0-10, SB-BD-10-14, SB-DS-0.5-9	all PCB samples	SB-DD-9-14, SB-FS-0.5-6, SB-FD-6-12, SB-GS-0.5-8, SB-GD-8-12

– - QC acceptance criteria were not exceeded for this compound

Actions: %D>15%: Estimate (UJ) nondetect results.

Note: Apply actions for Aroclor 1016 calibration exceedances to Aroclor 1221, Aroclor 1232, Aroclor 1242, and Aroclor 1248 and for Aroclor 1260 calibration exceedances to Aroclor 1254 since these multi-component compounds elute within similar retention times and similar responses would be expected.

Based on a review of the Aroclor 1016 results reported for the above failed CC (found value exceeded the expected value), it was determined that there was evidence of increased instrument sensitivity on the affected column. Therefore, since the Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, and Aroclor 1248 results in all soil samples, with the exception of Aroclor 1242 in sample SB-BD-10-14, were not detectable and the CC %D criteria were met on the remaining column, no validation actions were taken. The laboratory analyzed CCs for Aroclor 1242 which bracketed sample SB-BD-10-14. All calibration criteria were met for Aroclor 1242; therefore, no actions were required for this compound.

Blanks

SVOCs

The following table summarizes the level of blank contamination detected in the laboratory blanks. If a contaminant was detected in more than one blank, the highest concentration was used to qualify associated sample results.

Compound	Maximum Concentration (µg/Kg)	Blank Action Level (BAL) (µg/Kg)	Reporting Limit (µg/Kg)	Samples Affected/Actions
bis(2-ethylhexyl)phthalate	73	730	330	Qualify as nondetect (U) at the reporting limit in samples SB-B-9, SB-B-10-14, SB-D-0.5-9, SB-FD-6-12, and SB-G-8-12.

Sample results were qualified as follows:

- If sample result was >reporting limit and <BAL, the result was qualified as a nondetect (U) at the reported concentration
- If the sample result was <reporting limit and <BAL, the results was qualified as a nondetect (U) at the reporting limit
- If the sample results was >BAL, qualification of the data was not required.

Metals and Cyanide

The following table summarizes the level of blank contamination detected in the laboratory blanks. If a contaminant was detected in more than one blank, the highest concentration was used to qualify associated sample results.

Analyte	Maximum Concentration (µg/L)	Blank Action Level (BAL) (mg/Kg)	Samples Affected/Actions
cyanide	-6.1	-1.5	Qualify as estimated (J and UJ) the positive and nondetect results in all samples.
antimony	6.8	1.7	Qualify as nondetect (U) at the reported value in all samples except SB-FS-0.5-6, SB-BS-0-10, and SB-DS-0.5-9.
arsenic	2.7	0.67	All samples results were >BAL; No actions required.
barium	18.4	4.6	All samples results were >BAL; No actions required.
beryllium	0.8	0.2	All samples results were >BAL; No actions required.
chromium	1.4	0.35	All samples results were >BAL; No actions required.
copper	20.2	5.05	All samples results were >BAL; No actions required.
lead	1.9	0.48	All samples results were >BAL; No actions required.
nickel	-12.3	-3.1	All samples results were >BAL; No actions required.
selenium	2.4	0.6	All samples results were >BAL; No actions required.
silver	0.5	0.12	All samples results were >BAL; No actions required.
thallium	3.5	0.88	Qualify as nondetect (U) at the reported value in samples SB-DD-9-14 and SB-AD-8-16.
zinc	-33.2	-8.3	All samples results were >BAL; No actions required.

Sample results were qualified as follows for positive blank contamination:

- If the sample result was >method detection limit (MDL) and <BAL, the result was qualified as a nondetect (U) at the reported value
- If the sample result was >BAL, qualification of the data was not required.

Sample results were qualified as follows for negative blank contamination:

- If the sample result was > MDL and <absolute value of the negative BAL, the result was qualified as estimated (J)
- If the sample result was nondetect, the result was qualified as estimated (UJ)
- If the sample result was >the absolute value of the negative BAL, qualification of the data was not required.

SPLP Metals

The following table summarizes the level of blank contamination detected in the laboratory blanks. If a contaminant was detected in more than one blank, the highest concentration was used to qualify associated sample results.

Analyte	Maximum Concentration (µg/L)	Blank Action Level (BAL) (µg/L)	Samples Affected/Actions
antimony	15.3	76.5	Qualify as nondetect (U) at the reported value in all samples.
barium	12.2	61.0	Qualify as nondetect (U) at the reported value in samples SB-AS-0-8 and SB-BS-0-10.
beryllium	-0.35	-1.8	Qualify as estimated (UJ) the nondetect results in all samples.
cadmium	-0.49	-2.4	Qualify as estimated (J and UJ) the positive and nondetect results in samples SB-GS-0.5-8, SB-AS-0-8, SB-AS-CS-0-8, SB-BS-0-10, SB-DS-0.5-9, and SB-FS-0.5-6.
chromium	-0.44	-2.2	Qualify as estimated (J and UJ) the positive and nondetect results in samples SB-AS-0-8, SB-AS-CS-0-8, SB-DS-0.5-9, SB-FS-0.5-6, and SB-GS-0.5-8.
copper	10.7	53.5	Qualify as nondetect (U) at the reported value in samples SB-AS-0-8, SB-AS-CS-0-8, SB-BS-0-10, SB-FS-0.5-6, and SB-GS-0.5-8.
lead	2.3	11.5	Qualify as nondetect (U) at the reported value in samples SB-AS-CS-0-8, SB-BS-0-10, and SB-GS-0.5-8.
nickel	-1.5	-7.5	Qualify as estimated (UJ) the nondetect results in all samples except SB-BD-10-14.
selenium	-2.8	-14.0	Qualify as estimated (J and UJ) the positive and nondetect results in all samples.
silver	6.8	34.0	Qualify as nondetect (U) at the reported value in samples SB-BS-0-10, SB-BD-10-14, and SB-GS-0.5-8.
thallium	-3.96	-19.8	Qualify as estimated (J and UJ) the positive and nondetect results in all samples.
vanadium	2.3	11.5	Qualify as nondetect (U) at the reported value in samples SB-AS-CS-0-8, SB-DS-0.5-9, SB-FS-0.5-6, and SB-GS-0.5-8.
zinc	-20.6	-91.5	Qualify as estimated (J and UJ) the positive and nondetect results in samples SB-AS-0-8, SB-AS-CS-0-8, SB-BS-0-10, SB-DS-0.5-9, and SB-GS-0.5-8.

Sample results were qualified as follows for positive blank contamination:

- If the sample result was >method detection limit (MDL) and <BAL, the result was qualified as a nondetect (U) at the reported value
- If the sample result was >BAL, qualification of the data was not required.

Sample results were qualified as follows for negative blank contamination:

- If the sample result was > MDL and <absolute value of the negative BAL, the result was qualified as estimated (J)
- If the sample result was nondetect, the result was qualified as estimated (UJ)
- If the sample result was >the absolute value of the negative BAL, qualification of the data was not required.

Inductively Coupled Plasma (ICP) Interference Check Sample Results

SPLP Metals

Due to the limited nature of this review (lack of raw data), an in-depth review of the ICSA solution exceedances was not possible. The validator reviewed the ICSA results to determine whether there were any gross exceedances (unspiked analytes at concentrations >reporting limit). Lead was detected in the ICSA solution at concentrations greater than the reporting limit. However, no actions were taken since the significance of this interference could not be evaluated for the SPLP samples due to lack of raw data.

Surrogate Recoveries

VOCs

The following table lists the samples with surrogate percent recoveries outside QC acceptance criteria and the actions taken:

Sample ID	Surrogate Recovery (%R)		Actions
	toluene-d_8	BFB	
SB-F-5	308	238	Qualify as estimated (J) the positive acetone and carbon disulfide results in sample SB-F-5. No actions were taken for the remaining positive VOC results which were reported from the medium-level analysis in which surrogate %Rs were met.
QC Limits	25-156	49-146	

BFB - 4-Bromofluorobenzene

PCBs

The following table lists the samples with surrogate percent recoveries outside QC acceptance criteria and the actions taken:

Sample ID	Surrogate Recovery (%R)		Actions
	TCX (2)	DCB (1)	
SB-AS-0-8	500	662	All sample results were not detected; therefore, no actions were required.
SB-AS-CS-0-8	459	752	All sample results were not detected; therefore, no actions were required.
QC Limits	30-150	30-150	

TCX (2): tetrachloro-m-xylene (column 2)
DCB (1): decachlorobiphenyl (column1)

Internal Standards

VOCs

The following table summarizes the internal standard (IS) results that failed to meet the area count acceptance criterion, the associated samples and the actions taken:

Sample ID	IS	IS Area	Acceptance Criterion	Action
SB-A-CS-9.5	1,4-dichlorobenzene-d_4	80939	120757-483026	Qualify as estimated (J and UJ) the positive and nondetect VOC results associated with this failed IS in sample SB-A-CS-9.5.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

VOCs

Sample SB-B-9 was analyzed as the VOC soil MS/MSD sample in this data set. The MS/MSD compounds that did not meet the percent recovery (%R) and/or relative percent difference (RPD) acceptance criteria and actions taken are summarized in the following table:

Compound	MS %R	MSD %R	%RPD	QC limits		Actions
				%R	%RPD	
methyl-t-butyl ether	146	147	-	52-130	-	Result was not detected; no action required.
vinyl acetate	23	27	-	31-137	-	Qualify as estimated (UJ) the nondetect result in sample SB-B-9.
1,1,1-trichloroethane	128	131	-	72-126	-	Result was not detected; no action required.
1,2-dichloroethane	127	-	-	65-126	-	Result was not detected; no action required.
1,1,1,2-tetrachloroethane	118	127	-	80-115	-	Result was not detected; no action required.
bromobenzene	123	129	-	79-119	-	Result was not detected; no action required.
acetone	-	-	45	-	40	Qualify as estimated (J) the positive result in sample SB-B-9.
dibromochloroethane	-	122	-	76-115	-	Result was not detected; no action required.
1,2-dibromoethane	-	120	-	72-117	-	Result was not detected; no action required.
1,2,4-trimethylbenzene	-	129	-	73-126	-	Result was not detected; no action required.
1,2-dichlorobenzene	-	116	-	78-113	-	Result was not detected; no action required.

-- - QC acceptance criteria were not exceeded for this compound

SVOCs

Sample SB-D-0.5-9 was analyzed as the SVOC soil MS/MSD sample in this data set. The MS/MSD compounds that did not meet the %R and/or RPD acceptance criteria and actions taken are summarized in the following table:

Compound	MS %R	MSD %R	%RPD	QC limits		Actions
				%R	%RPD	
4,6-dinitro-2-methylphenol	30	18	50	33-130	40	Qualify as estimated (UJ) the nondetect result in sample SB-D-0.5-9.
hexachlorocyclopentadiene	-	-	67	-	40	Qualify as estimated (UJ) the nondetect result in sample SB-D-0.5-9.
2,4-dinitrophenol	-	10	46	15-136	40	Qualify as estimated (UJ) the nondetect result in sample SB-D-0.5-9.
pentachlorophenol	-	-	60	-	40	Qualify as estimated (UJ) the nondetect result in sample SB-D-0.5-9.

-- - QC acceptance criteria were not exceeded for this compound

ETPH

Sample SB-D-0.5-9 was analyzed as the ETPH soil MS/MSD sample in this data set. The MS/MSD compounds that did not meet the%R acceptance criteria and actions taken are summarized in the following table:

Compound	MS %R	MSD %R	QC limits	Actions
			%R	
ETPH	40.2	-	70-130	Qualify as estimated (J) the positive result in sample SB-D-0.5-9.

-- - QC acceptance criteria were not exceeded for this compound

Metals and Cyanide

Sample SB-BS-0-10 was analyzed as the metals and cyanide soil MS sample in this data set. The MS analytes that did not meet the %R acceptance criteria and actions taken are summarized in the following table:

Analyte	Spiked Sample Result (mg/kg)	Sample Result (mg/kg)	Matrix Spike %R	Affected Samples/Action
antimony	9.84	1.82	37	Qualify as estimated (J) the positive results in all soil samples.
arsenic	38.0	10.7	127	Qualify as estimated (J) the positive results in all soil samples.
copper	174	85.7	165	Qualify as estimated (J) the positive results in all soil samples.
thallium	15.9	1.04	69	Qualify as estimated (J) the positive results in all soil samples.
mercury	1.12	1.17	-6.9	Qualify as estimated (J) the positive results in all soil samples.

Laboratory Duplicate Sample Results

Metals and Cyanide

Sample SB-BS-0-10 was analyzed as the metals and cyanide soil laboratory duplicate sample in this data set. The analytes that did not meet the laboratory duplicate relative percent difference (RPD) criterion of $\leq$ 35% for analytes >5x reporting limit or the absolute difference criterion of >2x reporting limit for those analytes <5x reporting limit, and the actions taken are summarized in the following table:

Analyte	SB-BS-0-10 (mg/Kg)	SB-BS-0-10 DUP (mg/Kg)	%RPD	Actions
mercury	1.17	0.721	47.5	Qualify as estimated (J)the positive results in all soil samples.

Field Duplicate Sample Results

VOCs

The compounds that did not meet the field duplicate RPD criterion of $\leq$ 50 in the field duplicate pair SB-A-9.5/SB-A-CS-9.5 and the actions taken are summarized in the following table. Note that the RPDs for several compounds were not calculable since the result was not detectable in the field duplicate sample.

Compound	SB-A-9.5 (µg/Kg)	SB-A-CS-9.5 (µg/Kg)	%RPD	Actions
acetone	350	6 U	not calculable	Qualify as estimated (J and UJ) the positive and nondetect results in samples SB-A-9.5 and SB-A-CS-9.5.
carbon disulfide	280	6 U	not calculable	Qualify as estimated (J and UJ) the positive and nondetect results in samples SB-A-9.5 and SB-A-CS-9.5.
methylene chloride	160	6 U	not calculable	Qualify as estimated (J and UJ) the positive and nondetect results in samples SB-A-9.5 and SB-A-CS-9.5.
2-butanone	10	6U	not calculable	Qualify as estimated (J and UJ) the positive and nondetect results in samples SB-A-9.5 and SB-A-CS-9.5.
sec-butylbenzene	1	15	175	Qualify as estimated (J) the positive results in samples SB-A-9.5 and SB-A-CS-9.5.

SPLP PAHs

The compounds that did not meet the field duplicate RPD criterion of ≤ 50 in the field duplicate pair SB-A-0-8/SB-A-CS-0-8 and the actions taken are summarized in the following table:

Compound	SB-A-0-8 (µg/L)	SB-A-CS-0-8 (µg/L)	%RPD	Actions
pyrene	0.36	0.65	57	Qualify as estimated (J) the positive results in samples SB-A-0-8 and SB-A-CS-0-8.
benzo(a)anthracene	0.16	0.32	67	Qualify as estimated (J) the positive results in samples SB-A-0-8 and SB-A-CS-0-8.
chrysene	0.15	0.26	54	Qualify as estimated (J) the positive results in samples SB-A-0-8 and SB-A-CS-0-8.
benzo(b)fluoranthene	0.23	0.49	72	Qualify as estimated (J) the positive results in samples SB-A-0-8 and SB-A-CS-0-8.
benzo(a)pyrene	0.17	0.37	74	Qualify as estimated (J) the positive results in samples SB-A-0-8 and SB-A-CS-0-8.
indeno(1,2,3-cd)pyrene	0.13	0.28	73	Qualify as estimated (J) the positive results in samples SB-A-0-8 and SB-A-CS-0-8.

Compound	SB-A-0-8 (µg/L)	SB-A-CS-0-8 (µg/L)	%RPD	Actions
benzo(g,h,i)perylene	0.17	0.33	64	Qualify as estimated (J) the positive results in samples SB-A-0-8 and SB-A-CS-0-8.

Metals and Cyanide

The analytes for field duplicate pair SB-AS-0-8/SB-AS-CS-0-8 that did not meet the field duplicate RPD criterion of ≤ 50% for analytes >5x reporting limit or the absolute difference criterion of >4x reporting limit for those analytes <5x reporting limit, and the actions taken are summarized in the following table:

Analyte	SB-AS-0-8 (mg/Kg)	SB-AS-CS-0-8 (mg/Kg)	%RPD	Actions
lead	355	163	74	Qualify as estimated (J) the positive results in all soil samples.

ICP Serial Dilution Analysis Results

Metals

The following table summarizes the analyte that did not meet the percent difference (%D) acceptance criterion of <15% for the serially diluted sample SB-BS-0-10 and the actions taken:

Analyte	%D	Action
arsenic	17	Qualify as estimated (J) the positive results in all soil samples.
cadmium	57	Qualify as estimated (J)the positive results in all soil samples except SB-DD-9-14 and SB-AD-8-16 as these two results are not detected for cadmium.
silver	36	Qualify as estimated (J) the positive results in all soil samples.
selenium	63	Qualify as estimated (J) the positive results in all soil samples.

Compound Quantitation and Reported Quantitation Limits

VOCs

Samples SB-A-9.5 and SB-F-5 were analyzed as medium-level soil samples as well as low-level soil samples since several compounds exceeded the calibration range in the low-level analysis. Upon review of the low-level analysis versus the medium level analysis, several discrepancies were noted for both samples as summarized in the following table.

Sample	Compound	Low-level Result (µg/Kg)	Medium-level Result (µg/Kg)	Actions
SB-A-9.5	acetone	350	290 U	Report the low-level result and qualify this result as estimated (J) in sample SB-A-9.5.
	carbon disulfide	4 U	280	Report the medium-level results and qualify these results as estimated (J) in sample SB-A-9.5.
	methylene chloride	6	160	
SB-F-5	1,2,4-trimethylbenzene	8 U	200	Report the medium-level results and qualify these results as estimated (J) in sample SB-F-5.
	methylene chloride	9	160	
	benzene	31	120	
	toluene	10	160	
	ethylbenzene	26	140	
	m&p-xylene	44	260	
	xylene (total)	44	260	

The data validator took a conservative approach and reported the higher positive result in all instances where disparities were noted. In addition, these higher positive results were qualified as estimated (J) due to the uncertainty as a result of the imprecision of the low-level and medium-level results.

The positive acetone result in sample SB-A-9.5 was qualified as estimated (J) due to quantitation of this result at a value greater than the instrument calibration range.

The compounds in the following samples were reported from the medium level analysis due to either uncertainty in the low-level result (as discussed above) or exceedance of the calibration range in the low-level sample analysis:

Sample	Compounds from Medium-Level Analysis
SB-A-9.5	carbon disulfide, methylene chloride
SB-F-5	methylene chloride, benzene, toluene, ethylbenzene, m&p-xylene, xylene (total), isopropylbenzene, n-propylbenzene, 1,2,4-trimethylbenzene, sec-butylbenzene, n-butylbenzene

SVOCs

The following samples were diluted (dilution listed in parenthesis) based on the results exceeding the calibration range in the original sample analysis:

Sample	Compounds from Dilution Analysis
SB-A-0-8	(20x) for naphthalene, 2-methylnaphthalene, acenaphthene, dibenzofuran, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene
SB-A-CS-0-8	(20x) for naphthalene, 2-methylnaphthalene, acenaphthene, dibenzofuran, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene

SPLP PAHs

The following samples were diluted (dilution listed in parenthesis) based on the results exceeding the calibration range in the original sample analysis:

Sample	Compounds from Dilution Analysis
SB-A-0-8	(5x) for naphthalene
SB-A-CS-0-8	(5x) for naphthalene

ETPH

The following samples were diluted (dilution listed in parenthesis) based on the results exceeding the calibration range in the original sample analysis:

Sample	Compounds from Dilution Analysis
SB-A-CS-0-8	(2x) for ETPH

PCBs

The dual column precision (84.6% RPD) for the positive Aroclor 1242 result in sample SB-BD-10-14 exceeded the QC acceptance criterion of <40%RPD. Therefore, the positive Aroclor 1242 result in this sample was qualified as estimated (J).

Metals and Cyanide

The following table summarizes the positive and blank-qualified metal results that were less than the reporting limit but greater than the MDL. These listed results are qualified as estimated (J) due to uncertainty in the quantitation at concentrations less than the reporting limit. Note that the overall qualification for the blank qualified metal results is estimated, nondetect (UJ).

Sample	Affected Analytes
SB-AS-0-9	cadmium, silver
SB-AS-CS-0-8	antimony, cadmium, silver
SB-BD-10-14	antimony, cyanide
SB-DS-0.5-9	cadmium
SB-DD-9-14	antimony, silver, thallium, mercury
SB-AD-8-16	silver, thallium
SB-FS-0.5-6	thallium
SB-FD-6-12	antimony, silver, mercury
SB-GD-8-12	cadmium, silver

SPLP Metals

The following table summarizes the positive and blank-qualified metal results that were less than the reporting limit but greater than the MDL. These listed results are qualified as estimated (J) due to uncertainty in the quantitation at concentrations less than the reporting limit. Note that the overall qualification for the blank qualified metal results is estimated, nondetect (UJ).

Sample	Affected Analytes
SB-AS-0-8	antimony, arsenic, barium, chromium, vanadium, zinc, mercury
SB-AS-CS-0-8	antimony, barium, copper, lead, vanadium, mercury
SB-BS-0-10	antimony, arsenic, barium, chromium, copper, lead, silver, vanadium
SB-BD-10-14	arsenic, barium, cadmium, nickel, selenium, silver, thallium, vanadium
SB-DS-0.5-9	antimony, arsenic, barium, chromium, vanadium, mercury
SB-FS-0.5-6	antimony, barium, cadmium, chromium, vanadium, mercury
SB-GS-0.5-8	antimony, barium, chromium, lead, silver, vanadium

Attachment I

Chain-of-Custody

2 coolers

M&E Metcalf & Eddy

CHAIN OF CUSTODY FORM

Job/Project Name: Meriden HUB | Job/Project Location: Meriden, CT | Job/Project Number: 200100-0055-00034

Samplers: (Signatures) [signature] | Recorder: (Signature) [signature] | Date: 8/6/04

Lab (Samples Sent To): Mitkem Corporation

	SAMPLING Date	SAMPLING Time	SAMPLE NUMBER	SAMPLE LOCATION	MATRIX Water	MATRIX Soil	COMPOSITE/GRAB	PRESERVATIVE (Y/N)	ANALYSIS REQUESTED VOCs	RSR Metals/PCBs/Total cyanide	SVOCs/ETPH	% solids	Total #	COMMENTS
01	8/5/04	0935	SB-A-9.5	—		X	G	Y	3			1	4	
02	8/5/04	0900	SB-A-0-8	—		X	C	N		~~X~~	1		1	
03	8/5/04	0900	SB-AS-0-8	—		X	C	N		1			1	
04	8/5/04	1020	SB-AD-8-16	—		X	C	N		1			1	
05	8/5/04	0945	SB-A-CS-9.5	—		X	G	Y	3			1	4	
04 ~~06~~	8/5/04	0910	SB-A-CS-0-8	—		X	C	N			1		1	
07	8/5/04	0910	SB-AS-CS-0-8	—		X	C	N		1			1	
08	8/5/04	1340	SB-B-9	—		X	G	Y	9		1		10 ~~X~~	MS/MSD
9 ~~08~~	8/5/04	1400	SB-BS-0-10	—		X	C	N		3			3	MS/dup.
0 ~~09~~	8/5/04	1410	SB-B-10-14	—		X	C	N			1		1	
11 ~~10~~	8/5/04	1410	SB-BD-10-14	—		X	C	N		1			1	
12 ~~11~~	8/6/04	0810	SB-D-9	—		X	G	Y	3			1	4	

Relinquished By: (Signature)	Date:	Time:	Relinquished By: (Signature)	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
[signature]	8/6/04	1620					
Relinquished By: (Signature)	Date:	Time:	Relinquished By: (Signature)	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
Relinquished By: (Signature)	Date:	Time:	Received for Lab By: (Signature) [signature]	Date: 8-7-04 (YOC)	Time: 0915		

Comments: 21-day TAT plus 7-day TAT for preliminary Form I data for metals and SVOCs - hold samples for potential SPLP metals and PAH analysis

Method of Shipment: FedEx airbill #'s: ~~8464 0142 4~~ 8464 1425 2243 and 8464 1425 2232

Distribution: **Original** to Lab. **Copy 1** to Field Files, **Copy 2** to Project Manager

Form 274 (Rev. 5/89)

2 coolers

M&E Metcalf & Eddy

CHAIN OF CUSTODY FORM

Job/Project Name: Meriden HUB
Job/Project Location: Meriden, CT
Job/Project Number: 200100-0055-00034
Samplers: (Signatures) [signature]
Recorder: (Signature) [signature]
Date: 8/6/04
Lab (Samples Sent To): Mitkem Corporation

	SAMPLING Date	SAMPLING Time	SAMPLE NUMBER	SAMPLE LOCATION	MATRIX Water	MATRIX Soil	COMPOSITE/GRAB	PRESERVATIVE (Y/N)	VOCs	RCRA metals/PCBs Total cyanide	SVOCs/ETPH	% solids	Total #	COMMENTS
3 ~~12~~	8/6/04	0830	SB-D-0.5-9	—		X	C	N			3		3	MS/MSD
4 ~~13~~	8/6/04	0830	SB-DS-0.5-9	—		X	C	N		1			1	
5 ~~14~~	8/6/04	0845	SB-DD-9-14	—		X	C	N		1			1	
6 ~~15~~	8/6/04	1110	SB-F-5	—		X	G	Y	3			1	4	
7 ~~16~~	8/6/04	1145	SB-FS-0.5-6	—		X	C	N		1	1		2	
8 ~~17~~	8/6/04	1200	SB-FD-6-12	—		X	C	N		1	1		2	
9 ~~18~~	8/6/04	1440	SB-G-7.5	—		X	G	Y	3			1	4	
10 ~~19~~	8/6/04	1520	SB-G-8-12	—		X	C	N			1		1	
20 ~~20~~	8/6/04	1505	SB-GS-0.5-8	—		X	C	N		1			1	
21 22	8/6/04	1520	SB-GD-8-12	—		X	C	N		1			1	

← Temperature blank included in each cooler →

Relinquished By: (Signature)	Date:	Time:	Relinquished By: (Signature)	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
[signature]	8/6/04	1620					
Relinquished By: (Signature)	Date:	Time:	Relinquished By: (Signature)	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
Relinquished By: (Signature)	Date:	Time:	Received for Lab By: (Signature)	Date:	Time: (4°C)		Comments: 21-day TAT plus 7-day TAT for preliminary Form 1 data for metals and SVOCs – hold samples for potential SPLP metals and PAH analysis
			[signature]	8/7/04	0915		

Method of Shipment: FedEx airbill #s: 8464 4425 2243 and 8464 1425 2232

Distribution: **Original** to Lab. **Copy 1** to Field Files, **Copy 2** to Project Manager

Form 274 (Rev. 5/89)

2 coolers – 4°C / 7°C

Attachment II

Sample Result Summary Sheets

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-A-9.5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-01B

Sample wt/vol: 7.0 (g/mL) G Lab File ID: V5F4846

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 16 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	4	U
74-87-3	Chloromethane	4	U ~~J~~
75-01-4	Vinyl Chloride	4	U
74-83-9	Bromomethane	4	U J
75-00-3	Chloroethane	4	U
75-69-4	Trichlorofluoromethane	4	U
75-35-4	1,1-Dichloroethene	4	U
67-64-1	Acetone	350	~~E~~ J
74-88-4	Iodomethane	4	U
75-15-0	Carbon Disulfide	280 ~~4~~	~~U~~ J
75-09-2	Methylene Chloride	160 ~~6~~	J
156-60-5	trans-1,2-Dichloroethene	4	U
1634-04-4	Methyl tert-butyl ether	4	U
75-34-3	1,1-Dichloroethane	4	U
108-05-4	Vinyl acetate	4	U J
78-93-3	2-Butanone	10	J
156-59-2	cis-1,2-Dichloroethene	4	U
590-20-7	2,2-Dichloropropane	4	U
74-97-5	Bromochloromethane	4	U
67-66-3	Chloroform	4	U
71-55-6	1,1,1-Trichloroethane	4	U
563-58-6	1,1-Dichloropropene	4	U
56-23-5	Carbon Tetrachloride	4	U
107-06-2	1,2-Dichloroethane	4	U
71-43-2	Benzene	4	U
79-01-6	Trichloroethene	4	U
78-87-5	1,2-Dichloropropane	4	U
74-95-3	Dibromomethane	4	U
75-27-4	Bromodichloromethane	4	U
10061-01-5	cis-1,3-Dichloropropene	4	U J
108-10-1	4-Methyl-2-pentanone	4	U ~~J~~
108-88-3	Toluene	4	U
10061-02-6	trans-1,3-Dichloropropene	4	U
79-00-5	1,1,2-Trichloroethane	4	U

EJD 11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-A-9.5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-01B

Sample wt/vol: 7.0 (g/mL) G Lab File ID: V5F4846

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 16 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
142-28-9	1,3-Dichloropropane	4	U
127-18-4	Tetrachloroethene	4	U
591-78-6	2-Hexanone	4	U J
124-48-1	Dibromochloromethane	4	U
106-93-4	1,2-Dibromoethane	4	U
108-90-7	Chlorobenzene	4	U
630-20-6	1,1,1,2-Tetrachloroethane	4	U
100-41-4	Ethylbenzene	4	U
----------	m,p-Xylene	4	U
95-47-6	o-Xylene	4	U J
1330-20-7	Xylene (Total)	4	U
100-42-5	Styrene	4	U
75-25-2	Bromoform	4	U
98-82-8	Isopropylbenzene	4	U J
79-34-5	1,1,2,2-Tetrachloroethane	4	U
108-86-1	Bromobenzene	4	U
96-18-4	1,2,3-Trichloropropane	4	U
103-65-1	n-Propylbenzene	4	U J
95-49-8	2-Chlorotoluene	4	U
108-67-8	1,3,5-Trimethylbenzene	4	U J
106-43-4	4-Chlorotoluene	4	U
98-06-6	tert-Butylbenzene	4	U
95-63-6	1,2,4-Trimethylbenzene	4	U
135-98-8	sec-Butylbenzene	1	J
99-87-6	4-Isopropyltoluene	4	U J
541-73-1	1,3-Dichlorobenzene	4	U
106-46-7	1,4-Dichlorobenzene	4	U
104-51-8	n-Butylbenzene	4	U J
95-50-1	1,2-Dichlorobenzene	4	U
96-12-8	1,2-Dibromo-3-chloropropane	4	U
120-82-1	1,2,4-Trichlorobenzene	4	U
87-68-3	Hexachlorobutadiene	4	U
91-20-3	Naphthalene	4	U J
87-61-6	1,2,3-Trichlorobenzene	4	U

ED 11/30/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-A-CS-9.5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-05B

Sample wt/vol: 4.6 (g/mL) G Lab File ID: V5F4847

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 17 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6	U
74-87-3	Chloromethane	6	U
75-01-4	Vinyl Chloride	6	U
74-83-9	Bromomethane	6	UJ
75-00-3	Chloroethane	6	U
75-69-4	Trichlorofluoromethane	6	U
75-35-4	1,1-Dichloroethene	6	U
67-64-1	Acetone	6	UJ
74-88-4	Iodomethane	6	U
75-15-0	Carbon Disulfide	6	UJ
75-09-2	Methylene Chloride	6	UJ
156-60-5	trans-1,2-Dichloroethene	6	U
1634-04-4	Methyl tert-butyl ether	6	U
75-34-3	1,1-Dichloroethane	6	U
108-05-4	Vinyl acetate	6	UJ
78-93-3	2-Butanone	6	UJ
156-59-2	cis-1,2-Dichloroethene	6	U
590-20-7	2,2-Dichloropropane	6	U
74-97-5	Bromochloromethane	6	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
563-58-6	1,1-Dichloropropene	6	U
56-23-5	Carbon Tetrachloride	6	U
107-06-2	1,2-Dichloroethane	6	U
71-43-2	Benzene	6	U
79-01-6	Trichloroethene	6	U
78-87-5	1,2-Dichloropropane	6	U
74-95-3	Dibromomethane	6	U
75-27-4	Bromodichloromethane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	UJ
108-10-1	4-Methyl-2-pentanone	6	UJ
108-88-3	Toluene	2	J
10061-02-6	trans-1,3-Dichloropropene	6	U
79-00-5	1,1,2-Trichloroethane	6	U

11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-A-CS-9.5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-05B

Sample wt/vol: 4.6 (g/mL) G Lab File ID: V5F4847

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 17 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

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CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
142-28-9	1,3-Dichloropropane	6	U
127-18-4	Tetrachloroethene	6	U
591-78-6	2-Hexanone	6	UJ
124-48-1	Dibromochloromethane	6	U
106-93-4	1,2-Dibromoethane	6	U
108-90-7	Chlorobenzene	6	U
630-20-6	1,1,1,2-Tetrachloroethane	6	U
100-41-4	Ethylbenzene	6	U
	m,p-Xylene	6	U
95-47-6	o-Xylene	6	UJ
1330-20-7	Xylene (Total)	6	U
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
98-82-8	Isopropylbenzene	6	UJ
79-34-5	1,1,2,2-Tetrachloroethane	6	UJ
108-86-1	Bromobenzene	6	UJ
96-18-4	1,2,3-Trichloropropane	6	UJ
103-65-1	n-Propylbenzene	6	UJ
95-49-8	2-Chlorotoluene	6	UJ
108-67-8	1,3,5-Trimethylbenzene	6	UJ
106-43-4	4-Chlorotoluene	6	UJ
98-06-6	tert-Butylbenzene	2	J
95-63-6	1,2,4-Trimethylbenzene	1	J
135-98-8	sec-Butylbenzene	15	J
99-87-6	4-Isopropyltoluene	6	UJ
541-73-1	1,3-Dichlorobenzene	6	UJ
106-46-7	1,4-Dichlorobenzene	6	UJ
104-51-8	n-Butylbenzene	6	UJ
95-50-1	1,2-Dichlorobenzene	6	UJ
96-12-8	1,2-Dibromo-3-chloropropane	6	UJ
120-82-1	1,2,4-Trichlorobenzene	6	UJ
87-68-3	Hexachlorobutadiene	6	UJ
91-20-3	Naphthalene	6	UJ
87-61-6	1,2,3-Trichlorobenzene	6	UJ

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-B-9

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-08B

Sample wt/vol: 5.4 (g/mL) G Lab File ID: V5F4848

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 13 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	3	J
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	UJ
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	89	J
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	J
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	UJ
108-05-4	Vinyl acetate	5	UJ
78-93-3	2-Butanone	5	UJ
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	UJ
108-10-1	4-Methyl-2-pentanone	5	UJ
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

SD 11/30/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-B-9

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-08B

Sample wt/vol: 5.4 (g/mL) G Lab File ID: V5F4848

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 13 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	UJ
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	UJ
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	UJ
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	UJ
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	UJ
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	UJ
99-87-6	4-Isopropyltoluene	5	UJ
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	UJ
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	UJ
91-20-3	Naphthalene	5	UJ
87-61-6	1,2,3-Trichlorobenzene	5	U

SD 11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-D-9

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-12B

Sample wt/vol: 5.1 (g/mL) G Lab File ID: V5F4851

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 19 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6	U
74-87-3	Chloromethane	6	UJ
75-01-4	Vinyl Chloride	6	U
74-83-9	Bromomethane	6	UJ
75-00-3	Chloroethane	6	U
75-69-4	Trichlorofluoromethane	6	U
75-35-4	1,1-Dichloroethene	6	U
67-64-1	Acetone	64	J
74-88-4	Iodomethane	6	U
75-15-0	Carbon Disulfide	6	U
75-09-2	Methylene Chloride	13	
156-60-5	trans-1,2-Dichloroethene	6	U
1634-04-4	Methyl tert-butyl ether	6	U
75-34-3	1,1-Dichloroethane	6	U
108-05-4	Vinyl acetate	6	UJ
78-93-3	2-Butanone	6	UJ
156-59-2	cis-1,2-Dichloroethene	6	U
590-20-7	2,2-Dichloropropane	6	U
74-97-5	Bromochloromethane	6	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
563-58-6	1,1-Dichloropropene	6	U
56-23-5	Carbon Tetrachloride	6	U
107-06-2	1,2-Dichloroethane	6	U
71-43-2	Benzene	6	U
79-01-6	Trichloroethene	6	U
78-87-5	1,2-Dichloropropane	6	U
74-95-3	Dibromomethane	6	U
75-27-4	Bromodichloromethane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	UJ
108-10-1	4-Methyl-2-pentanone	6	UJ
108-88-3	Toluene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-00-5	1,1,2-Trichloroethane	6	U

EJD 11/13/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-D-9

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-12B

Sample wt/vol: 5.1 (g/mL) G Lab File ID: V5F4851

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 19 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
142-28-9	1,3-Dichloropropane	6	U
127-18-4	Tetrachloroethene	6	U
591-78-6	2-Hexanone	6	UJ
124-48-1	Dibromochloromethane	6	U
106-93-4	1,2-Dibromoethane	6	U
108-90-7	Chlorobenzene	6	U
630-20-6	1,1,1,2-Tetrachloroethane	6	U
100-41-4	Ethylbenzene	6	U
----------	m,p-Xylene	6	U
95-47-6	o-Xylene	6	UJ
1330-20-7	Xylene (Total)	6	U
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
98-82-8	Isopropylbenzene	6	UJ
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-86-1	Bromobenzene	6	U
96-18-4	1,2,3-Trichloropropane	6	U
103-65-1	n-Propylbenzene	6	UJ
95-49-8	2-Chlorotoluene	6	U
108-67-8	1,3,5-Trimethylbenzene	6	UJ
106-43-4	4-Chlorotoluene	6	U
98-06-6	tert-Butylbenzene	6	U
95-63-6	1,2,4-Trimethylbenzene	6	U
135-98-8	sec-Butylbenzene	6	UJ
99-87-6	4-Isopropyltoluene	6	UJ
541-73-1	1,3-Dichlorobenzene	6	U
106-46-7	1,4-Dichlorobenzene	6	U
104-51-8	n-Butylbenzene	6	UJ
95-50-1	1,2-Dichlorobenzene	6	U
96-12-8	1,2-Dibromo-3-chloropropane	6	U
120-82-1	1,2,4-Trichlorobenzene	6	U
87-68-3	Hexachlorobutadiene	6	U
91-20-3	Naphthalene	4	J
87-61-6	1,2,3-Trichlorobenzene	6	U

ED 11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-F-5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-16B

Sample wt/vol: 5.5 (g/mL) G Lab File ID: V5F4852

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 43 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8	U
74-87-3	Chloromethane	8	U ~~J~~
75-01-4	Vinyl Chloride	8	U
74-83-9	Bromomethane	8	U J
75-00-3	Chloroethane	8	U
75-69-4	Trichlorofluoromethane	8	U
75-35-4	1,1-Dichloroethene	8	U
67-64-1	Acetone	190	J
74-88-4	Iodomethane	8	U
75-15-0	Carbon Disulfide	5	J
75-09-2	Methylene Chloride	160 ~~9~~	J
156-60-5	trans-1,2-Dichloroethene	8	U
1634-04-4	Methyl tert-butyl ether	8	U
75-34-3	1,1-Dichloroethane	8	U
108-05-4	Vinyl acetate	8	U J
78-93-3	2-Butanone	8	U J
156-59-2	cis-1,2-Dichloroethene	8	U
590-20-7	2,2-Dichloropropane	8	U
74-97-5	Bromochloromethane	8	U
67-66-3	Chloroform	8	U
71-55-6	1,1,1-Trichloroethane	8	U
563-58-6	1,1-Dichloropropene	8	U
56-23-5	Carbon Tetrachloride	8	U
107-06-2	1,2-Dichloroethane	8	U
71-43-2	Benzene	120 ~~31~~	J
79-01-6	Trichloroethene	8	U
78-87-5	1,2-Dichloropropane	8	U
74-95-3	Dibromomethane	8	U
75-27-4	Bromodichloromethane	8	U
10061-01-5	cis-1,3-Dichloropropene	8	U J
108-10-1	4-Methyl-2-pentanone	8	U ~~J~~
108-88-3	Toluene	160 ~~10~~	J
10061-02-6	trans-1,3-Dichloropropene	8	U
79-00-5	1,1,2-Trichloroethane	8	U

EJP 11/13/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-F-5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-16B

Sample wt/vol: 5.5 (g/mL) G Lab File ID: V5F4852

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 43 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
142-28-9	1,3-Dichloropropane	8	U
127-18-4	Tetrachloroethene	8	U
591-78-6	2-Hexanone	8	UJ
124-48-1	Dibromochloromethane	8	U
106-93-4	1,2-Dibromoethane	8	U
108-90-7	Chlorobenzene	8	U
630-20-6	1,1,1,2-Tetrachloroethane	8	U
100-41-4	Ethylbenzene	140 ~~26~~	J
----------	m,p-Xylene	260 ~~44~~	J
95-47-6	o-Xylene	8	U J
1330-20-7	Xylene (Total)	260 ~~44~~	J
100-42-5	Styrene	8	U
75-25-2	Bromoform	8	U
98-82-8	Isopropylbenzene	1700 ~~690~~	E
79-34-5	1,1,2,2-Tetrachloroethane	8	U
108-86-1	Bromobenzene	8	U
96-18-4	1,2,3-Trichloropropane	8	U
103-65-1	n-Propylbenzene	4700 ~~1900~~	E
95-49-8	2-Chlorotoluene	8	U
108-67-8	1,3,5-Trimethylbenzene	8	UJ
106-43-4	4-Chlorotoluene	8	U
98-06-6	tert-Butylbenzene	8	UJ
95-63-6	1,2,4-Trimethylbenzene	200 J ~~8~~	U
135-98-8	sec-Butylbenzene	2000 ~~520~~	E
99-87-6	4-Isopropyltoluene	8	UJ
541-73-1	1,3-Dichlorobenzene	8	U
106-46-7	1,4-Dichlorobenzene	8	U
104-51-8	n-Butylbenzene	3300 ~~600~~	E J
95-50-1	1,2-Dichlorobenzene	8	U
96-12-8	1,2-Dibromo-3-chloropropane	8	U
120-82-1	1,2,4-Trichlorobenzene	8	U
87-68-3	Hexachlorobutadiene	8	UJ
91-20-3	Naphthalene	8	UJ
87-61-6	1,2,3-Trichlorobenzene	8	U

ZD 11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-G-7.5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-19B

Sample wt/vol: 5.1 (g/mL) G Lab File ID: V5F4853

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 11 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6	U
74-87-3	Chloromethane	6	U
75-01-4	Vinyl Chloride	6	U
74-83-9	Bromomethane	6	UJ
75-00-3	Chloroethane	6	U
75-69-4	Trichlorofluoromethane	6	U
75-35-4	1,1-Dichloroethene	6	U
67-64-1	Acetone	70	J
74-88-4	Iodomethane	6	U
75-15-0	Carbon Disulfide	6	U
75-09-2	Methylene Chloride	9	
156-60-5	trans-1,2-Dichloroethene	6	U
1634-04-4	Methyl tert-butyl ether	6	U
75-34-3	1,1-Dichloroethane	6	U
108-05-4	Vinyl acetate	6	UJ
78-93-3	2-Butanone	6	UJ
156-59-2	cis-1,2-Dichloroethene	6	U
590-20-7	2,2-Dichloropropane	6	U
74-97-5	Bromochloromethane	6	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
563-58-6	1,1-Dichloropropene	6	U
56-23-5	Carbon Tetrachloride	6	U
107-06-2	1,2-Dichloroethane	6	U
71-43-2	Benzene	6	U
79-01-6	Trichloroethene	6	U
78-87-5	1,2-Dichloropropane	6	U
74-95-3	Dibromomethane	6	U
75-27-4	Bromodichloromethane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	UJ
108-10-1	4-Methyl-2-pentanone	6	U
108-88-3	Toluene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-00-5	1,1,2-Trichloroethane	6	U

ESD 11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-G-7.5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-19B

Sample wt/vol: 5.1 (g/mL) G Lab File ID: V5F4853

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: not dec. 11 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
142-28-9	1,3-Dichloropropane	6	U
127-18-4	Tetrachloroethene	6	U
591-78-6	2-Hexanone	6	UJ
124-48-1	Dibromochloromethane	6	U
106-93-4	1,2-Dibromoethane	6	U
108-90-7	Chlorobenzene	6	U
630-20-6	1,1,1,2-Tetrachloroethane	6	U
100-41-4	Ethylbenzene	6	U
----------	m,p-Xylene	6	U
95-47-6	o-Xylene	6	UJ
1330-20-7	Xylene (Total)	6	U
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
98-82-8	Isopropylbenzene	6	UJ
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-86-1	Bromobenzene	6	U
96-18-4	1,2,3-Trichloropropane	6	U
103-65-1	n-Propylbenzene	2	J
95-49-8	2-Chlorotoluene	6	U
108-67-8	1,3,5-Trimethylbenzene	6	UJ
106-43-4	4-Chlorotoluene	6	U
98-06-6	tert-Butylbenzene	6	UJ
95-63-6	1,2,4-Trimethylbenzene	6	U
135-98-8	sec-Butylbenzene	6	UJ
99-87-6	4-Isopropyltoluene	6	UJ
541-73-1	1,3-Dichlorobenzene	6	U
106-46-7	1,4-Dichlorobenzene	6	U
104-51-8	n-Butylbenzene	2	J
95-50-1	1,2-Dichlorobenzene	6	U
96-12-8	1,2-Dibromo-3-chloropropane	6	U
120-82-1	1,2,4-Trichlorobenzene	6	U
87-68-3	Hexachlorobutadiene	6	UJ
91-20-3	Naphthalene	4	J
87-61-6	1,2,3-Trichlorobenzene	6	U

ED 11/30

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-A-0-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-02A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S3C9786

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 9 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
108-95-2	Phenol		360	U
111-44-4	bis(2-Chloroethyl)Ether		360	U
95-57-8	2-Chlorophenol		360	U
541-73-1	1,3-Dichlorobenzene		360	U
106-46-7	1,4-Dichlorobenzene		360	U
95-50-1	1,2-Dichlorobenzene		360	U
95-48-7	2-Methylphenol		360	U
108-60-1	2,2'-oxybis(1-Chloropropane)		360	U
106-44-5	4-Methylphenol		50	J
621-64-7	N-Nitroso-di-n-propylamine		360	U
67-72-1	Hexachloroethane		360	U
98-95-3	Nitrobenzene		360	U
78-59-1	Isophorone		360	U
88-75-5	2-Nitrophenol		360	U
105-67-9	2,4-Dimethylphenol		360	U
120-83-2	2,4-Dichlorophenol		360	U
120-82-1	1,2,4-Trichlorobenzene		360	U
91-20-3	Naphthalene	6600	~~6900~~	~~E~~
106-47-8	4-Chloroaniline		360	U
111-91-1	bis(2-Chloroethoxy)methane		360	U
87-68-3	Hexachlorobutadiene		360	U
59-50-7	4-Chloro-3-Methylphenol		360	U
91-57-6	2-Methylnaphthalene		6100	~~E~~ J
77-47-4	Hexachlorocyclopentadiene		360	UJ
88-06-2	2,4,6-Trichlorophenol		360	U
95-95-4	2,4,5-Trichlorophenol		740	U
91-58-7	2-Chloronaphthalene		360	U
88-74-4	2-Nitroaniline		740	U
131-11-3	Dimethylphthalate		360	U
208-96-8	Acenaphthylene	9500	~~8800~~	~~E~~
606-20-2	2,6-Dinitrotoluene		360	U
99-09-2	3-Nitroaniline		740	U
83-32-9	Acenaphthene		3000	

ED 11/30

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-A-0-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-02A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S3C9786

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 9 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/10/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EXD 11/30

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	740	UJ
100-02-7	4-Nitrophenol	740	U
132-64-9	Dibenzofuran	7600 ~~7000~~	E
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	9900 ~~9600~~	E
100-01-6	4-Nitroaniline	740	U
534-52-1	4,6-Dinitro-2-methylphenol	740	UJ
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	740	UJ
85-01-8	Phenanthrene	80,000 ~~26000~~	E
120-12-7	Anthracene	14,000 ~~10000~~	E
86-74-8	Carbazole	2000	
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	80,000 ~~26000~~	E
129-00-0	Pyrene	63,000 ~~21000~~	E
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	UJ
56-55-3	Benzo(a)anthracene	24,000 ~~15000~~	E
218-01-9	Chrysene	25,000 ~~15000~~	E
117-81-7	bis(2-Ethylhexyl)phthalate	360	U
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	31000	E
207-08-9	Benzo(k)fluoranthene	9700 ~~10000~~	E
50-32-8	Benzo(a)pyrene	23000 ~~26000~~	E
193-39-5	Indeno(1,2,3-cd)pyrene	14,000 ~~17000~~	E
53-70-3	Dibenzo(a,h)anthracene	4900	
191-24-2	Benzo(g,h,i)perylene	17,000 ~~19000~~	E

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-A-CS-0-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S3C9787

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 7 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

ED 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	64	J
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	65	J
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	9200 ~~7300~~	~~E~~
106-47-8	4-Chloroaniline	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-Methylphenol	J 350	U
91-57-6	2-Methylnaphthalene	7000 ~~6900~~	~~E~~
77-47-4	Hexachlorocyclopentadiene	350	UJ
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	720	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	720	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	11,000 ~~9400~~	~~E~~
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	720	U
83-32-9	Acenaphthene	3400	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-A-CS-0-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S3C9787

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 7 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EAD 11/13/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	720	UJ
100-02-7	4-Nitrophenol	720	U
132-64-9	Dibenzofuran	8900 ~~7700~~	~~E~~
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	12,000 ~~10000~~	~~E~~
100-01-6	4-Nitroaniline	720	U
534-52-1	4,6-Dinitro-2-methylphenol	720	UJ
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	720	UJ
85-01-8	Phenanthrene	94,000 ~~28000~~	~~E~~
120-12-7	Anthracene	17,000 ~~11000~~	~~E~~
86-74-8	Carbazole	2400	
84-74-2	Di-n-butylphthalate	350	U
206-44-0	Fluoranthene	91,000 ~~27000~~	~~E~~
129-00-0	Pyrene	72,000 ~~22000~~	~~E~~
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	UJ
56-55-3	Benzo(a)anthracene	28,000 ~~16000~~	~~E~~
218-01-9	Chrysene	27,000 ~~16000~~	~~E~~
117-81-7	bis(2-Ethylhexyl)phthalate	350	U
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	35000	E
207-08-9	Benzo(k)fluoranthene	12,000 ~~16000~~	~~E~~
50-32-8	Benzo(a)pyrene	26,000 ~~28000~~	~~E~~
193-39-5	Indeno(1,2,3-cd)pyrene	16,000 ~~18000~~	~~E~~
53-70-3	Dibenzo(a,h)anthracene	4000J ~~5800~~	~~E~~
191-24-2	Benzo(g,h,i)perylene	19,000 ~~22000~~	~~E~~

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-B-9

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-08A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S3C9788

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	770	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	770	U
131-11-3	Dimethylphthalate	380	U
208-96-8	Acenaphthylene	130	J
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	770	U
83-32-9	Acenaphthene	380	U

SD 11/3/04

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-B-9

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-08A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S3C9788

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	770	UJ
100-02-7	4-Nitrophenol	770	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	770	U
534-52-1	4,6-Dinitro-2-methylphenol	770	UJ
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	770	UJ
85-01-8	Phenanthrene	250	J
120-12-7	Anthracene	83	J
86-74-8	Carbazole	380	U
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	460	
129-00-0	Pyrene	620	
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	UJ
56-55-3	Benzo(a)anthracene	310	J
218-01-9	Chrysene	320	J
117-81-7	bis(2-Ethylhexyl)phthalate	380U ~~64~~	J
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo(b)fluoranthene	340	J
207-08-9	Benzo(k)fluoranthene	130	J
50-32-8	Benzo(a)pyrene	290	J
193-39-5	Indeno(1,2,3-cd)pyrene	150	J
53-70-3	Dibenzo(a,h)anthracene	50	J
191-24-2	Benzo(g,h,i)perylene	180	J

(1) - Cannot be separated from Diphenylamine

SD 11/34

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-B-10-14

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-10A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S3C9789

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 22 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

SD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	420	U
111-44-4	bis(2-Chloroethyl)Ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	130	J
106-47-8	4-Chloroaniline	420	U
111-91-1	bis(2-Chloroethoxy)methane	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U
91-57-6	2-Methylnaphthalene	110	J
77-47-4	Hexachlorocyclopentadiene	420	UJ
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	860	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	420	U
208-96-8	Acenaphthylene	390	J
606-20-2	2,6-Dinitrotoluene	420	U
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	540	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-B-10-14

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-10A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S3C9789

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 22 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	860	UJ
100-02-7	4-Nitrophenol	860	U
132-64-9	Dibenzofuran	350	J
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	660	
100-01-6	4-Nitroaniline	860	U
534-52-1	4,6-Dinitro-2-methylphenol	860	UJ
86-30-6	N-Nitrosodiphenylamine (1)	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	860	UJ
85-01-8	Phenanthrene	4100	
120-12-7	Anthracene	1400	
86-74-8	Carbazole	400	J
84-74-2	Di-n-butylphthalate	420	U
206-44-0	Fluoranthene	4400	
129-00-0	Pyrene	4700	
85-68-7	Butylbenzylphthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	420	UJ
56-55-3	Benzo(a)anthracene	2100	
218-01-9	Chrysene	2300	
117-81-7	bis(2-Ethylhexyl)phthalate	420U ~~230~~ ~~J~~	
117-84-0	Di-n-octylphthalate	420	U
205-99-2	Benzo(b)fluoranthene	2600	
207-08-9	Benzo(k)fluoranthene	1300	
50-32-8	Benzo(a)pyrene	2100	
193-39-5	Indeno(1,2,3-cd)pyrene	1000	
53-70-3	Dibenzo(a,h)anthracene	330	J
191-24-2	Benzo(g,h,i)perylene	1200	

(1) - Cannot be separated from Diphenylamine

SD 11/3/04

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-D-0.5-9

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-13A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S3C9790

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 22 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

SD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	420	U
111-44-4	bis(2-Chloroethyl)Ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
111-91-1	bis(2-Chloroethoxy)methane	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	UJ
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	860	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	420	U
208-96-8	Acenaphthylene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	48	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-D-0.5-9

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-13A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S3C9790

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 22 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

ED 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	860	UJ
100-02-7	4-Nitrophenol	860	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	420	U
100-01-6	4-Nitroaniline	860	U
534-52-1	4,6-Dinitro-2-methylphenol	860	UJ
86-30-6	N-Nitrosodiphenylamine (1)	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	860	UJ
85-01-8	Phenanthrene	390	J
120-12-7	Anthracene	83	J
86-74-8	Carbazole	420	U
84-74-2	Di-n-butylphthalate	420	U
206-44-0	Fluoranthene	460	
129-00-0	Pyrene	640	
85-68-7	Butylbenzylphthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	420	UJ
56-55-3	Benzo(a)anthracene	220	J
218-01-9	Chrysene	260	J
117-81-7	bis(2-Ethylhexyl)phthalate	420U ~~72~~	~~J~~
117-84-0	Di-n-octylphthalate	420	U
205-99-2	Benzo(b)fluoranthene	290	J
207-08-9	Benzo(k)fluoranthene	96	J
50-32-8	Benzo(a)pyrene	240	J
193-39-5	Indeno(1,2,3-cd)pyrene	150	J
53-70-3	Dibenzo(a,h)anthracene	420	U
191-24-2	Benzo(g,h,i)perylene	180	J

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-FS-0.5-6

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-17A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9793

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 17 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)Ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-Methylphenol	400	U
91-57-6	2-Methylnaphthalene	50	J
77-47-4	Hexachlorocyclopentadiene	400	UJ
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	800	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	800	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	800	U
83-32-9	Acenaphthene	400	U

EAD 11/3/04

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-FS-0.5-6

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-17A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9793

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 17 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	800	UJ
100-02-7	4-Nitrophenol	800	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	800	U
534-52-1	4,6-Dinitro-2-methylphenol	800	UJ
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	800	UJ
85-01-8	Phenanthrene	110	J
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	210	J
129-00-0	Pyrene	240	J
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	UJ
56-55-3	Benzo(a)anthracene	120	J
218-01-9	Chrysene	110	J
117-81-7	bis(2-Ethylhexyl)phthalate	400	U
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	120	J
207-08-9	Benzo(k)fluoranthene	59	J
50-32-8	Benzo(a)pyrene	100	J
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) - Cannot be separated from Diphenylamine

EAD 11/3/04

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-FD-6-12

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-18A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: S3C9794

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 23 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
108-95-2	Phenol	420	U
111-44-4	bis(2-Chloroethyl)Ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
111-91-1	bis(2-Chloroethoxy)methane	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U
91-57-6	2-Methylnaphthalene	50	J
77-47-4	Hexachlorocyclopentadiene	420	UJ
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	860	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	420	U
208-96-8	Acenaphthylene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	420	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-FD-6-12

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-18A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: S3C9794

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 23 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

ED 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	860	UJ
100-02-7	4-Nitrophenol	860	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	420	U
100-01-6	4-Nitroaniline	860	U
534-52-1	4,6-Dinitro-2-methylphenol	860	UJ
86-30-6	N-Nitrosodiphenylamine (1)	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	860	UJ
85-01-8	Phenanthrene	88	J
120-12-7	Anthracene	420	U
86-74-8	Carbazole	420	U
84-74-2	Di-n-butylphthalate	420	U
206-44-0	Fluoranthene	93	J
129-00-0	Pyrene	100	J
85-68-7	Butylbenzylphthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	420	UJ
56-55-3	Benzo(a)anthracene	420	U
218-01-9	Chrysene	420	U
117-81-7	bis(2-Ethylhexyl)phthalate	420u ~~69~~	~~J~~
117-84-0	Di-n-octylphthalate	420	U
205-99-2	Benzo(b)fluoranthene	420	U
207-08-9	Benzo(k)fluoranthene	420	U
50-32-8	Benzo(a)pyrene	420	U
193-39-5	Indeno(1,2,3-cd)pyrene	420	U
53-70-3	Dibenzo(a,h)anthracene	420	U
191-24-2	Benzo(g,h,i)perylene	420	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-G-8-12

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-20A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9795

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 18 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)Ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-Methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	UJ
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	810	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	810	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	810	U
83-32-9	Acenaphthene	400	U

SD 11/3/04

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-G-8-12

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-20A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9795

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: 18 decanted: (Y/N) N Date Extracted: 08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/10/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

SJD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	810	UJ
100-02-7	4-Nitrophenol	810	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	810	U
534-52-1	4,6-Dinitro-2-methylphenol	810	UJ
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	810	UJ
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	UJ
56-55-3	Benzo(a)anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	400 ~~78~~	~~J~~
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	400	U
207-08-9	Benzo(k)fluoranthene	400	U
50-32-8	Benzo(a)pyrene	400	U
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-A-0-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) WATER Lab Sample ID: C0886-02A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S1E0946

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/23/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/25/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	37 ~~36~~	~~E~~ J
91-57-6	2-Methylnaphthalene	2.8	
208-96-8	Acenaphthylene	3.2	
83-32-9	Acenaphthene	0.87	
86-73-7	Fluorene	1.2	
85-01-8	Phenanthrene	1.8	
120-12-7	Anthracene	1.4	
206-44-0	Fluoranthene	0.44	
129-00-0	Pyrene	0.36	
56-55-3	Benzo(a)anthracene	0.16	
218-01-9	Chrysene	0.15	
205-99-2	Benzo(b)fluoranthene	0.23	
207-08-9	Benzo(k)fluoranthene	0.14	
50-32-8	Benzo(a)pyrene	0.17	
193-39-5	Indeno(1,2,3-cd)pyrene	0.13	
53-70-3	Dibenzo(a,h)anthracene	0.10	U
191-24-2	Benzo(g,h,i)perylene	0.17	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-A-CS-0-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) WATER Lab Sample ID: C0886-06A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S1E0947

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/23/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/25/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	28 ~~26~~	E
91-57-6	2-Methylnaphthalene	2.5	
208-96-8	Acenaphthylene	3.6	
83-32-9	Acenaphthene	0.86	
86-73-7	Fluorene	1.4	
85-01-8	Phenanthrene	2.0	
120-12-7	Anthracene	1.4	
206-44-0	Fluoranthene	0.70	
129-00-0	Pyrene	0.65	
56-55-3	Benzo(a)anthracene	0.32	
218-01-9	Chrysene	0.26	
205-99-2	Benzo(b)fluoranthene	0.49	
207-08-9	Benzo(k)fluoranthene	0.21	
50-32-8	Benzo(a)pyrene	0.37	
193-39-5	Indeno(1,2,3-cd)pyrene	0.28	
53-70-3	Dibenzo(a,h)anthracene	0.10	U
191-24-2	Benzo(g,h,i)perylene	0.33	

J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-B-10-14

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) WATER Lab Sample ID: C0886-10A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S1E0948

Level: (low/med) LOW Date Received: 08/07/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/23/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/25/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EXD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.50	
91-57-6	2-Methylnaphthalene	0.094	J
208-96-8	Acenaphthylene	0.13	
83-32-9	Acenaphthene	0.10	U
86-73-7	Fluorene	0.10	U
85-01-8	Phenanthrene	0.27	
120-12-7	Anthracene	0.10	U
206-44-0	Fluoranthene	0.22	
129-00-0	Pyrene	0.21	
56-55-3	Benzo(a)anthracene	0.12	
218-01-9	Chrysene	0.13	
205-99-2	Benzo(b)fluoranthene	0.15	
207-08-9	Benzo(k)fluoranthene	0.078	J
50-32-8	Benzo(a)pyrene	0.15	
193-39-5	Indeno(1,2,3-cd)pyrene	0.095	J
53-70-3	Dibenzo(a,h)anthracene	0.10	U
191-24-2	Benzo(g,h,i)perylene	0.12	

1

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-AS-0-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-03A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2E0480F

% Moisture: 8 decanted: (Y/N) N Date Received: 08/07/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/12/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

EDD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	36	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
11096-82-5	Aroclor-1260	36	U
11100-14-4	Aroclor-1268	36	U

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-AD-8-16

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-04A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2E0481F

% Moisture: 18 decanted: (Y/N) N Date Received: 08/07/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/12/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

SLD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U
11100-14-4	Aroclor-1268	40	U

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-AS-CS-0-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-07A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2E0482F

% Moisture: 11 decanted: (Y/N) N Date Received: 08/07/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/12/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

EAP 11/3/4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	37	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U
11100-14-4	Aroclor-1268	37	U

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-BS-0-10

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-09A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2E0483F

% Moisture: 13 decanted: (Y/N) N Date Received: 08/07/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/12/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

EAD 1/13/04

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	38	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U
11100-14-4	Aroclor-1268	38	U

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-BD-10-14

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-11A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2E0486F

% Moisture: 20 decanted: (Y/N) N Date Received: 08/07/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/12/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	150	~~P~~ J
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U
11100-14-4	Aroclor-1268	41	U

EJP 11/3/04

FORM I PCB

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-DS-0.5-9

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-14A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2E0487F

% Moisture: 19 decanted: (Y/N) N Date Received: 08/07/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/12/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U
11100-14-4	Aroclor-1268	41	U

EAP 11/3/04

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-DD-9-14

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-15A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2E0494F

% Moisture: 19 decanted: (Y/N) N Date Received: 08/07/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/12/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U
11100-14-4	Aroclor-1268	41	U

EP 11/3/04

FORM I PCB

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-FS-0.5-6

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-17A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2E0495F

% Moisture: 17 decanted: (Y/N) N Date Received: 08/07/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/12/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U
11100-14-4	Aroclor-1268	40	U

EJD 11/3/04

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-FD-6-12

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-18A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2E0496F

% Moisture: 23 decanted: (Y/N) N Date Received: 08/07/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/12/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	43	U
11096-82-5	Aroclor-1260	43	U
11100-14-4	Aroclor-1268	43	U

EAP 11/3/04

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-GS-0.5-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-21A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2E0497F

% Moisture: 12 decanted: (Y/N) N Date Received: 08/07/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/12/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	37	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U
11100-14-4	Aroclor-1268	37	U

EAD 11/3/04

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-GD-8-12

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0886

Matrix: (soil/water) SOIL Lab Sample ID: C0886-22A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2E0498F

% Moisture: 16 decanted: (Y/N) N Date Received: 08/07/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/12/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U
11100-14-4	Aroclor-1268	39	U

SAD 11/3/04

Mitkem Corporation

Date: *22-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: SB-A-0-8
Lab ID: C0886-02

Project: M&E Connecticut Brownfields
Collection Date: 08/05/04 09:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch I
CT ETPH BY GC-FID				**CTETPH_S**			
Extractable Total Petroleum Hydrocarbon	920		66	mg/Kg	1	08/12/2004 14:38	1404
Surr: para-Terphenyl	70.8		16-127	%REC	1	08/12/2004 14:38	1404

EP 11/30/04

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *22-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: SB-A-CS-0-8
Lab ID: C0886-06

Project: M&E Connecticut Brownfields
Collection Date: 08/05/04 09:10

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch I
CT ETPH BY GC-FID				**CTETPH_S**			
Extractable Total Petroleum Hydrocarbon	1300		130	mg/Kg	2	08/13/2004 11:24	140-
Surr: para-Terphenyl	107		16-127	%REC	2	08/13/2004 11:24	140

EAD 11/3/04

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *22-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: SB-B-10-14
Lab ID: C0886-10

Project: M&E Connecticut Brownfields
Collection Date: 08/05/04 14:10

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch I
CT ETPH BY GC-FID				**CTETPH_S**			
Extractable Total Petroleum Hydrocarbon	560		76	mg/Kg	1	08/12/2004 15:55	140
Surr: para-Terphenyl	88.4		16-127	%REC	1	08/12/2004 15:55	140

11/3/04

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *22-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: SB-D-0.5-9
Lab ID: C0886-13

Project: M&E Connecticut Brownfields
Collection Date: 08/06/04 08:30

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch I
CT ETPH BY GC-FID				**CTETPH_S**			
Extractable Total Petroleum Hydrocarbon	92	J	77	mg/Kg	1	08/12/2004 16:33	140
Surr: para-Terphenyl	75.9		16-127	%REC	1	08/12/2004 16:33	140

SD 11/3/04

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *22-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: SB-FS-0.5-6
Lab ID: C0886-17

Project: M&E Connecticut Brownfields
Collection Date: 08/06/04 11:45

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch I
CT ETPH BY GC-FID				**CTETPH_S**			
Extractable Total Petroleum Hydrocarbon	100		72	mg/Kg	1	08/12/2004 18:28	140
Surr: para-Terphenyl	66.1		16-127	%REC	1	08/12/2004 18:28	140

EHD 11/3/04

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *22-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: SB-FD-6-12
Lab ID: C0886-18

Project: M&E Connecticut Brownfields
Collection Date: 08/06/04 12:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch I
CT ETPH BY GC-FID				**CTETPH_S**			
Extractable Total Petroleum Hydrocarbon	27		16	mg/Kg	1	08/12/2004 19:06	1404
Surr: para-Terphenyl	66.1		16-127	%REC	1	08/12/2004 19:06	140

11/3/04

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *22-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: SB-G-8-12
Lab ID: C0886-20

Project: M&E Connecticut Brownfields
Collection Date: 08/06/04 15:20

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch I
CT ETPH BY GC-FID				**CTETPH_S**			
Extractable Total Petroleum Hydrocarbon	15 ~~ND~~		15	mg/Kg	1	08/12/2004 20:23	140
Surr: para-Terphenyl	65.2		16-127	%REC	1	08/12/2004 20:23	140

EAP 11/3/04

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-AS-0-8

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886

Matrix (soil/water): SOIL Lab Sample ID: C0886-03

Level (low/med): MED Date Received: 08/07/04

% Solids: 92.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

EJD 11/3/04

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.2		~~N~~ J u	P
7440-38-2	Arsenic	7.0		~~N~~ E J	P
7440-39-3	Barium	146			P
7440-41-7	Beryllium	0.95		~~E~~	P
7440-43-9	Cadmium	0.13	~~B~~	~~E~~ J	P
7440-47-3	Chromium	14.7			P
7440-50-8	Copper	33.4		~~N~~ J	P
7439-92-1	Lead	355		~~E~~ J	P
7440-02-0	Nickel	10.5		~~S~~ J	P
7782-49-2	Selenium	2.4		~~E~~ J	P
7440-22-4	Silver	1.3	~~B~~	~~E~~ J	P
7440-28-0	Thallium	1.7		~~N*~~ J	P
7440-62-2	Vanadium	24.8			P
7440-66-6	Zinc	147			P
7439-97-6	Mercury	0.11		~~N*~~ J	CV
	Cyanide	0.13	U	J	CA

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-AS-CS-0-8

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886

Matrix (soil/water): SOIL Lab Sample ID: C0886-07

Level (low/med): MED Date Received: 08/07/04

% Solids: 89.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.79	~~B~~	~~N~~ U J	P
7440-38-2	Arsenic	6.9		~~N~~ E J	P
7440-39-3	Barium	118			P
7440-41-7	Beryllium	0.97		~~E~~	P
7440-43-9	Cadmium	0.080	~~B~~	~~E~~ J	P
7440-47-3	Chromium	12.7			P
7440-50-8	Copper	33.7		~~N~~ J	P
7439-92-1	Lead	163		~~E~~ J	P
7440-02-0	Nickel	11.2		~~J~~	P
7782-49-2	Selenium	2.6		~~E~~ J	P
7440-22-4	Silver	1.2	~~B~~	~~E~~ J	P
7440-28-0	Thallium	1.9		~~N*~~ J	P
7440-62-2	Vanadium	27.4			P
7440-66-6	Zinc	118			P
7439-97-6	Mercury	0.16		~~N*~~ J	CV
	Cyanide	0.13	U	J	CA

SAP 11/3/04

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-BS-0-10

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886

Matrix (soil/water): SOIL Lab Sample ID: C0886-09

Level (low/med): MED Date Received: 08/07/04

% Solids: 87.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.8		~~N~~J	P
7440-38-2	Arsenic	10.7		~~N~~E J	P
7440-39-3	Barium	107			P
7440-41-7	Beryllium	0.96		E	P
7440-43-9	Cadmium	0.31		~~E~~ J	P
7440-47-3	Chromium	12.6			P
7440-50-8	Copper	85.7		~~N~~ J	P
7439-92-1	Lead	191		E J	P
7440-02-0	Nickel	14.2		~~N~~	P
7782-49-2	Selenium	3.2		E J	P
7440-22-4	Silver	3.1		E J	P
7440-28-0	Thallium	1.0		~~N~~* J	P
7440-62-2	Vanadium	34.6			P
7440-66-6	Zinc	149			P
7439-97-6	Mercury	1.2		~~N~~* J	CV
	Cyanide	0.12	U	J	CA

EAD 11/3/04

Comments:

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0200

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-BD-10-14

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886

Matrix (soil/water): SOIL Lab Sample ID: C0886-11

Level (low/med): MED Date Received: 08/07/04

% Solids: 80.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.95	B	~~N~~ U J	P
7440-38-2	Arsenic	10.1		~~N~~ E J	P
7440-39-3	Barium	86.6			P
7440-41-7	Beryllium	1.1		E	P
7440-43-9	Cadmium	0.85		E J	P
7440-47-3	Chromium	189			P
7440-50-8	Copper	215		N J	P
7439-92-1	Lead	228		E J	P
7440-02-0	Nickel	64.1			P
7782-49-2	Selenium	2.9		E J	P
7440-22-4	Silver	53.1		E J	P
7440-28-0	Thallium	2.5		N* J	P
7440-62-2	Vanadium	41.8			P
7440-66-6	Zinc	918			P
7439-97-6	Mercury	0.86		N* J	CV
	Cyanide	0.61	B	J	CA

EAP 11/3/04

Comments:

FORM I - IN SW846

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-DS-0.5-9

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886

Matrix (soil/water): SOIL Lab Sample ID: C0886-14

Level (low/med): MED Date Received: 08/07/04

% Solids: 81.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	2.1		~~N~~ J	P
7440-38-2	Arsenic	12.6		~~N~~E J	P
7440-39-3	Barium	198			P
7440-41-7	Beryllium	0.98		E	P
7440-43-9	Cadmium	0.29	~~B~~	E J	P
7440-47-3	Chromium	12.5			P
7440-50-8	Copper	189		~~N~~ J	P
7439-92-1	Lead	312		~~E~~ J	P
7440-02-0	Nickel	13.8		~~E~~	P
7782-49-2	Selenium	3.7		E J	P
7440-22-4	Silver	3.0		E J	P
7440-28-0	Thallium	1.9		~~N~~* J	P
7440-62-2	Vanadium	34.6			P
7440-66-6	Zinc	371			P
7439-97-6	Mercury	0.95		~~N~~* J	CV
	Cyanide	0.13	U J		CA

EJD 11/3/04

Comments:

FORM I - IN SW846

0202

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-DD-9-14

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886

Matrix (soil/water): SOIL Lab Sample ID: C0886-15

Level (low/med): MED Date Received: 08/07/04

% Solids: 81.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.63	B	N J	P
7440-38-2	Arsenic	6.4		N J	P
7440-39-3	Barium	102			P
7440-41-7	Beryllium	1.0			P
7440-43-9	Cadmium	0.0059	U		P
7440-47-3	Chromium	8.5			P
7440-50-8	Copper	21.0		N J	P
7439-92-1	Lead	8.8		J	P
7440-02-0	Nickel	12.3		J	P
7782-49-2	Selenium	2.0		J	P
7440-22-4	Silver	0.87	B	J	P
7440-28-0	Thallium	0.85		UJ	P
7440-62-2	Vanadium	24.7			P
7440-66-6	Zinc	37.6			P
7439-97-6	Mercury	0.024	B	N J	CV
	Cyanide	0.13	U	J	CA

EAD 11/3/04

Comments:

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0196

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-AD-8-16

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886

Matrix (soil/water): SOIL Lab Sample ID: C0886-04

Level (low/med): MED Date Received: 08/07/04

% Solids: 82.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.2		~~N~~ UJ	P
7440-38-2	Arsenic	6.4		~~NE~~ J	P
7440-39-3	Barium	252			P
7440-41-7	Beryllium	1.4		~~E~~	P
7440-43-9	Cadmium	0.0055	U	~~E~~	P
7440-47-3	Chromium	20.1			P
7440-50-8	Copper	10.7		~~N~~ J	P
7439-92-1	Lead	35.8		~~E~~ J	P
7440-02-0	Nickel	12.6		~~E~~	P
7782-49-2	Selenium	2.4		~~E~~ J	P
7440-22-4	Silver	0.87	~~B~~	~~E~~ J	P
7440-28-0	Thallium	0.61	~~B~~	~~N*~~ UJ	P
7440-62-2	Vanadium	34.4			P
7440-66-6	Zinc	50.9			P
7439-97-6	Mercury	0.079		~~N*~~ J	CV
	Cyanide	0.14	U	J	CA

EAD 11/3/04

Comments:

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SW846

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-FS-0.5-6

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886

Matrix (soil/water): SOIL Lab Sample ID: C0886-17

Level (low/med): MED Date Received: 08/07/04

% Solids: 83.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

EAP 11/3/04

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	2.4		~~N~~ J	P
7440-38-2	Arsenic	15.5		~~NE~~ J	P
7440-39-3	Barium	122			P
7440-41-7	Beryllium	1.2		~~E~~	P
7440-43-9	Cadmium	22.7		~~E~~ J	P
7440-47-3	Chromium	10.1			P
7440-50-8	Copper	550		~~N~~ J	P
7439-92-1	Lead	144		~~E~~ J	P
7440-02-0	Nickel	18.3		~~J~~	P
7782-49-2	Selenium	4.0		~~E~~ J	P
7440-22-4	Silver	3.1		~~E~~ J	P
7440-28-0	Thallium	0.92	~~B~~	~~N*~~ J	P
7440-62-2	Vanadium	38.8			P
7440-66-6	Zinc	3690			P
7439-97-6	Mercury	1.0		~~N*~~ J	CV
	Cyanide	0.14	U	J	CA

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-FD-6-12

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886

Matrix (soil/water): SOIL Lab Sample ID: C0886-18

Level (low/med): MED Date Received: 08/07/04

% Solids: 77.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.56	B	N J	P
7440-38-2	Arsenic	9.0		NE J	P
7440-39-3	Barium	78.4			P
7440-41-7	Beryllium	1.0		E	P
7440-43-9	Cadmium	1.3		E J	P
7440-47-3	Chromium	13.6			P
7440-50-8	Copper	33.6		N J	P
7439-92-1	Lead	20.7		E J	P
7440-02-0	Nickel	10			P
7782-49-2	Selenium	2.9		E J	P
7440-22-4	Silver	1.2	B	E J	P
7440-28-0	Thallium	3.4		N J	P
7440-62-2	Vanadium	42.5			P
7440-66-6	Zinc	151			P
7439-97-6	Mercury	0.040	B	N J	CV
	Cyanide	0.15	U	J	CA

11/3/04

Comments:

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-GS-0.5-8

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886

Matrix (soil/water): SOIL Lab Sample ID: C0886-21

Level (low/med): MED Date Received: 08/07/04

% Solids: 88.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.3		~~N~~ UJ	P
7440-38-2	Arsenic	11.0		~~N~~E J	P
7440-39-3	Barium	125			P
7440-41-7	Beryllium	1.1		~~E~~	P
7440-43-9	Cadmium	2.5		~~E~~ J	P
7440-47-3	Chromium	12.7			P
7440-50-8	Copper	146		~~N~~ J	P
7439-92-1	Lead	79.5		~~E~~ J	P
7440-02-0	Nickel	15.2		~~E~~	P
7782-49-2	Selenium	3.4		~~E~~ J	P
7440-22-4	Silver	2.0		~~E~~ J	P
7440-28-0	Thallium	2.5		~~N~~ J	P
7440-62-2	Vanadium	44.8			P
7440-66-6	Zinc	479			P
7439-97-6	Mercury	0.10		~~N~~ J	CV
	Cyanide	0.12	U	J	CA

11/3/04

Comments:

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0206

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-GD-8-12

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886

Matrix (soil/water): SOIL Lab Sample ID: C0886-22

Level (low/med): MED Date Received: 08/07/04

% Solids: 84.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.3		~~N~~ U J	P
7440-38-2	Arsenic	10.9		~~N~~ E J	P
7440-39-3	Barium	93.9			P
7440-41-7	Beryllium	1.3		~~E~~	P
7440-43-9	Cadmium	0.32	~~B~~	~~E~~ J	P
7440-47-3	Chromium	16.6			P
7440-50-8	Copper	48.7		~~N~~ J	P
7439-92-1	Lead	18.8		~~E~~ J	P
7440-02-0	Nickel	14.8		~~E~~	P
7782-49-2	Selenium	3.3		~~E~~ J	P
7440-22-4	Silver	1.6	~~B~~	~~E~~ J	P
7440-28-0	Thallium	4.3		~~N*~~ J	P
7440-62-2	Vanadium	51.6			P
7440-66-6	Zinc	122			P
7439-97-6	Mercury	0.12		~~N*~~ J	CV
	Cyanide	0.13	U	J	CA

Comments:

FORM I - IN SW846

0205

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-AS-0-8

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886-S

Matrix (soil/water): SOIL Lab Sample ID: C0886-03

Level (low/med): MED Date Received: 08/07/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	2.0	~~B~~	[redacted] u J	P
7440-38-2	Arsenic	4.3	~~B~~	J	P
7440-39-3	Barium	53.7	~~B~~	u J	P
7440-41-7	Beryllium	0.15	U	J	P
7440-43-9	Cadmium	0.10	U	J	P
7440-47-3	Chromium	0.63	~~B~~	J	P
7440-50-8	Copper	34.4		u	P
7439-92-1	Lead	24.2			P
7440-02-0	Nickel	0.59	U	J	P
7782-49-2	Selenium	0.98	U	J	P
7440-22-4	Silver	0.91	U		P
7440-28-0	Thallium	1.2	U	J	P
7440-62-2	Vanadium	20.7	~~B~~	J	P
7440-66-6	Zinc	6.2	~~B~~	J	P
7439-97-6	Mercury	0.074	~~B~~	J	CV

ED 11/3/04

Comments:

SPLP Metals

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-AS-CS-0-8

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886-S

Matrix (soil/water): SOIL Lab Sample ID: C0886-07

Level (low/med): MED Date Received: 08/07/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	7.2	B	UJ	P
7440-38-2	Arsenic	1.6	U		P
7440-39-3	Barium	128	B	J	P
7440-41-7	Beryllium	0.15	U	J	P
7440-43-9	Cadmium	0.10	U	J	P
7440-47-3	Chromium	0.38	U	J	P
7440-50-8	Copper	19.0	B	UJ	P
7439-92-1	Lead	7.9	B	UJ	P
7440-02-0	Nickel	0.59	U	J	P
7782-49-2	Selenium	0.98	U	J	P
7440-22-4	Silver	0.91	U		P
7440-28-0	Thallium	1.2	U	J	P
7440-62-2	Vanadium	1.2	B	UJ	P
7440-66-6	Zinc	2.3	U	J	P
7439-97-6	Mercury	0.074	B	J	CV

EAD 11/3/04

Comments:

SPLP Metals

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-BD-10-14

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886-S

Matrix (soil/water): SOIL Lab Sample ID: C0886-11

Level (low/med): MED Date Received: 08/07/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	28.4		u	P
7440-38-2	Arsenic	12.6	~~B~~	J	P
7440-39-3	Barium	121	~~B~~	J	P
7440-41-7	Beryllium	0.15	U	J	P
7440-43-9	Cadmium	3.1	~~B~~	J	P
7440-47-3	Chromium	100			P
7440-50-8	Copper	557			P
7439-92-1	Lead	90.7			P
7440-02-0	Nickel	12.0	~~B~~	J	P
7782-49-2	Selenium	1.9	~~B~~	J	P
7440-22-4	Silver	6.5	~~B~~	UJ	P
7440-28-0	Thallium	4.0	~~B~~	J	P
7440-62-2	Vanadium	37.8	~~B~~	J	P
7440-66-6	Zinc	288			P
7439-97-6	Mercury	0.056	U		CV

EAD 11/3/04

Comments:

SPLP Metals

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-DS-0.5-9

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886-S

Matrix (soil/water): SOIL Lab Sample ID: C0886-14

Level (low/med): MED Date Received: 08/07/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

ED 11/3/04

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	10.2	~~B~~	UJ	P
7440-38-2	Arsenic	4.8	~~B~~	J	P
7440-39-3	Barium	155	~~B~~	J	P
7440-41-7	Beryllium	0.15	U	J	P
7440-43-9	Cadmium	0.10	U	J	P
7440-47-3	Chromium	1.9	~~B~~	J	P
7440-50-8	Copper	68.4			P
7439-92-1	Lead	58.5			P
7440-02-0	Nickel	0.59	U	J	P
7782-49-2	Selenium	0.98	U	J	P
7440-22-4	Silver	0.91	U		P
7440-28-0	Thallium	1.2	U	J	P
7440-62-2	Vanadium	10.2	~~B~~	UJ	P
7440-66-6	Zinc	54.6	J		P
7439-97-6	Mercury	0.064	~~B~~	J	CV

Comments:

SPLP Metals

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-FS-0.5-6

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886-S

Matrix (soil/water): SOIL Lab Sample ID: C0886-17

Level (low/med): MED Date Received: 08/07/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	2.3	~~B~~	UJ	P
7440-38-2	Arsenic	1.6	U		P
7440-39-3	Barium	143	~~B~~	J	P
7440-41-7	Beryllium	0.15	U	J	P
7440-43-9	Cadmium	1.7	~~B~~	J	P
7440-47-3	Chromium	1.7	~~B~~	J	P
7440-50-8	Copper	51.4		U	P
7439-92-1	Lead	17.1			P
7440-02-0	Nickel	0.59	U	J	P
7782-49-2	Selenium	0.98	U	J	P
7440-22-4	Silver	0.91	U		P
7440-28-0	Thallium	1.2	U	J	P
7440-62-2	Vanadium	3.9	~~B~~	UJ	P
7440-66-6	Zinc	386			P
7439-97-6	Mercury	0.14	~~B~~	J	CV

EP 11/3/04

Comments:

SPLP Metals

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-BS-0-10

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886-S

Matrix (soil/water): SOIL Lab Sample ID: C0886-09

Level (low/med): MED Date Received: 08/07/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	3.7	~~B~~	UJ	P
7440-38-2	Arsenic	2.6	~~B~~	J	P
7440-39-3	Barium	39.5	~~B~~	UJ	P
7440-41-7	Beryllium	0.15	U	J	P
7440-43-9	Cadmium	0.10	U	J	P
7440-47-3	Chromium	2.8	~~B~~	J	P
7440-50-8	Copper	27.9	~~B~~	UJ	P
7439-92-1	Lead	2.0	~~B~~	UJ	P
7440-02-0	Nickel	0.59	U	J	P
7782-49-2	Selenium	0.98	U	J	P
7440-22-4	Silver	1.4	~~B~~	UJ	P
7440-28-0	Thallium	1.2	U	J	P
7440-62-2	Vanadium	35.5	~~B~~	J	P
7440-66-6	Zinc	2.3	U	J	P
7439-97-6	Mercury	0.058	U		CV

EJD 1/13/04

Comments:

SPLP Metals

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-GS-0.5-8

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0886-S

Matrix (soil/water): SOIL Lab Sample ID: C0886-21

Level (low/med): MED Date Received: 08/07/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

EAD 11/13/04

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	4.3	~~B~~	UJ	P
7440-38-2	Arsenic	1.6	U		P
7440-39-3	Barium	142	~~B~~	J	P
7440-41-7	Beryllium	0.15	U	J	P
7440-43-9	Cadmium	0.10	U	J	P
7440-47-3	Chromium	0.79	~~B~~	J	P
7440-50-8	Copper	31.0		J	P
7439-92-1	Lead	9.4	~~B~~	UJ	P
7440-02-0	Nickel	0.59	U	J	P
7782-49-2	Selenium	0.98	U	J	P
7440-22-4	Silver	2.4	~~B~~	UJ	P
7440-28-0	Thallium	1.2	U	J	P
7440-62-2	Vanadium	5.0	~~B~~	UJ	P
7440-66-6	Zinc	56.1		J	P
7439-97-6	Mercury	0.31			CV

Comments:

SPLP Metals

Memorandum

PROJECT NO:	036200100.0055.00033	**DATE:** October 29, 2004	
TO:	Meriden HUB	**OFFICE:** Wakefield	
FROM:	P. DiMattei	**COMPANY:** Metcalf & Eddy, Inc.	
REVIEWED BY:	D. Truini		
CC:	B. Weir, N. Thurber, D. Laferte (memo only)		

SUBJECT: Limited QC Review/Modified Tier II-Like Review
VOCs, SVOCs, PCBs, ETPH, Mercury, Cyanide, Metals, and SPLP Metals
Mitkem Corporation, Warwick, Rhode Island
Project #C0908/MC0908

On August 9, 2004, eight soil samples and one trip blank were collected at the Meriden HUB site, located in Meriden, Connecticut by Metcalf & Eddy, Inc. (M&E) field personnel. The sampling was performed as part of the TBA Response Action Contract (RAC) Work Assignment (WA) #155-SIBZ-0100. The samples were submitted to Mitkem Corporation located in Warwick, Rhode Island for the analysis of volatile organic compounds according to *SW-846 Method 8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)*, for semivolatile organic compounds (SVOCs) according to *SW-846 Method 8270C, Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS),* for polychlorinated biphenyls (PCBs) according to *SW-846 Method 8082, Polychlorinated Biphenyls (PCBs) by Gas Chromatography,* for extractable total petroleum hydrocarbons (ETPHs) according to the Connecticut method entitled *Analysis of Extractable Total Petroleum Hydrocarbons (ETPH) Using Methylene Chloride Gas Chromatograph/Flame Ionization Detection,* for mercury according to *SW-846 Method 7471A, Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)*, for cyanide according to *SW-846 Method 9014, Titrimetric and Manual Spectrophotometric Determinative Methods for Cyanide,* and for metals according to *SW-846 Method 6010B, Inductively Coupled Plasma-Atomic Emission Spectrometry.* Based on the initial screening results, two soil samples required extraction according to *SW-846 Method 1312, Synthetic Precipitation Leaching Procedure.* These two samples were analyzed for mercury and metals according to *SW-846 Methods 7470A, Mercury in Liquid Waste (Manual Cold Vapor Technique)* and *6010B, Inductively Coupled Plasma-Atomic Emission Spectrometry*, respectively. All samples were received by the laboratory on July 23, 2004. The data package was received in the M&E office on September 23, 2004.

M&E reviewed the data in accordance with the EPA-approved Final Field Task Work Plan for the site, and the guidance received from EPA Work Assignment Manager, Mr. James Byrne, in a September 17, 1999 letter to former M&E Work Assignment Manager, Barb Wyskowski. The data review included:

	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	GC/MS and GC/ECD Instrument Performance Check
	•	Initial and Continuing Calibrations
	•	Blank Analysis Results
	•	Inductively Coupled Plasma (ICP) Interference Check Sample Results
	•	Surrogate Compounds
*	•	Internal Standards
	•	Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Recoveries
*	•	Laboratory Duplicate Sample Results
NA	•	Field Duplicate Sample Results
	•	Laboratory Control Sample (LCS) Results
NA	•	Furnace Atomic Absorption Results
*	•	ICP Serial Dilution Analysis Results
*	•	Compound Quantitation and Reported Quantitation Limits
NA	•	Semivolatile and Pesticide/PCB Cleanup
NA	•	Performance Evaluation (PE) Sample Results

*	=	All criteria met for this parameter
NA	=	Not applicable and/or no information was provided by the laboratory

Note: Worksheets are not included for parameters that have met criteria or for criteria that are not applicable to the method and/or to the modified Tier II-like review.

Included in Attachment I is a copy of the chain-of-custody (COC) record. Included in Attachment II are the result summary sheets, annotated with qualifiers, if necessary, as detailed in this memorandum. Included in Attachment III are communication logs. Included in Attachment IV are the data validation worksheets.

Data Completeness

Missing forms or clarification of data for SVOCs, PCBs, ETPH, and metals were required (see Attachment III for details). The laboratory was contacted on October 15, 2004 and these items were adequately addressed in the resubmittal response received from the laboratory on October 22, 2004.

It should be noted that trip blank sample TP-02 (as identified on the COC) was analyzed by the laboratory as both a low-level and medium-level analysis. The trip blank was identified as TP-02A for the low-level analysis and as TP-02B for the medium-level analysis. Both sets of results have been submitted with this data package.

Initial and Continuing Calibrations

VOCs

The following table summarizes the compounds in the initial calibration (IC) and/or continuing calibration (CC) that failed to meet acceptance criterion of ≤15 percent relative standard deviation (%RSD) for the IC or ≤20 percent difference (%D) for the CC, the associated samples, and the actions taken:

Instrument	V5	V5	V6	V6
Calibration Date	IC 8/9/04	CC 8/18/04	IC 8/15/04	CC 8/19/04
Compound				
o-xylene	18.4	-	-	-
1,2-dibromo-3-chloropropane	-	-	-	22.7
vinyl acetate	-	36.1	-	-
bromomethane	22.6	-	51.7	-
chloroethane	-	-	38.8	48.2
acetone	38.5	-	28.2	-
2-butanone	-	25.7	-	20.6
n-propylbenzene	16.4	-	-	-
4-methyl-2-pentanone	-	-	16.6	-
2-hexanone	-	29.4	18.8	-
1,3,5-trimethylbenzene	15.8	-	-	-
bromoform	-	-	-	23.4
1,1,2,2-tetrachloroethane	-	-	19.1	20.7
4-isopropyltoluene	15.5	-	-	-
n-butylbenzene	16.1	-	-	-
isopropylbenzene	21.3	-	-	-
sec-butylbenzene	17.2	-	-	-
cis-1,3-dichloropropene	15.8	-	-	-
naphthalene	25.8	-	19.7	37.0
1,2,3-trichlorobenzene	-	-	-	29.9
1,2,4-trichlorobenzene	-	-	20.8	-
Associated Samples	SB-H-6, SB-I-7.5, SB-I-10.5, TP-02A	SB-H-6, SB-I-7.5, SB-I-10.5, TP-02A	TP-02B	TP-02B

– - QC acceptance criteria were not exceeded for this compound

Actions: %RSD>15%: Estimate (J and UJ) positive and nondetect results.
%D>20%: Estimate (J and UJ) positive and nondetect results.

SVOCs

The following table summarizes the compounds in the IC and/or CC that failed to meet the IC acceptance criterion of %RSD≤15% or CC acceptance criterion of %D≤20, the associated samples, and the actions taken:

Instrument	S1	S1	S3	S3
Calibration Date	IC 8/9/04	CC 8/16/04	IC 8/9/04	CC 8/13/04
Compound				
4,6-dinitro-2-methylphenol	-	-	18.4	-
n-nitroso-di-n-propylamine	-	41.3	-	-
2,4-dimethylphenol	32.5	-	-	-
butylbenzyl phthalate	-	-	15.6	-
hexachlorocyclopentadiene	33.0	-63.0	-	-22.2
4-nitrophenol	-	-	-	29.7
2,4-dinitrophenol[1]	21.0	-	31.3	-
pentachlorophenol	-	-	21.4	-
4-nitroaniline	-	34.3	-	-
benzo(k)fluoranthene	15.8	-	-	-
Associated Samples	SB-H-0.5-8	SB-H-0.5-8	SB-IS-1-7, SB-ID-7-11	SB-IS-1-7, SB-ID-7-11

-- QC acceptance criteria were not exceeded for this compound

Actions: %RSD>15%: Estimate (J and UJ) positive and nondetect results.
%D>20%: Estimate (J and UJ) positive and nondetect results.

Note[1]: The nondetect 2,4-dinitrophenol result in sample SB-H-0.5-8 was subsequently qualified as rejected (R) due to <10% matrix spike duplicate recovery; therefore, no further actions were taken for calibration nonconformance.

PCBs

The following table summarizes the compounds in the CC that failed to meet the acceptance criterion of %D≤15%, the associated samples, and the actions taken:

Column	RTXCLPPEST	RTXCLPPEST
Calibration Date	CC 8/12/04 19:17 beginning calibration	CC 8/13/04 5:16 ending calibration
Compound		
Aroclor 1016 peak 1	20	20
Aroclor 1016 peak 2	20	20
Aroclor 1016 peak 3	20	20
Associated Samples	all PCB samples	all PCB samples

– - QC acceptance criteria were not exceeded for this compound

Actions: %D>15%: Estimate (UJ) nondetect results.

Note: Apply actions for Aroclor 1016 calibration exceedances to Aroclor 1221, Aroclor 1232, Aroclor 1242, and Aroclor 1248 and for Aroclor 1260 calibration exceedances to Aroclor 1254 since these multi-component compounds elute within similar retention times and similar responses would be expected.

Based on a review of the Aroclor 1016 results reported for the above failed CC (found value exceeded the expected value), it was determined that there was evidence of increased instrument sensitivity on the affected column. Therefore, since the Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, and Aroclor 1248 results in all soil samples were not detectable and the CC %D criteria were met on the remaining column, no validation actions were taken.

Blanks

VOCs

The following table summarizes the level of blank contamination detected in the laboratory blanks. If a contaminant was detected in more than one blank, the highest concentration was used to qualify associated sample results.

Compound	Maximum Concentration (µg/Kg)	Blank Action Level (BAL) (µg/Kg)	Reporting Limit (µg/Kg)	Samples Affected/Actions
acetone	24	240	5	Qualify as nondetect (U) at the reported value in all samples.
methylene chloride	13	130	5	Qualify as nondetect (U) at the reported value in samples SB-H-6 and SB-I-7.5.
naphthalene	9	45	5	All results were not detected or were >BAL; No actions were required.

Sample results were qualified as follows:

- If sample result was >reporting limit and <BAL, the result was qualified as a nondetect (U) at the reported concentration
- If the sample result was <reporting limit and <BAL, the results was qualified as a nondetect (U) at the reporting limit
- If the sample results was >BAL, qualification of the data was not required.

Metals and Cyanide

The following table summarizes the level of blank contamination detected in the laboratory blanks. If a contaminant was detected in more than one blank, the highest concentration was used to qualify associated sample results.

Analyte	Maximum Concentration (µg/L)	Blank Action Level (BAL) (mg/Kg)	Samples Affected/Actions
mercury	0.1	0.083	Qualify as nondetect (U) at the reported value in samples SB-HS-0.5-8 and SB-HD-8-12.
cyanide	-6.1	-1.5	Qualify as estimated (UJ) the nondetect results in all samples.
antimony	4.4	1.1	Qualify as nondetect (U) at the reported value in all samples.
barium	9.9	2.5	All samples results were >BAL; No actions required.
beryllium	0.5	0.12	All samples results were >BAL; No actions required.
cadmium	0.2	0.05	All samples results were >BAL; No actions required.
chromium	0.64	0.16	All samples results were >BAL; No actions required.
copper	17.5	4.4	All samples results were >BAL; No actions required.
lead	3.7	0.92	All samples results were >BAL; No actions required.
nickel	0.6	0.15	All samples results were >BAL; No actions required..
selenium	-2.4	-0.6	Qualify as estimated (J and UJ) the positive and nondetect results in all samples.
silver	3.0	0.75	Qualify as nondetect (U) at the reported value in sample SB-HD-8-12.
thallium	2.4	0.6	All samples results were >BAL; No actions required.
zinc	10.8	2.7	All samples results were >BAL; No actions required.

Sample results were qualified as follows for positive blank contamination:

- If the sample result was >method detection limit (MDL) and <BAL, the result was qualified as a nondetect (U) at the reported value
- If the sample result was >BAL, qualification of the data was not required.

Sample results were qualified as follows for negative blank contamination:

- If the sample result was > MDL and <absolute value of the negative BAL, the result was qualified as estimated (J)
- If the sample result was nondetect, the result was qualified as estimated (UJ)
- If the sample result was >the absolute value of the negative BAL, qualification of the data was not required.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

SVOCs

Sample SB-H-0.5-8 was analyzed as the SVOC soil MS/MSD sample in this data set. The MS/MSD compounds that did not meet the percent recovery (%R) acceptance criteria and actions taken are summarized in the following table:

Compound	MS %R	MSD %R	QC limits %R	Actions
2,4-dinitrophenol	10	8	15-136	Qualify as rejected (R) the nondetect result in sample SB-H-0.5-8.
4,6-dinitro-2-methylphenol	18	14	33-130	Qualify as estimated (UJ) the nondetect result in sample SB-H-0.5-8.
bis(2-ethylhexyl)phthalate	62	57	64-115	Qualify as estimated (UJ) the nondetect result in sample SB-H-0.5-8.
di-n-octyl phthalate	52	52	69-137	Qualify as estimated (UJ) the nondetect result in sample SB-H-0.5-8.
benzo(b)fluoranthene	60	60	61-129	Qualify as estimated (J) the positive result in sample SB-H-0.5-8.
benzo(a)pyrene	63	63	66-119	Qualify as estimated (J) the positive result in sample SB-H-0.5-8.
fluorene	-	62	63-115	Qualify as estimated (UJ) the nondetect result in sample SB-H-0.5-8.
di-n-butyl phthalate	-	67	70-120	Qualify as estimated (UJ) the nondetect result in sample SB-H-0.5-8.
butylbenzyl phthalate	-	62	63-123	Qualify as estimated (UJ) the nondetect result in sample SB-H-0.5-8.

-- - QC acceptance criteria were not exceeded for this compound

Laboratory Control Sample (LCS) Results

SVOCs

The following table lists the compounds in the LCS that were outside %R acceptance criteria and the actions taken:

Compound	Recovery (%R)	QC Limits	Actions
n-nitroso-di-n-propylamine	124	44-111	All sample results were not detected; no actions were required.
4-nitroaniline	129	35-124	All sample results were not detected; no actions were required.

Compound Quantitation and Reported Quantitation Limits

VOCs

The compound in the following sample was reported from the medium level analysis exceedance of the calibration range in the low-level sample analysis:

Sample	Compounds from Medium-Level Analysis
SB-I-10.5	n-propylbenzene

Metals and Cyanide

The following table summarizes the positive and blank-qualified metal results that were less than the reporting limit but greater than the MDL. These listed results are qualified as estimated (J) due to uncertainty in the quantitation at concentrations less than the reporting limit. Note that the overall qualification for the blank qualified metal results is estimated, nondetect (UJ).

Sample	Affected Analytes
SB-HS-0.5-8	antimony, selenium
SB-HD-8-12	antimony, selenium, silver, mercury
SB-IS-1-7	antimony, cadmium, thallium
SB-ID-7-11	antimony, selenium

SPLP Metals

The following table summarizes the positive and blank-qualified metal results that were less than the reporting limit but greater than the MDL. These listed results are qualified as estimated (J) due to uncertainty in the quantitation at concentrations less than the reporting limit. Note that the overall qualification for the blank qualified metal results is estimated, nondetect (UJ).

Sample	Affected Analytes
SB-ID-7-11	antimony, arsenic, barium, cadmium, chromium, nickel, vanadium, mercury
SB-HS-0.5-8	antimony, barium, chromium, copper, lead, nickel, vanadium, zinc

Attachment I

Chain-of-Custody

C0908

M&E Metcalf & Eddy

CHAIN OF CUSTODY FORM

Job/Project Name: Meriden HUB | Job/Project Location: Meriden, CT | Job/Project Number: 200100-0055-00034

Samplers: (Signatures) [signature] | Recorder: (Signature) [signature] | Date: 8/9/04

Lab (Samples Sent To): mitkem corporation

	SAMPLING Date	SAMPLING Time	SAMPLE NUMBER	SAMPLE LOCATION	MATRIX Water	MATRIX Soil				COMPOSITE/GRAB	PRESERVATIVE (Y/N)	VOCs	RSR metals/PCBs/Total cyanide	SVOCs/ETPH	% solids					Total #	COMMENTS
01	8/9/04	0805	SB-H-6	—		X				G	Y	3			1					4	
02	8/9/04	0840	SB-HS-0.5-8	—		X				C	N		1							1	
03	8/9/04	0850	SB-HD-8-12	—		X				C	N		1							1	
04	8/9/04	0840	SB-H-0.5-8	—		X				C	N			1						1	
05	8/9/04	1050	SB-I-7.5	—		X				G	Y	3			1					4	
06	8/9/04	1055	SB-I-10.5	—		X				G	Y	3			1					4	
07	8/9/04	1110	SB-IS-1-7	—		X				C	N		1	1						2	
08	8/9/04	1115	SB-ID-7-11	—		X				C	N		1	1						2	
09	8/9/04	1215	TP-02	—		X				G	Y	3								3	
← Temperature Blank included in cooler →																					

Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
[signature]	8/9/04	1515	[signature]				
Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
Relinquished By: (Signature)	Date:	Time:	Received for Lab By: (Signature)	Date:	Time:		

Comments: 21-day TAT plus 7-day TAT for preliminary Form I data for metals and SVOCs - hold samples for potential SPLP metals and PAH analysis

Method of Shipment: courier

Distribution: **Original** to Lab. **Copy 1** to Field Files, **Copy 2** to Project Manager

Attachment II

Sample Result Summary Sheets

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-H-6

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-01A

Sample wt/vol: 4.5 (g/mL) G Lab File ID: V5F4854

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: not dec. 13 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

ED 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6	U
74-87-3	Chloromethane	6	U
75-01-4	Vinyl Chloride	6	U
74-83-9	Bromomethane	6	U
75-00-3	Chloroethane	6	U
75-69-4	Trichlorofluoromethane	6	U
75-35-4	1,1-Dichloroethene	6	U
67-64-1	Acetone	15	u
74-88-4	Iodomethane	6	U
75-15-0	Carbon Disulfide	6	U
75-09-2	Methylene Chloride	14	u
156-60-5	trans-1,2-Dichloroethene	6	U
1634-04-4	Methyl tert-butyl ether	6	U
75-34-3	1,1-Dichloroethane	6	U
108-05-4	Vinyl acetate	6	U
78-93-3	2-Butanone	6	U
156-59-2	cis-1,2-Dichloroethene	6	U
590-20-7	2,2-Dichloropropane	6	U
74-97-5	Bromochloromethane	6	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
563-58-6	1,1-Dichloropropene	6	U
56-23-5	Carbon Tetrachloride	6	U
107-06-2	1,2-Dichloroethane	6	U
71-43-2	Benzene	6	U
79-01-6	Trichloroethene	6	U
78-87-5	1,2-Dichloropropane	6	U
74-95-3	Dibromomethane	6	U
75-27-4	Bromodichloromethane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
108-10-1	4-Methyl-2-pentanone	6	U
108-88-3	Toluene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-00-5	1,1,2-Trichloroethane	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-H-6

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-01A

Sample wt/vol: 4.5 (g/mL) G Lab File ID: V5F4854

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: not dec. 13 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
142-28-9	1,3-Dichloropropane	6	U
127-18-4	Tetrachloroethene	6	U
591-78-6	2-Hexanone	6	UJ
124-48-1	Dibromochloromethane	6	U
106-93-4	1,2-Dibromoethane	6	U
108-90-7	Chlorobenzene	6	U
630-20-6	1,1,1,2-Tetrachloroethane	6	U
100-41-4	Ethylbenzene	6	U
	m,p-Xylene	6	U
95-47-6	o-Xylene	6	U
1330-20-7	Xylene (Total)	6	UJ
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
98-82-8	Isopropylbenzene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	UJ
108-86-1	Bromobenzene	6	U
96-18-4	1,2,3-Trichloropropane	6	U
103-65-1	n-Propylbenzene	6	U
95-49-8	2-Chlorotoluene	6	UJ
108-67-8	1,3,5-Trimethylbenzene	6	U
106-43-4	4-Chlorotoluene	6	UJ
98-06-6	tert-Butylbenzene	6	U
95-63-6	1,2,4-Trimethylbenzene	6	U
135-98-8	sec-Butylbenzene	6	U
99-87-6	4-Isopropyltoluene	6	UJ
541-73-1	1,3-Dichlorobenzene	6	UJ
106-46-7	1,4-Dichlorobenzene	6	U
104-51-8	n-Butylbenzene	6	U
95-50-1	1,2-Dichlorobenzene	6	UJ
96-12-8	1,2-Dibromo-3-chloropropane	6	U
120-82-1	1,2,4-Trichlorobenzene	6	U
87-68-3	Hexachlorobutadiene	6	U
91-20-3	Naphthalene	6	U
87-61-6	1,2,3-Trichlorobenzene	6	UJ
		6	U

ED 11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-I-7.5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-05A

Sample wt/vol: 5.3 (g/mL) G Lab File ID: V5F4855

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: not dec. 16 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6	U
74-87-3	Chloromethane	6	U
75-01-4	Vinyl Chloride	6	U
74-83-9	Bromomethane	6	U
75-00-3	Chloroethane	6	UJ
75-69-4	Trichlorofluoromethane	6	U
75-35-4	1,1-Dichloroethene	6	U
67-64-1	Acetone	6	U
74-88-4	Iodomethane	52	u
75-15-0	Carbon Disulfide	6	U
75-09-2	Methylene Chloride	6	U
156-60-5	trans-1,2-Dichloroethene	7	u
1634-04-4	Methyl tert-butyl ether	6	U
75-34-3	1,1-Dichloroethane	6	U
108-05-4	Vinyl acetate	6	U
78-93-3	2-Butanone	6	UJ
156-59-2	cis-1,2-Dichloroethene	6	UJ
590-20-7	2,2-Dichloropropane	6	U
74-97-5	Bromochloromethane	6	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
563-58-6	1,1-Dichloropropene	6	U
56-23-5	Carbon Tetrachloride	6	U
107-06-2	1,2-Dichloroethane	6	U
71-43-2	Benzene	6	U
79-01-6	Trichloroethene	6	U
78-87-5	1,2-Dichloropropane	6	U
74-95-3	Dibromomethane	6	U
75-27-4	Bromodichloromethane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	UJ
108-10-1	4-Methyl-2-pentanone	6	U
108-88-3	Toluene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-00-5	1,1,2-Trichloroethane	6	U

11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-I-7.5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-05A

Sample wt/vol: 5.3 (g/mL) G Lab File ID: V5F4855

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: not dec. 16 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
142-28-9	1,3-Dichloropropane	6	U
127-18-4	Tetrachloroethene	6	U
591-78-6	2-Hexanone	6	UJ
124-48-1	Dibromochloromethane	6	U
106-93-4	1,2-Dibromoethane	6	U
108-90-7	Chlorobenzene	6	U
630-20-6	1,1,1,2-Tetrachloroethane	6	U
100-41-4	Ethylbenzene	6	U
----------	m,p-Xylene	6	U
95-47-6	o-Xylene	6	U
1330-20-7	Xylene (Total)	6	UJ
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
98-82-8	Isopropylbenzene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	UJ
108-86-1	Bromobenzene	6	U
96-18-4	1,2,3-Trichloropropane	6	U
103-65-1	n-Propylbenzene	6	U
95-49-8	2-Chlorotoluene	6	UJ
108-67-8	1,3,5-Trimethylbenzene	6	U
106-43-4	4-Chlorotoluene	6	UJ
98-06-6	tert-Butylbenzene	6	U
95-63-6	1,2,4-Trimethylbenzene	6	U
135-98-8	sec-Butylbenzene	6	U
99-87-6	4-Isopropyltoluene	6	UJ
541-73-1	1,3-Dichlorobenzene	6	UJ
106-46-7	1,4-Dichlorobenzene	6	U
104-51-8	n-Butylbenzene	6	U
95-50-1	1,2-Dichlorobenzene	6	UJ
96-12-8	1,2-Dibromo-3-chloropropane	6	U
120-82-1	1,2,4-Trichlorobenzene	6	U
87-68-3	Hexachlorobutadiene	6	U
91-20-3	Naphthalene	6	U
87-61-6	1,2,3-Trichlorobenzene	6	U

SD 11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-I-10.5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-06A

Sample wt/vol: 5.4 (g/mL) G Lab File ID: V5F4856

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: not dec. 15 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

SLD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U J
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U J
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	2	J
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	84	u J
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U J
78-93-3	2-Butanone	5	U J
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	6	J
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U J
108-10-1	4-Methyl-2-pentanone	5	U J
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-I-10.5

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-06A

Sample wt/vol: 5.4 (g/mL) G Lab File ID: V5F4856

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: not dec. 15 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	UJ
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	31	J
----------	m,p-Xylene	3	J
95-47-6	o-Xylene	5	UJ
1330-20-7	Xylene (Total)	3	J
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	200	J
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	920 ~~690~~	~~E~~
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	8	J
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	100	J
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	74	J
99-87-6	4-Isopropyltoluene	5	UJ
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	150	J
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	140	J
87-61-6	1,2,3-Trichlorobenzene	5	U

EJD 11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-02A

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-09A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V5F4857

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: not dec. 0 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	UJ
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	24	J
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	13	
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	UJ
78-93-3	2-Butanone	5	UJ
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	UJ
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

EJD 11/30/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-02A

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-09A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V5F4857

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: not dec. 0 Date Analyzed: 08/18/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(mL) Soil Aliquot Volume: _____(uL)

ED 11/30/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	UJ
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	UJ
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	2	J
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	UJ
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	UJ
99-87-6	4-Isopropyltoluene	5	UJ
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	UJ
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	9	J
87-61-6	1,2,3-Trichlorobenzene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-02B

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-09B

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V6D2371

Level: (low/med) MED Date Received: 08/09/04

% Moisture: not dec. 0 Date Analyzed: 08/19/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5(mL) Soil Aliquot Volume: 100.0(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	250	U
74-87-3	Chloromethane	250	U
75-01-4	Vinyl Chloride	250	U
74-83-9	Bromomethane	250	UJ
75-00-3	Chloroethane	250	UJ
75-69-4	Trichlorofluoromethane	250	U
75-35-4	1,1-Dichloroethene	250	U
67-64-1	Acetone	250	UJ
74-88-4	Iodomethane	250	U
75-15-0	Carbon Disulfide	250	U
75-09-2	Methylene Chloride	110	J
156-60-5	trans-1,2-Dichloroethene	250	U
1634-04-4	Methyl tert-butyl ether	250	U
75-34-3	1,1-Dichloroethane	250	U
108-05-4	Vinyl acetate	250	U
78-93-3	2-Butanone	250	UJ
156-59-2	cis-1,2-Dichloroethene	250	U
590-20-7	2,2-Dichloropropane	250	U
74-97-5	Bromochloromethane	250	U
67-66-3	Chloroform	250	U
71-55-6	1,1,1-Trichloroethane	250	U
563-58-6	1,1-Dichloropropene	250	U
56-23-5	Carbon Tetrachloride	250	U
107-06-2	1,2-Dichloroethane	250	U
71-43-2	Benzene	250	U
79-01-6	Trichloroethene	250	U
78-87-5	1,2-Dichloropropane	250	U
74-95-3	Dibromomethane	250	U
75-27-4	Bromodichloromethane	250	U
10061-01-5	cis-1,3-Dichloropropene	250	U
108-10-1	4-Methyl-2-pentanone	250	UJ
108-88-3	Toluene	250	U
10061-02-6	trans-1,3-Dichloropropene	250	U
79-00-5	1,1,2-Trichloroethane	250	U

ED 11/30/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-02B

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-09B

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V6D2371

Level: (low/med) MED Date Received: 08/09/04

% Moisture: not dec. 0 Date Analyzed: 08/19/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5(mL) Soil Aliquot Volume: 100.0(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
142-28-9	1,3-Dichloropropane	250	U
127-18-4	Tetrachloroethene	250	U
591-78-6	2-Hexanone	250	UJ
124-48-1	Dibromochloromethane	250	U
106-93-4	1,2-Dibromoethane	250	U
108-90-7	Chlorobenzene	250	U
630-20-6	1,1,1,2-Tetrachloroethane	250	U
100-41-4	Ethylbenzene	250	U
	m,p-Xylene	250	U
95-47-6	o-Xylene	250	U
1330-20-7	Xylene (Total)	250	U
100-42-5	Styrene	250	U
75-25-2	Bromoform	250	UJ
98-82-8	Isopropylbenzene	250	U
79-34-5	1,1,2,2-Tetrachloroethane	250	UJ
108-86-1	Bromobenzene	250	U
96-18-4	1,2,3-Trichloropropane	250	U
103-65-1	n-Propylbenzene	250	U
95-49-8	2-Chlorotoluene	250	U
108-67-8	1,3,5-Trimethylbenzene	250	U
106-43-4	4-Chlorotoluene	250	U
98-06-6	tert-Butylbenzene	250	U
95-63-6	1,2,4-Trimethylbenzene	250	U
135-98-8	sec-Butylbenzene	250	U
99-87-6	4-Isopropyltoluene	250	U
541-73-1	1,3-Dichlorobenzene	250	U
106-46-7	1,4-Dichlorobenzene	250	U
104-51-8	n-Butylbenzene	250	U
95-50-1	1,2-Dichlorobenzene	250	U
96-12-8	1,2-Dibromo-3-chloropropane	250	UJ
120-82-1	1,2,4-Trichlorobenzene	250	UJ
87-68-3	Hexachlorobutadiene	250	U
91-20-3	Naphthalene	250	UJ
87-61-6	1,2,3-Trichlorobenzene	250	UJ

EJD 11/30/04

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-H-0.5-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-04A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0779

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: 10 decanted: (Y/N) N Date Extracted: 08/13/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)Ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U ~~J~~
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U J
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U J
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U ~~J~~
111-91-1	bis(2-Chloroethoxy)methane	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-Methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U J
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	740	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	740	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	740	U
83-32-9	Acenaphthene	360	U

EJD 11/3/a

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-H-0.5-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-04A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0779

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: 10 decanted: (Y/N) N Date Extracted: 08/13/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	~~740~~	~~U~~ R
100-02-7	4-Nitrophenol	740	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	UJ
100-01-6	4-Nitroaniline	740	UJ
534-52-1	4,6-Dinitro-2-methylphenol	740	UJ
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	740	U
85-01-8	Phenanthrene	190	J
120-12-7	Anthracene	61	J
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	UJ
206-44-0	Fluoranthene	470	
129-00-0	Pyrene	420	
85-68-7	Butylbenzylphthalate	360	UJ
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	240	J
218-01-9	Chrysene	240	J
117-81-7	bis(2-Ethylhexyl)phthalate	360	UJ
117-84-0	Di-n-octylphthalate	360	UJ
205-99-2	Benzo(b)fluoranthene	250	J
207-08-9	Benzo(k)fluoranthene	150	J
50-32-8	Benzo(a)pyrene	180	J
193-39-5	Indeno(1,2,3-cd)pyrene	64	J
53-70-3	Dibenzo(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	72	J

(1) - Cannot be separated from Diphenylamine

EP 11/3/04

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-IS-1-7

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-07A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9841

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: 11 decanted: (Y/N) N Date Extracted: 08/13/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/13/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-Methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	UJ
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	750	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	750	U
131-11-3	Dimethylphthalate	370	U
208-96-8	Acenaphthylene	70	J
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	750	U
83-32-9	Acenaphthene	370	U

EJD 11/3/04

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-IS-1-7

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-07A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S3C9841

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: 11 decanted: (Y/N) N Date Extracted: 08/13/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/13/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	750	UJ
100-02-7	4-Nitrophenol	750	UJ
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethylphthalate	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
86-73-7	Fluorene	370	U
100-01-6	4-Nitroaniline	750	U
534-52-1	4,6-Dinitro-2-methylphenol	750	UJ
86-30-6	N-Nitrosodiphenylamine (1)	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	750	UJ
85-01-8	Phenanthrene	280	J
120-12-7	Anthracene	110	J
86-74-8	Carbazole	370	U
84-74-2	Di-n-butylphthalate	370	U
206-44-0	Fluoranthene	500	
129-00-0	Pyrene	580	
85-68-7	Butylbenzylphthalate	370	UJ
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)anthracene	290	J
218-01-9	Chrysene	290	J
117-81-7	bis(2-Ethylhexyl)phthalate	370	U
117-84-0	Di-n-octylphthalate	370	UJ
205-99-2	Benzo(b)fluoranthene	300	J
207-08-9	Benzo(k)fluoranthene	130	J
50-32-8	Benzo(a)pyrene	260	J
193-39-5	Indeno(1,2,3-cd)pyrene	170	J
53-70-3	Dibenzo(a,h)anthracene	47	J
191-24-2	Benzo(g,h,i)perylene	190	J

(1) - Cannot be separated from Diphenylamine

SJD 11/3/04

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-ID-7-11

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-08A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: S3C9842

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: 20 decanted: (Y/N) N Date Extracted: 08/13/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/13/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	470	
106-47-8	4-Chloroaniline	410	U
111-91-1	bis(2-Chloroethoxy)methane	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-Methylphenol	410	U
91-57-6	2-Methylnaphthalene	810	
77-47-4	Hexachlorocyclopentadiene	410	UJ
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	410	U
208-96-8	Acenaphthylene	410	U
606-20-2	2,6-Dinitrotoluene	410	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	410	U

EAD 11/30

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-ID-7-11

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-08A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: S3C9842

Level: (low/med) LOW Date Received: 08/09/04

% Moisture: 20 decanted: (Y/N) N Date Extracted: 08/13/04

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/13/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	830	UJ
100-02-7	4-Nitrophenol	830	UJ
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
86-73-7	Fluorene	410	U
100-01-6	4-Nitroaniline	830	U
534-52-1	4,6-Dinitro-2-methylphenol	830	UJ
86-30-6	N-Nitrosodiphenylamine (1)	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	830	UJ
85-01-8	Phenanthrene	350	J
120-12-7	Anthracene	120	J
86-74-8	Carbazole	410	U
84-74-2	Di-n-butylphthalate	410	U
206-44-0	Fluoranthene	550	
129-00-0	Pyrene	670	
85-68-7	Butylbenzylphthalate	410	UJ
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)anthracene	300	J
218-01-9	Chrysene	320	J
117-81-7	bis(2-Ethylhexyl)phthalate	410	U
117-84-0	Di-n-octylphthalate	410	UJ
205-99-2	Benzo(b)fluoranthene	340	J
207-08-9	Benzo(k)fluoranthene	110	J
50-32-8	Benzo(a)pyrene	260	J
193-39-5	Indeno(1,2,3-cd)pyrene	140	J
53-70-3	Dibenzo(a,h)anthracene	52	J
191-24-2	Benzo(g,h,i)perylene	160	J

(1) - Cannot be separated from Diphenylamine

11/13/04

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-HS-0.5-8

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-02A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2E0499F

% Moisture: 11 decanted: (Y/N) N Date Received: 08/09/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/12/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	37	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

EJD 11/3/04

FORM 1
PCB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB-HD-8-12

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0908

Matrix: (soil/water) SOIL Lab Sample ID: C0908-03A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2E0500F

% Moisture: 12 decanted: (Y/N) N Date Received: 08/09/04

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 08/11/04

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/13/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	37	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

ESD 11/3/04

Mitkem Corporation

Date: *26-Aug-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: SB-H-0.5-8
Lab ID: C0908-04

Project: M&E Connecticut Brownfields
Collection Date: 08/09/04 08:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch I
CT ETPH BY GC-FID				CTETPH_S			
Extractable Total Petroleum Hydrocarbon	150		66	mg/Kg	1	08/12/2004 21:01	140
Surr: para-Terphenyl	77.0		16-127	%REC	1	08/12/2004 21:01	140

EJD
11/3/04

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *26-Aug-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: SB-IS-1-7
Lab ID: C0908-07

Project: M&E Connecticut Brownfields
Collection Date: 08/09/04 11:10

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch I
CT ETPH BY GC-FID				**CTETPH_S**			
Extractable Total Petroleum Hydrocarbon	200		67	mg/Kg	1	08/12/2004 21:40	1404
Surr: para-Terphenyl	80.2		16-127	%REC	1	08/12/2004 21:40	1404

EDD
11/13/04

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *26-Aug-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: SB-ID-7-11
Lab ID: C0908-08

Project: M&E Connecticut Brownfields
Collection Date: 08/09/04 11:15

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
CT ETPH BY GC-FID				CTETPH_S			
Extractable Total Petroleum Hydrocarbon	430		75	mg/Kg	1	08/12/2004 22:18	1404
Surr: para-Terphenyl	58.5		16-127	%REC	1	08/12/2004 22:18	1404

ESD 11/13/04

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-HS-0.5-8

Lab Name: Mitkem Corporation Contract: 20100-005

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0908

Matrix (soil/water): SOIL Lab Sample ID: C0908-02

Level (low/med): MED Date Received: 08/09/04

% Solids: 89.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.91	B	UJ	P
7440-38-2	Arsenic	3.1			P
7440-39-3	Barium	120			P
7440-41-7	Beryllium	1.0			P
7440-43-9	Cadmium	0.44			P
7440-47-3	Chromium	26.6			P
7440-50-8	Copper	38.7			P
7439-92-1	Lead	53.4			P
7440-02-0	Nickel	16.4			P
7782-49-2	Selenium	0.37	B	UJ	P
7440-22-4	Silver	0.019	U		P
7440-28-0	Thallium	1.8			P
7440-62-2	Vanadium	47.3			P
7440-66-6	Zinc	69.0			P
7439-97-6	Mercury	0.067		U	CV
	Cyanide	0.12	U	J	CA

EJD 11/3/04

Comments:

FORM I - IN

SW846

0131

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-HD-8-12

Lab Name: Mitkem Corporation Contract: 20100-005

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0908

Matrix (soil/water): SOIL Lab Sample ID: C0908-03

Level (low/med): MED Date Received: 08/09/04

% Solids: 88.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

EJD 11/3/04

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.75	~~B~~	UJ	P
7440-38-2	Arsenic	2.8			P
7440-39-3	Barium	75.8			P
7440-41-7	Beryllium	0.83			P
7440-43-9	Cadmium	0.34			P
7440-47-3	Chromium	11.7			P
7440-50-8	Copper	30.2			P
7439-92-1	Lead	21.3			P
7440-02-0	Nickel	11.5			P
7782-49-2	Selenium	0.24	~~B~~	UJ	P
7440-22-4	Silver	0.49	~~B~~	UJ	P
7440-28-0	Thallium	1.3			P
7440-62-2	Vanadium	34.8			P
7440-66-6	Zinc	104			P
7439-97-6	Mercury	0.018	~~B~~	UJ	CV
	Cyanide	0.12	U	J	CA

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-IS-1-7

Lab Name: Mitkem Corporation Contract: 20100-005

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0908

Matrix (soil/water): SOIL Lab Sample ID: C0908-07

Level (low/med): MED Date Received: 08/09/04

% Solids: 89.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.41	~~B~~	UJ	P
7440-38-2	Arsenic	1.8			P
7440-39-3	Barium	142			P
7440-41-7	Beryllium	0.97			P
7440-43-9	Cadmium	0.17	~~B~~	J	P
7440-47-3	Chromium	12.0			P
7440-50-8	Copper	10.0			P
7439-92-1	Lead	10.0			P
7440-02-0	Nickel	8.2			P
7782-49-2	Selenium	0.058	U	J	P
7440-22-4	Silver	0.017	U		P
7440-28-0	Thallium	0.73	~~B~~	J	P
7440-62-2	Vanadium	20.0			P
7440-66-6	Zinc	35.9			P
7439-97-6	Mercury	0.28			CV
	Cyanide	0.12	U	J	CA

EXD 11/3/04

Comments:

FORM I - IN

SW846

0133

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-ID-7-11

Lab Name: Mitkem Corporation Contract: 20100-005

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0908

Matrix (soil/water): SOIL Lab Sample ID: C0908-08

Level (low/med): MED Date Received: 08/09/04

% Solids: 80.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.57	~~B~~	UJ	P
7440-38-2	Arsenic	3.5			P
7440-39-3	Barium	78.1			P
7440-41-7	Beryllium	0.96			P
7440-43-9	Cadmium	0.32			P
7440-47-3	Chromium	12.0			P
7440-50-8	Copper	43.3			P
7439-92-1	Lead	58.0			P
7440-02-0	Nickel	10.9			P
7782-49-2	Selenium	0.27	~~B~~	J	P
7440-22-4	Silver	0.019	U		P
7440-28-0	Thallium	1.6			P
7440-62-2	Vanadium	44.0			P
7440-66-6	Zinc	73.0			P
7439-97-6	Mercury	0.11			CV
	Cyanide	0.14	U	J	CA

SD 11/13/04

Comments:

FORM I - IN

SW846

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-ID-7-11

Lab Name: Mitkem Corporation

Contract: 20100-005

Lab Code: MITKEM

Case No.

SAS No.:

SDG No.: MC0908-S

Matrix (soil/water): SOIL

Lab Sample ID: C0908-08

Level (low/med): MED

Date Received: 08/09/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	9.9	~~B~~	~~UJ~~	P
7440-38-2	Arsenic	3.0	~~B~~	J	P
7440-39-3	Barium	188	~~B~~	~~E~~ J	P
7440-41-7	Beryllium	0.15	U	J	P
7440-43-9	Cadmium	0.17	~~B~~	J	P
7440-47-3	Chromium	6.4	~~B~~	J	P
7440-50-8	Copper	67.2			P
7439-92-1	Lead	66.3			P
7440-02-0	Nickel	4.9	~~B~~	J	P
7782-49-2	Selenium	0.98	U	J	P
7440-22-4	Silver	0.91	U		P
7440-28-0	Thallium	1.2	U	J	P
7440-62-2	Vanadium	25.3	~~B~~	~~E~~ J	P
7440-66-6	Zinc	62.1		J	P
7439-97-6	Mercury	0.10	~~B~~	J	CV

EAD 11/3/04

Comments:

SPLP Metals

FORM I - IN

SW846

0171

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

SB-HS-0.5-8

Lab Name: Mitkem Corporation Contract: 20100-005

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0908-S

Matrix (soil/water): SOIL Lab Sample ID: C0908-02

Level (low/med): MED Date Received: 08/09/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	4.1	~~B~~	UJ	P
7440-38-2	Arsenic	1.6	U		P
7440-39-3	Barium	133	~~B~~	~~E~~ J	P
7440-41-7	Beryllium	0.15	U	J	P
7440-43-9	Cadmium	0.10	U	J	P
7440-47-3	Chromium	0.48	~~B~~	J	P
7440-50-8	Copper	21.2	~~B~~	UJ	P
7439-92-1	Lead	5.4	~~B~~	UJ	P
7440-02-0	Nickel	1.0	~~B~~	J	P
7782-49-2	Selenium	0.98	U	J	P
7440-22-4	Silver	0.91	U		P
7440-28-0	Thallium	1.2	U	J	P
7440-62-2	Vanadium	4.3	~~B~~	~~E~~ UJ	P
7440-66-6	Zinc	22.3	~~B~~	J	P
7439-97-6	Mercury	0.056	U		CV

EAD 11/3/04

Comments:

SPLP Metals

Memorandum

PROJECT NO: 036200100.0055.00033
DATE: October 29, 2004
TO: Meriden HUB
OFFICE: Wakefield
FROM: P. DiMattei
COMPANY: Metcalf & Eddy, Inc.
REVIEWED BY: D. Truini
CC: B. Weir, N. Thurber, D. Laferte (memo only)

SUBJECT: Limited QC Review/Modified Tier II-Like Review
VOCs, SVOCs, ETPH, Mercury, Cyanide, and Metals
Mitkem Corporation, Warwick, Rhode Island
Project #C1111/MC1111

On September 8, 2004, six groundwater samples and one trip blank were collected at the Meriden HUB site, located in Meriden, Connecticut by Metcalf & Eddy, Inc. (M&E) field personnel. The sampling was performed as part of the TBA Response Action Contract (RAC) Work Assignment (WA) #155-SIBZ-0100. The samples were submitted to Mitkem Corporation located in Warwick, Rhode Island for the analysis of volatile organic compounds according to *SW-846 Method 8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)*, for semivolatile organic compounds (SVOCs) according to *SW-846 Method 8270C, Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS),* for extractable total petroleum hydrocarbons (ETPHs) according to the Connecticut method entitled *Analysis of Extractable Total Petroleum Hydrocarbons (ETPH) Using Methylene Chloride Gas Chromatograph/Flame Ionization Detection,* for mercury according to *SW-846 Method 7470A, Mercury in Liquid Waste (Manual Cold Vapor Technique)*, for cyanide according to *SW-846 Method 9014, Titrimetric and Manual Spectrophotometric Determinative Methods for Cyanide,* and for metals according to *SW-846 Method 6010B, Inductively Coupled Plasma-Atomic Emission Spectrometry.* All samples were received by the laboratory on September 9, 2004. The data package was received in the M&E office on October 15, 2004.

M&E reviewed the data in accordance with the EPA-approved Final Field Task Work Plan for the site, and the guidance received from EPA Work Assignment Manager, Mr. James Byrne, in a September 17, 1999 letter to former M&E Work Assignment Manager, Barb Wyskowski. The data review included:

	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	GC/MS and GC/ECD Instrument Performance Check
	•	Initial and Continuing Calibrations
	•	Blank Analysis Results
	•	Inductively Coupled Plasma (ICP) Interference Check Sample Results
	•	Surrogate Compounds
*	•	Internal Standards
	•	Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Recoveries
*	•	Laboratory Duplicate Sample Results
*	•	Field Duplicate Sample Results
	•	Laboratory Control Sample (LCS) Results
NA	•	Furnace Atomic Absorption Results
*	•	ICP Serial Dilution Analysis Results
	•	Compound Quantitation and Reported Quantitation Limits
NA	•	Semivolatile and Pesticide/PCB Cleanup
NA	•	Performance Evaluation (PE) Sample Results

*	=	All criteria met for this parameter
NA	=	Not applicable and/or no information was provided by the laboratory

Note: Worksheets are not included for parameters that have met criteria or for criteria that are not applicable to the method and/or to the modified Tier II-like review.

Included in Attachment I is a copy of the chain-of-custody (COC) record. Included in Attachment II are the result summary sheets, annotated with qualifiers, if necessary, as detailed in this memorandum. Included in Attachment III are communication logs. Included in Attachment IV are the data validation worksheets.

Data Completeness

Clarification of some VOC, ETPH and metals, issues were required (see Attachment III for details). The laboratory was contacted on October 28, 2004 and these items were adequately addressed in the resubmittal response received from the laboratory on October 29, 2004.

Initial and Continuing Calibrations

VOCs

The following table summarizes the compounds in the initial calibration (IC) and/or continuing calibration (CC) that failed to meet acceptance criterion of ≤15 percent relative standard deviation (%RSD) for the IC or ≤20 percent difference (%D) for the CC, the associated samples, and the actions taken:

Instrument	V6	V6
Calibration Date	IC 9/1/04	CC 9/15/04
Compound		
trichlorofluoromethane	-	36.6
acetone	-	28.1
2-butanone	15.7	-
1,2-dichloroethane	-	29.8
1,2,4-trichlorobenzene	-	21.7
naphthalene	-	35.8
1,2,3-trichlorobenzene	-	26.2
Associated Samples	All VOC samples	All VOC samples

– - QC acceptance criteria were not exceeded for this compound.

Actions: %RSD>15%: Estimate (UJ) nondetect results.
%D>20%: Estimate (J and UJ) positive and nondetect results.

SVOCs

The following table summarizes the compounds in the IC that failed to meet the IC acceptance criterion of %RSD≤15%, the associated samples, and the actions taken:

Instrument	S4
Calibration Date	IC 9/8/04
Compound	
2,4-dinitrophenol	25.9
Associated Samples	All SVOC samples

Actions: %RSD>15%: Estimate (UJ) nondetect results.

Blanks

VOCs

The following table summarizes the level of blank contamination detected in the trip blank. If a contaminant was detected in more than one blank, the highest concentration was used to qualify associated sample results.

Compound	Maximum Concentration (µg/L)	Blank Action Level (BAL) (µg/L)	Reporting Limit (µg/L)	Samples Affected/Actions
acetone	7	70	5	All associated sample results were nondetect; no actions required.

Sample results were qualified as follows:

- If sample result was >reporting limit and <BAL, the result was qualified as a nondetect (U) at the reported concentration
- If the sample result was <reporting limit and <BAL, the results was qualified as a nondetect (U) at the reporting limit
- If the sample results was >BAL, qualification of the data was not required.

SVOCs

The following table summarizes the level of blank contamination detected in the laboratory blanks. If a contaminant was detected in more than one blank, the highest concentration was used to qualify associated sample results.

Compound[1]	Maximum Concentration (µg/L)	Blank Action Level (BAL) (µg/L)	Reporting Limit (µg/L)	Samples Affected/Actions
9-octadecenamide (Z)-	5	50	NA	Remove this result from the tentatively identified compound (TIC) result summary form for samples GW-MW-3 and GW-108. This compound should not be reported as a TIC in these samples.
13-docosenamide (Z)-	22	220	NA	Remove this result from the tentatively identified compound (TIC) result summary form for samples GW-MW-106, GW-MW-206, GW-108, GW-102, and GW-109. This compound should not be reported as a TIC in these samples.

NA - Not applicable

Note[1]: The compounds listed in the table above are tentatively identified compounds (TICs).

Sample results were qualified as follows:

- If sample result was <BAL, the result was removed from the TIC result summary form
- If the sample results was >BAL, qualification of the data was not required.

Metals and Cyanide

The following table summarizes the level of blank contamination detected in the laboratory blanks. If a contaminant was detected in more than one blank, the highest concentration was used to qualify associated sample results.

Analyte	Maximum Concentration (µg/L)	Blank Action Level (BAL) (µg/L)	Samples Affected/Actions
antimony	14.3	71.5	Qualify as nondetect (U) at the reported value in sample GW-102.
arsenic	3.7	18.5	Qualify as nondetect (U) at the reported value in sample GW-102.
barium	5.78	28.9	All samples results were >BAL; No actions required.
beryllium	0.5	2.5	Qualify as nondetect (U) at the reported value in sample GW-108.
lead	1.089	5.44	Qualify as nondetect (U) at the reported value in samples GW-MW-106, GW-MW-3, GW-MW-206, and GW-109.
selenium	1.5	7.5	All samples results were not detected; No actions required.
silver	7.9	39.5	Qualify as nondetect (U) at the reported value in samples GW-MW-106 and GW-MW-3.
thallium	2.2	11.0	Qualify as nondetect (U) at the reported value in sample GW-MW-106.

Sample results were qualified as follows for positive blank contamination:

- If the sample result was >method detection limit (MDL) and <BAL, the result was qualified as a nondetect (U) at the reported value
- If the sample result was >BAL, qualification of the data was not required.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

VOCs

Sample GW-MW-3 was analyzed as the VOC MS/MSD sample in this data set. The MS/MSD compounds that did not meet the percent recovery (%R) acceptance criteria and actions taken are summarized in the following table:

Compound	MS %R	MSD %R	QC limits	Actions
chloromethane	120	120	60-118	Result was not detected; no action required.
1,2-dichloroethane	130	136	83-123	Result was not detected; no action required.
naphthalene	56	-	58-133	Qualify as estimated (J) the positive result in sample GW-MW-3.
trichlorofluoromethane	-	140	68-129	Result was not detected; no action required.

– - QC acceptance criteria were not exceeded for this compound

SVOCs

Sample GW-MW-3 was analyzed as the SVOC MS/MSD sample in this data set. The MS/MSD compounds that did not meet the %R acceptance criteria and actions taken are summarized in the following table:

Compound	MS %R	MSD %R	QC limits %R	Actions
n-nitrosodiphenylamine	134	128	48-121	Result was not detected; no action required.
3,3'-dichlorobenzidine	16	20	41-117	Qualify as estimated (UJ) the nondetect result in sample GW-MW-3.
chrysene	126	-	53-123	Result was not detected; no action required.
benzo(b)fluoranthene	132	-	58-126	Result was not detected; no action required.
benzo(a)pyrene	130	124	61-121	Result was not detected; no action required.
dibenz(a,h)anthracene	126	126	60-122	Result was not detected; no action required.

– - QC acceptance criteria were not exceeded for this compound

Laboratory Control Sample (LCS) Results

VOCs

The LCS compounds that did not meet the %R acceptance criteria and actions taken are summarized in the following table:

Compound	%R	QC limits %R	Actions
1,2-dichloroethane	134	83-123	Result was not detected in all associated samples; no action required.

Compound Quantitation and Reported Quantitation Limits

Metals and Cyanide

The following table summarizes the positive and blank-qualified metal results that were less than the reporting limit but greater than the MDL. These listed results are qualified as estimated (J) due to uncertainty in the quantitation at concentrations less than the reporting limit. Note that the overall qualification for the blank qualified metal results is estimated, nondetect (UJ).

Sample	Affected Analytes
GW-MW-106	barium, lead, nickel, silver, thallium, vanadium, zinc
GW-MW-3	lead, nickel, silver, zinc
GW-MW-206	barium, copper, lead, nickel, vanadium, zinc
GW-108	beryllium, copper, nickel, vanadium, zinc
GW-102	antimony, arsenic, chromium, nickel, vanadium, zinc, cyanide
GW-109	lead, nickel, vanadium, zinc

Attachment I

Chain-of-Custody

M&E Metcalf & Eddy

CHAIN OF CUSTODY FORM

Job/Project Name: Meriden HUB | Job/Project Location: Meriden, CT | Job/Project Number: 200100-0055-00032

Samplers: (Signatures) [signature] | Recorder: (Signature) [signature] | Date: 9/8/04

Lab (Samples Sent To): Mitkem Corporation

	SAMPLING Date	SAMPLING Time	SAMPLE NUMBER	SAMPLE LOCATION	MATRIX Water	MATRIX Soil	COMPOSITE/GRAB	PRESERVATIVE (Y/N)	ANALYSIS REQUESTED VOCs	SVOCs	CT ETPH	RSA Metals	Total Cyanide	Total #	COMMENTS
01	9/8/04	1555	GW-MW-106	—	X		G	Y	2	2	2	1	1	8	
02	9/8/04	1310	GW-MW-3	—	X		G	Y	6	6	6	2	2	22	MS/MSD
03	9/8/04	1615	GW-MW-206	—	X		G	Y	2	2	2	1	1	8	
04	9/8/04	1535	GW-108	—	X		G	Y	2	2	2	1	1	8	
05	9/8/04	1250	GW-102	—	X		G	Y	2	2	2	1	1	8	
06	9/8/04	1740	TB-1	—	X		G	Y	2					2	
07	9/8/04	1845	GW-109	—	X		G	Y	2	2	2	1	1	8	

← Temperature blank included in each cooler →

6°

Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
[signature]	9/9/04	14:00	[signature]	9/9/04 14:00			
Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
Relinquished By: (Signature)	Date:	Time:	Received for Lab By: (Signature)	Date:	Time:	Comments: 3 coolers total	

Method of Shipment: courier

Distribution: **Original** to Lab. **Copy 1** to Field Files, **Copy 2** to Project Manager

Form [illegible] (Rev. [illegible])

Attachment II

Sample Result Summary Sheets

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-MW-106

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-01A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3045

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	2	J
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	UJ
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	UJ
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	UJ
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	UJ
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

EJD 11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-MW-106

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-01A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3045

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
----------	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	UJ
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	UJ
87-61-6	1,2,3-Trichlorobenzene	5	UJ

11/3/04

FORM I VOA OLM03.0

0015

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-MW-106

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-01A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3045

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

ED 11/34

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
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22.				
23.				
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25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-MW-3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-02A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3044

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	8	
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	UJ
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	UJ
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	2	J
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	UJ
156-59-2	cis-1,2-Dichloroethene	16	
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	UJ
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	6	
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

ED 11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-MW-3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-02A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3044

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
----------	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	UJ
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	1	J
87-61-6	1,2,3-Trichlorobenzene	1	J

ED 11/3/a

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-MW-3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-02A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3044

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-MW-206

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-03A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3046

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	UJ
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	UJ
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	UJ
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	UJ
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

EAD 11/3/04

FORM I VOA OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-MW-206

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-03A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3046

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
----------	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	UJ
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	UJ
91-20-3	Naphthalene	5	UJ
87-61-6	1,2,3-Trichlorobenzene	5	

ED 11/3/04

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: GW-MW-206

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-03A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3046

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-108

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-04A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3047

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

QED 11/3/04

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	UJ
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	UJ
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	UJ
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	UJ
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	4	J
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-108

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-04A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3047

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	3	J
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	UJ
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	UJ
91-20-3	Naphthalene	5	UJ
87-61-6	1,2,3-Trichlorobenzene		

EXD 11/3/04

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-108

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-04A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3047

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-102

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-05A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3048

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

SD 11/3/04

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	UJ
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	UJ
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	UJ
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	UJ
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-102

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-05A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3048

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

ED 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	UJ
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	UJ
87-61-6	1,2,3-Trichlorobenzene	5	UJ

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-102

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-05A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3048

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Exp 11/3

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-109

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-07A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3050

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	UJ
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	UJ
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	UJ
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	2	J
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	UJ
71-43-2	Benzene	1	J
79-01-6	Trichloroethene	10	
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

SD 11/3/04

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-109

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-07A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3050

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	2	J
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	1	J
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	6	
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	14	
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	3	J
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	2	J
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	3	J
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	UJ
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	3	J
87-61-6	1,2,3-Trichlorobenzene	5	UJ

SAD 11/3/04

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-109

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-07A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3050

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 22

SD 11/30

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	BRANCHED ALKANE	3.28	10	J
2.	BRANCHED ALKANE	3.53	6	J
3.	UNKNOWN	4.40	13	J
4.	UNKNOWN	5.09	13	J
5.	BRANCHED ALKANE	5.23	6	J
6.	UNKNOWN	5.52	31	J
7.	UNKNOWN	5.59	10	J
8.	CYCLIC ALKANE	6.33	67	J
9.	UNKNOWN	6.54	6	J
10.	UNKNOWN	6.82	11	J
11.	UNKNOWN	6.96	18	J
12.	UNKNOWN	7.69	9	J
13.	CYCLIC ALKANE	7.91	12	J
14.	CYCLIC ALKANE	8.05	8	J
15.	CYCLIC ALKANE	8.64	12	J
16.	UNKNOWN	10.42	5	J
17. 496-11-7	INDANE	12.61	24	NJ
18. 2870-04-4	BENZENE, 2-ETHYL-1,3-DIMETHY	13.17	19	NJ
19. 27133-93-3	2,3-DIHYDRO-1-METHYLINDENE	13.28	24	NJ
20. 95-93-2	BENZENE, 1,2,4,5-TETRAMETHYL	13.62	10	NJ
21. 768-49-0	BENZENE, (2-METHYL-1-PROPENY	13.96	8	NJ
22.	UNKNOWN	14.13	18	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB-1

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-06A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3049

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	3	J
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	UJ
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	7	J
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	UJ
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	UJ
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

SD 11Bk

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB-1

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-06A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3049

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

EAD 11/30/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
----------	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	UJ
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	UJ
87-61-6	1,2,3-Trichlorobenzene	5	UJ

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TB-1

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-06A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V6D3049

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: not dec. _____ Date Analyzed: 09/15/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

ESP 11/30/04

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-MW-106

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5538A

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U

SD 11/3/04

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-MW-106

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5538A

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	20	UJ
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

SLD 11/3/04

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-MW-106

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5538A

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

SD 11/30

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 1077-56-1	BENZENESULFONAMIDE, N-ETHYL-	10.12	14	NJ
2. 80-39-7	BENZENESULFONAMIDE, N-ETHYL-	10.48	7	NJ
3.	UNKNOWN	13.55	5	J
~~4. 112-84-5~~	~~13-DOCOSENAMIDE, (Z)-~~	~~15.20~~	~~24~~	~~NJB~~
5.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-MW-3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5539

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EAD 11/13/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-MW-3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5539

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

ED 11/3/04

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	20	UJ
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	UJ
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-MW-3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5539

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EJD 11/3/04

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 5

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 1077-56-1	BENZENESULFONAMIDE, N-ETHYL-	10.12	12	NJ
2. 80-39-7	BENZENESULFONAMIDE, N-ETHYL-	10.48	5	NJ
3. 57-10-3	N-HEXADECANOIC ACID	11.66	4	NJ
4.	UNKNOWN	13.55	9	J
~~5. 301-02-0~~	~~9-OCTADECENAMIDE, (Z)-~~	~~15.20~~	~~44~~	~~NJ~~
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-MW-206

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5542

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EED 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-108

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5543

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EJD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-108

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5543

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

ED 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	20	UJ
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-108

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5543

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 4

EAP 1/13/a

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 80-39-7	BENZENESULFONAMIDE, N-ETHYL-	10.36	8	NJ
2. 80-39-7	BENZENESULFONAMIDE, N-ETHYL-	10.49	47	NJ
~~3. 301-02-0~~	~~9-OCTADECENAMIDE, (Z)-~~	~~13.55~~	~~5~~	~~NJB~~
~~4. 112-84-5~~	~~13-DOCOSENAMIDE, (Z)-~~	~~15.20~~	~~26~~	~~NJB~~
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-102

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5544

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EJD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	1	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-102

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5544

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EDD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	20	UJ
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	2	J
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	4	J
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	2	J
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-102

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5544

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

EHP 11/3/04

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 1077-56-1	BENZENESULFONAMIDE, N-ETHYL-	10.13	21	NJ
2. 80-39-7	BENZENESULFONAMIDE, N-ETHYL-	10.48	10	NJ
3.	UNKNOWN	13.55	4	J
~~4. 112-84-5~~	~~13-DOCOSENAMIDE, (Z)-~~	~~15.20~~	~~26~~	~~NJB~~
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-109

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5545

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

EJD 11/3/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	2	J
106-47-8	4-Chloroaniline	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	2	J
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-109

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5545

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

ED 1/13/04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	20	UJ
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-109

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C1111

Matrix: (soil/water) WATER Lab Sample ID: C1111-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S4A5545

Level: (low/med) LOW Date Received: 09/09/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 09/12/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/16/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

EAD 11/30

Number TICs found: 10

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 496-11-7	INDANE	5.65	7	NJ
2. 141-93-5	BENZENE, 1,3-DIETHYL-	5.73	4	NJ
3. 105-05-5	BENZENE, 1,4-DIETHYL-	5.81	5	NJ
4. 95-93-2	BENZENE, 1,2,4,5-TETRAMETHYL	6.35	6	NJ
5. 3454-07-7	BENZENE, 1-ETHENYL-4-ETHYL-	6.57	6	NJ
6. 2039-89-6	BENZENE, 2-ETHENYL-1,4-DIMET	6.65	10	NJ
7. 1077-56-1	BENZENESULFONAMIDE, N-ETHYL-	10.13	17	NJ
8. 80-39-7	BENZENESULFONAMIDE, N-ETHYL-	10.48	8	NJ
9.	UNKNOWN	13.55	4	J
~~10. 112-84-5~~	~~13-DOCOSENAMIDE, (Z)-~~	~~15.20~~	~~22~~	~~NJB~~
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Mitkem Corporation

Date: *15-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: GW-MW-106
Lab ID: C1111-01

Project: M&E Connecticut Brownfields
Collection Date: 09/08/04 15:55

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
CT ETPH BY GC-FID				CTETPH_W			
Extractable Total Petroleum Hydrocarbon	0.35 ~~ND~~		0.35	mg/L	1	09/13/2004 18:54	1472
Surr: para-Terphenyl	103		22-134	%REC	1	09/13/2004 18:54	1472

EBD 11/3/04

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- DF - Dilution Factor
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- RL - Reporting Limit

Mitkem Corporation

Date: *15-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: GW-MW-3
Lab ID: C1111-02

Project: M&E Connecticut Brownfields
Collection Date: 09/08/04 13:10

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
CT ETPH BY GC-FID				**CTETPH_W**			
Extractable Total Petroleum Hydrocarbon	0.35 ~~ND~~		0.35	mg/L	1	09/13/2004 19:33	1472
Surr: para-Terphenyl	87.7		22-134	%REC	1	09/13/2004 19:33	1472

EJD
11/3/04

Qualifiers:
- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- DF - Dilution Factor
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- RL - Reporting Limit

Mitkem Corporation

Date: *15-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: GW-MW-206
Lab ID: C1111-03

Project: M&E Connecticut Brownfields
Collection Date: 09/08/04 16:15

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
CT ETPH BY GC-FID				**CTETPH_W**			
Extractable Total Petroleum Hydrocarbon	0.35	~~ND~~	0.35	mg/L	1	09/13/2004 21:28	1472
Surr: para-Terphenyl	104		22-134	%REC	1	09/13/2004 21:28	1472

EBD 11/3/04

Qualifiers:
- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- DF - Dilution Factor
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- RL - Reporting Limit

Mitkem Corporation

Date: *15-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: GW-108
Lab ID: C1111-04

Project: M&E Connecticut Brownfields
Collection Date: 09/08/04 15:35

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch Il
CT ETPH BY GC-FID				**CTETPH_W**			
Extractable Total Petroleum Hydrocarbon	0.35	~~ND~~	0.35	mg/L	1	09/13/2004 22:06	1472
Surr: para-Terphenyl	103		22-134	%REC	1	09/13/2004 22:06	1472

EJD 11/3/04

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *15-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: GW-102
Lab ID: C1111-05

Project: M&E Connecticut Brownfields
Collection Date: 09/08/04 12:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
CT ETPH BY GC-FID				CTETPH_W			
Extractable Total Petroleum Hydrocarbon	0.35 ~~ND~~		0.35	mg/L	1	09/13/2004 22:44	1472
Surr: para-Terphenyl	102		22-134	%REC	1	09/13/2004 22:44	1472

EAD 11/3/04

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- DF - Dilution Factor
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- RL - Reporting Limit

Mitkem Corporation

Date: *15-Sep-04*

Client: Metcalf & Eddy, Inc.
Client Sample ID: GW-109
Lab ID: C1111-07

Project: M&E Connecticut Brownfields
Collection Date: 09/08/04 18:45

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
CT ETPH BY GC-FID				**CTETPH_W**			
Extractable Total Petroleum Hydrocarbon	0.35 ~~ND~~		0.35	mg/L	1	09/13/2004 23:23	1472
Surr: para-Terphenyl	95.5		22-134	%REC	1	09/13/2004 23:23	1472

11/3/04

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

GW-MW-106

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC1111

Matrix (soil/water): WATER Lab Sample ID: C1111-01

Level (low/med): MED Date Received: 09/09/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

EJD 11/3/04

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	1.6	U		P
7440-39-3	Barium	193	~~B~~	J	P
7440-41-7	Beryllium	0.15	U		P
7440-43-9	Cadmium	0.10	U		P
7440-47-3	Chromium	0.38	U		P
7440-50-8	Copper	6.3	U		P
7439-92-1	Lead	1.4	~~B~~	UJ	P
7440-02-0	Nickel	2.1	~~B~~	J	P
7782-49-2	Selenium	0.98	U		P
7440-22-4	Silver	1.4	~~B~~	UJ	P
7440-28-0	Thallium	1.7	~~B~~	UJ	P
7440-62-2	Vanadium	3.4	~~B~~	J	P
7440-66-6	Zinc	4.0	~~B~~	J	P
7439-97-6	Mercury	0.062	U		CV
	Cyanide	9.1	U		CA

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

GW-MW-3

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC1111

Matrix (soil/water): WATER Lab Sample ID: C1111-02

Level (low/med): MED Date Received: 09/09/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	1.6	U		P
7440-39-3	Barium	213			P
7440-41-7	Beryllium	0.15	U		P
7440-43-9	Cadmium	0.10	U		P
7440-47-3	Chromium	0.38	U		P
7440-50-8	Copper	6.3	U		P
7439-92-1	Lead	0.50	~~B~~	uJ	P
7440-02-0	Nickel	13.4	~~B~~	J	P
7782-49-2	Selenium	0.98	U		P
7440-22-4	Silver	1.4	~~B~~	uJ	P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	0.47	U		P
7440-66-6	Zinc	14.5	~~B~~	J	P
7439-97-6	Mercury	0.067	U		CV
	Cyanide	66.5			CA

EAP 11/3/04

Comments:

FORM I - IN

SW846

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

GW-MW-206

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC1111

Matrix (soil/water): WATER Lab Sample ID: C1111-03

Level (low/med): MED Date Received: 09/09/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

EJD 1/13/04

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	1.6	U		P
7440-39-3	Barium	188	~~B~~	J	P
7440-41-7	Beryllium	0.15	U		P
7440-43-9	Cadmium	0.10	U		P
7440-47-3	Chromium	0.38	U		P
7440-50-8	Copper	9.1	~~B~~	J	P
7439-92-1	Lead	0.71	~~B~~	UJ	P
7440-02-0	Nickel	2.1	~~B~~	J	P
7782-49-2	Selenium	0.98	U		P
7440-22-4	Silver	0.91	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	3.5	~~B~~	J	P
7440-66-6	Zinc	4.4	~~B~~	J	P
7439-97-6	Mercury	0.066	U		CV
	Cyanide	9.1	U		CA

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

GW-108

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC1111

Matrix (soil/water): WATER Lab Sample ID: C1111-04

Level (low/med): MED Date Received: 09/09/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

EAD 11/3/04

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	1.6	U		P
7440-39-3	Barium	372			P
7440-41-7	Beryllium	1.5	~~B~~	UJ	P
7440-43-9	Cadmium	0.10	U		P
7440-47-3	Chromium	29.8			P
7440-50-8	Copper	9.1	~~B~~	J	P
7439-92-1	Lead	11.3			P
7440-02-0	Nickel	14.2	~~B~~	J	P
7782-49-2	Selenium	0.98	U		P
7440-22-4	Silver	0.91	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	19.6	~~B~~	J	P
7440-66-6	Zinc	40.8	~~B~~	J	P
7439-97-6	Mercury	0.061	U		CV
	Cyanide	9.1	U		CA

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

GW-102

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC1111

Matrix (soil/water): WATER Lab Sample ID: C1111-05

Level (low/med): MED Date Received: 09/09/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.5	~~B~~	UJ	P
7440-38-2	Arsenic	3.0	~~B~~	UJ	P
7440-39-3	Barium	247			P
7440-41-7	Beryllium	0.15	U		P
7440-43-9	Cadmium	0.10	U		P
7440-47-3	Chromium	1.8	~~B~~	J	P
7440-50-8	Copper	34.2			P
7439-92-1	Lead	17.1			P
7440-02-0	Nickel	4.4	~~B~~	J	P
7782-49-2	Selenium	0.98	U		P
7440-22-4	Silver	0.91	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	0.80	~~B~~	J	P
7440-66-6	Zinc	45.9	~~B~~	J	P
7439-97-6	Mercury	0.075	U		CV
	Cyanide	12.1	~~B~~	J	CA

EAD 1/13/04

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

GW-109

Lab Name: Mitkem Corporation Contract: 200100-00

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC1111

Matrix (soil/water): WATER Lab Sample ID: C1111-07

Level (low/med): MED Date Received: 09/09/04

% Solids: 0.0

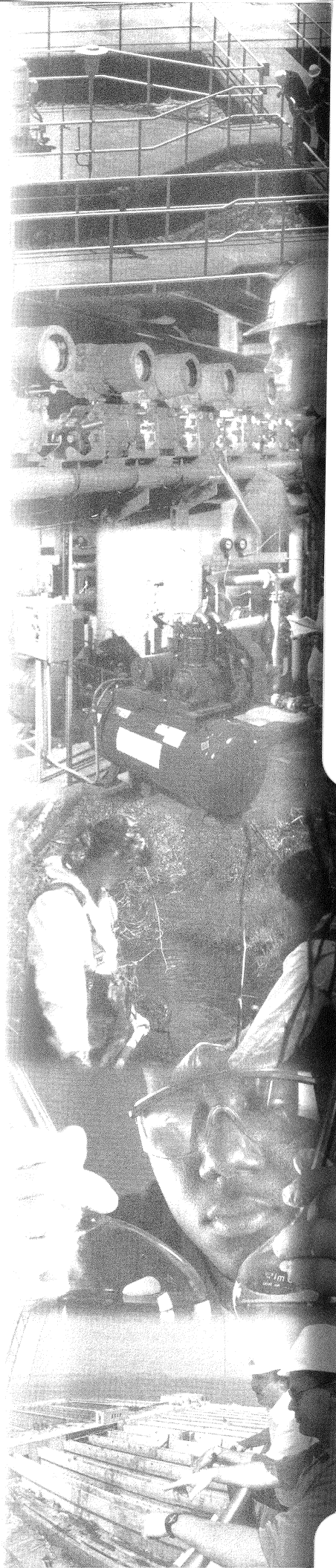
Concentration Units (ug/L or mg/kg dry weight): UG/L

EJD 11/3/04

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	1.6	U		P
7440-39-3	Barium	287			P
7440-41-7	Beryllium	0.15	U		P
7440-43-9	Cadmium	0.10	U		P
7440-47-3	Chromium	0.38	U		P
7440-50-8	Copper	6.3	U		P
7439-92-1	Lead	1.4	~~B~~	UJ	P
7440-02-0	Nickel	0.92	~~B~~	J	P
7782-49-2	Selenium	0.98	U		P
7440-22-4	Silver	0.91	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	0.60	~~B~~	J	P
7440-66-6	Zinc	9.1	~~B~~	J	P
7439-97-6	Mercury	0.062	U		CV
	Cyanide	9.1	U		CA

Comments:

APPENDIX H



APPENDIX H

APPENDIX H

STATEMENT OF LIMITATIONS

STATEMENT OF LIMITATIONS

The data presented and the opinions expressed in this report are qualified as follows:

1. The sole purpose of the investigation and of this report is to assess the physical characteristics of the Site with respect to the presence or absence in the environment of oil or hazardous materials and substances as defined in the applicable state and federal environmental laws and regulations and to gather information regarding current and past environmental conditions at the Site.

2. Metcalf & Eddy (M&E) derived the data in this report primarily from visual inspections, examination of records in the public domain, interviews with individuals with information about the Site, and a limited number of subsurface explorations made on the dates indicated. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the Site, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.

3. In preparing this report, M&E has relied upon and presumed accurate certain information (or the absence thereof) about the Site and adjacent properties provided by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, M&E has not attempted to verify the accuracy or completeness of any such information.

4. The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Services, including the extent of subsurface exploration and other tests. The Scope of Services was defined by the requests of the Client, the time and budgetary constraints imposed by the Client, and the availability of access to the Site.

5. Because of the limitations stated above, the findings, observations, and conclusions expressed by M&E in this report are not, and should not be considered, an opinion concerning the compliance of any past or present owner or operator of the site with any federal, state or local law or regulation. No warranty or guarantee, whether express or implied, is made with respect to the data reported or findings, observations, and conclusions expressed in this report. Further, such data, findings observations, and conclusions are based solely upon site conditions in existence at the time of investigation.

6. This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the Agreement and the provisions thereof.