FINAL
PHOSTER™ SYSTEM SOIL SAMPLING REPORT
(November 2008 Sampling Event)

Multi Site G
Operation, Maintenance & Monitoring

SMS Instruments Site
Deer Park, Suffolk County, NY
Site 1-52-026

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1.0 INTRODUCTION

The SMS Instruments site was evaluated in 2003 as part of the Pump and Treat Optimization initiative from US Environmental Protection Agency (USEPA) headquarters, which provided recommendations to enhance remedial and cost effectiveness. In July 2003, GeoTrans, Inc. (GeoTrans), on behalf of the USEPA, conducted a site visit to perform the optimization evaluation of the active Groundwater Pump and Treat (GW P&T) system. The results of the evaluation were included in a Remediation System Evaluation (RSE) report (GeoTrans, December, 2003). The RSE report recommended developing an exit strategy and provided three potential approaches for consideration.

Site activities from 2004 to 2005 have been performed based on the recommendations provided by the RSE report. In 2005, the Site was transferred from USEPA to the New York State Department of Environmental Conservation (NYSDEC). This sampling report summarizes the SMS Instruments Site remediation activities that occurred since the transfer.

1.1 BACKGROUND INFORMATION AND SITE CHRONOLOGY

The SMS Instruments Superfund site is located at 120 Marcus Boulevard in Deer Park, Suffolk County, New York (Figure 1). The site was listed on the National Priority List (NPL) in 1986. The Site consists of a 34,000 square foot building located on a 1.5-acre lot that is surrounded by other light industrial facilities. A recharge basin is located adjacent to the Site to the east. Facility operations occurred between 1967 and 1990 and primarily involved overhauling of military aircraft components. These activities consisted of cleaning, painting, degreasing, refurbishing, metal machining, and testing components. Other historic uses, under different tenants, included the manufacturing of wooden kitchen utensils. The building was unoccupied for the past several years but as of January 2, 2008, the building is used to store furniture.

Site contamination was first discovered in 1980 when the Suffolk County Department of Health Services sampled a leaching pool on the southern side of the facility. USEPA completed a remedial investigation/feasibility study (RI/FS) in 1989. Groundwater contaminants included volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs) and metals. The primary VOC contaminants in groundwater consisted of tetrachloroethene (PCE), trichloroethene (TCE), trans-1,2-dichloroethane, chlorobenzene, total xylenes, ethylbenzene, and 1,1-dichloroethane. SVOCs included naphthalene, 1,4-dichlorobenzene, 1,3-dichlorobenzene, and 1,2-dichlorobenzene. Two metals, chromium and lead, were also a concern for groundwater. Soil contaminants of concern included ethylbenzene, total xylenes, chlorobenzene, trans-1,2-dichloroethene, and PCE. Investigative and remedial activities at the Site have included pumping out the leaching pond and backfilling it, removal of an underground storage tank (which was used to store jet fuel), and operation of a soil vapor extraction system (SVE). The SVE system was operated from 1992 to 1994, near the former leaching pool and the former UST areas to remediate residual VOCs in soils. Wastewater was historically discharged into a leaching pool at the site, which, subsequently contaminated soils and groundwater beneath the site. In addition, the leaking UST also contaminated soils and groundwater beneath the site. A GW P&T system, which included an air stripper to treat contaminated groundwater, was constructed and began operation in 1994.

Soil sampling conducted after the operation of the SVE system indicated that the soil remedy reduced VOC contamination and therefore reduced potential exposure to contaminated soil vapor. The groundwater contamination had decreased substantially since activation of the GW P&T system, and as a direct result of the successful SVE remedial action. After several years of operation, the influent

concentrations had decreased substantially and the GW P&T system was no longer seen as accelerating site cleanup. Furthermore, the GW P&T system was failing to achieve the ultimate groundwater cleanup goals (e.g., the maximum contaminant levels [MCLs]). Therefore, in July 2003, GeoTrans, on behalf of the USEPA, conducted a site visit to perform an evaluation of the active GW P&T system. The results of the evaluation were included in a RSE (GeoTrans, 2003). The RSE report recommended conducting a pilot study on alternative technologies and to determine if an alternative technology should replace the GW P&T system. The RSE report indicated various alternative technologies were available for reducing mass of VOCs, including air sparging, bioaugmentation, and chemical oxidation.

Following acceptance of the RSE report, in May of 2004, the USEPA Remedial Action Branch sent a request for field support at the SMS Instruments Site. The request involved two phases: additional field characterization of a former UST area through use of a Geoprobe down to the water table, and a second phase to assess and implement additional remedial technologies to address remaining source areas, such as air sparging with SVE and/or bioremedial-enhancing injections. In an effort to field characterize the former UST area and obtain data needed for the selection of a pilot alternative approach, 25 soil borings were advanced and sampled, and SVE and air sparge wells were installed in August 2004 by ERT and the Response Engineering and Analytical Contract (REAC) contractor (Lockheed Martin Technology Services [Lockheed Martin]).

Based on an evaluation of the data generated by ERT/REAC, the USEPA Remedial Project Manager (RPM) and the USEPA Removal On-Scene Coordinator (OSC) concluded that a bioremedial – enhancing approach via gaseous injection to facilitate cometabolic degradation of the residual chlorinated chemicals of concern (COCs) contamination in groundwater would be the most appropriate and cost effective technology for the time frame of operation. In April of 2005, under the Emergency and Rapid Response Services (ERRS) contract, Earth Tech Northeast, Inc. (Earth Tech) procured a PHOSter™ system and the system was later installed and activated on site in May 2005. Further details of the PHOSter™ system are included in Section 2.1 of this report.

The USEPA operated the GW P&T system at the Site until July 15, 2005 when the Site was turned over to NYSDEC. Based on sampling conducted by CDM for the USEPA in June 2005 and effluent samples collected by Earth Tech in August 2005, Earth Tech determined that the GW P&T system was no longer removing significant quantities of contaminants, and VOC concentrations in the influent were below laboratory reporting limits (5 µg/L). In a letter to NYSDEC dated October 6, 2005, Earth Tech recommended that the GW P&T system be de-activated. NYSDEC concurred with this recommendation in a letter dated October 21, 2005.

1.1.1 USEPA/REAC Soil Boring Advancement and SVE/Air Sparge Well Installation Activities (August 2004)

In July 2004, EPA-ERT/REAC provided the necessary field support to characterize the remaining source area located off the southeast corner of the SMS Building, and preliminary cost projections to implement sparging/bioremediation operations. A Geoprobe was used to advance 25 soil borings to collect 46 subsurface soil samples, which were analyzed with a field gas chromatograph (GC) for benzene, toluene, ethylbenzene, and xylenes (BTEX). Three samples were also analyzed for total VOCs (method 8260B). The highest BTEX/VOC concentrations were detected in samples collected in the vicinity of the drywell and groundwater extraction well EW-3. These soil samples were collected in the saturated zone (between 24 and 28 feet below ground surface [ft bgs]). The focus of the current remedial action is on this submerged contaminant zone. The highest concentrations of BTEX were found in the drywell sample collected at 24 ft bgs with a total concentration of 170,580 micrograms per kilogram (µg/kg). The highest

VOC results were obtained from the drywell location at 24 feet bgs with a total VOC concentration of 408,100 µg/kg. Vadose zone and saturated zone soil sample data indicated that contamination was contained within the shallow saturated zone. Complete details of the soil boring event are included in the Site Investigation Report (Technical Memorandum, REAC / Lockheed Martin, August, 2005).

Following a review of these results, it was determined that bioremedial enhancement required further evaluation beyond the USEPA's Remedial Action Branch's required timeframe for transfer of the site to the NYSDEC. Therefore, in November 2004, USEPA's Removal Action Branch along with ERT/REAC were able to provide continual field support to install the necessary piping for the bioremediation system. However, it was determined that purchasing or rental of the bioremediation system was beyond the scope of their existing contract. Therefore, in May 2005, Earth Tech, EPA Region II ERRS contractor, procured and installed a PHOSter™ bioremediation system at the Site. Further details of the bioremediation system are included in Section 2.3 of this report.

The PHOSter™ system performance was evaluated in June 2006 with a soil sampling program designed to collect subsurface soil samples for chemical testing and methanotrophs. The results of this evaluation were presented in the Final PHOSter™ System Soil Sampling Report (June 2006 Sampling Event) (Earth Tech, October 2006). The report concluded that the PHOSter™ system was removing VOCs from the soil column; however, pockets of contamination still remained. The report recommended that the PHOSter™ system continue to operate for another six months at which time the performance would again be evaluated. A second system performance evaluation was performed in March 2007. These results documented a significant reduction in contaminant concentrations. The report recommended that the PHOSter™ system continue to operate for at least an additional six months. Modifications were made to the PHOSter™ system to focus the bioremediation amendment injections on the limited areas where soils had not met the cleanup objectives.

1.1.2 USEPA/Earth Tech Groundwater Pump And Treat System Evaluation Sampling (August 31, 2005)

In an effort to evaluate the current status of the GW P&T system, on August 31, 2005, three groundwater samples (including one field duplicate) were shipped to Mitkem Corporation for VOC analysis by USEPA Method 624, along with three air samples (also including one field duplicate), which were shipped to Con-Test Analytical Laboratory for total organic analysis.

Results of the GW P&T system evaluation sampling performed on August 31, 2005 indicated no contamination was being treated by the system, as no contaminants were detected in the influent. Therefore, on October 6, 2005 Earth Tech recommended the shut-down of the SMS groundwater pump and treatment plant. In a letter dated October 21, 2005, the NYSDEC approved the temporary shutdown of the groundwater treatment plant. The NYSDEC letter also indicated that groundwater sampling would continue to determine if any significant rebound occurs. If no rebound was observed after a reasonable period of time, the treatment GW P&T system would be permanently shut down and dismantled.

1.1.3 Groundwater Pump and Treat System Shutdown and Dismantlement

Following the temporary shutdown of the GW P&T system in August 2005, two rounds of groundwater samples were collected: February 2006 and September 2006. These results were summarized in the Final Groundwater Sampling Report (Earth Tech, December 2006). No apparent rebound was noted in the monitoring well groundwater samples. One of the recommendations of this report was the demolition of the GW P&T system building. This report also recommended that the PHOSter™ system continue

operations for a minimum of six additional months. A third groundwater sampling event was conducted in August 2007 after the decision was made to demolish the building.

A Dismantlement Plan was prepared and finalized in April 2007 (Earth Tech, 2007), which detailed the demolition of the treatment building. Several tasks were required to obtain the demolition permit from the City of Babylon, New York. These tasks included the termination of electrical and water service to the building. The electrical main to the treatment building was terminated on July 16, 2007 by a licensed electrical contractor, ADB Electric and Sons. The service was moved to a new "H" frame service to continue the PHOSter™ system operations. The potable water line to the building was capped on November 20, 2007 by a licensed plumber, Pro Mechanical. On November 2, 2007, Veolia ES Technical Solutions removed all waste from the treatment building including water treatment chemicals, test meter solutions and other wastes. The building was demolished in two phases. All piping and carbon units were dismantled in June 2007. Final building demolition and concrete foundation removal occurred in late December 2007.

2.0 PHOSter™ SYSTEM

2.1 TECHNOLOGY DESCRIPTION/SELECTION RATIONALE

The Enhanced In-Situ Bioremediation Process is a biostimulation technology developed by the US Department of Energy (DOE) at the Westinghouse Savannah River Plant site in Aiken, S.C. DOE refers to their phosphate injection technology as PHOSter™ and has licensed the process to Earth Tech. Earth Tech is utilizing the process to deliver a gaseous phase mixture of air, nutrients (triethylphosphate [TEP]), and methane (an alternative carbon source) to contaminated soils at the SMS site. These enhancements are delivered to groundwater via injection wells to stimulate and accelerate the growth of existing microbial populations, specifically methanotrophs. These methanotrophs are capable of direct aerobic and aerobic cometabolic bioremediation. The advantage of aerobic cometabolic bioremediation is that at low VOC concentrations (as at this site) there may not be an adequate carbon source available to support bacterial growth for direct aerobic biodegradation. This type of aerobic bacteria has the ability to metabolize methane and produce enzymes (soluble methane mono-oxygenase [sMMO]) capable of degrading chlorinated solvents and their degradation products to non-hazardous constituents. Furthermore, these methanotrophs typically adhere to soil grain surfaces and would be ideally located for the degradation of the remaining residual adsorbed contaminants. The primary components of Earth Tech's treatment system consist of injection wells, air injection equipment, groundwater monitoring wells, and soil vapor monitoring points. Figure 2 shows a plan view of the treatment area, the injection wells, and monitoring points. The injection wells are designed to deliver air, gaseous-phase nutrients, and methane to groundwater and the vadose zone in the underlying soils.

The PHOSter™ technology was chosen for this site for a number of reasons. Contaminant concentrations in the groundwater are at very low asymptotic levels and it was felt that the GW P&T system was no longer capable of removing a sufficient mass of contamination to justify operation. A system of groundwater and vadose zone wells were already in place that would be suitable for economically installing this technology. Soil and groundwater sampling results indicated existing biological activity was slowly degrading the primary contaminants (chlorinated VOCs). The site geology and hydrogeology was also ideal for this technology. The PHOSter™ technology has demonstrated ability to stimulate bacterial activity, promote the destruction of the primary site COCs (chlorinated VOCs - PCE, TCE and dichlorobenzenes), provide a means to focus remediation on the submerged zone of residual contamination, and act as a polishing technology for the removal of low level contamination often encountered in the final stages of site remediation.

2.2 PHOSter™ SYSTEM OVERVIEW

The initial SMS system consisted of two compressors capable of delivering 10 to 20 pounds per square inch (psi) and approximately 10 to 200 standard cubic feet per hour (scfh) to a pressure rated steel tank. Air from the main line is diverted to the injection wells. The monitoring wells and soil vapor monitoring points were installed as part of a proposed air sparging and vacuum extraction system that was never completed since the PHOSter™ injection system was subsequently implemented.

The SMS injection system consists of air, nutrient, and methane injection equipment, all housed in a mobile trailer. A compressor system provides the air source, and includes a condensate tank with a drain, an air line, coalescing filters and pressure regulators and valves. Methane and nitrous oxide provide the source of carbon and nitrogen, respectively. Both are provided in standard gas cylinders and are piped into the main air line using regulators and flow meters. TEP, the phosphorus source, is stored as a liquid in a pressure-rated steel tank. Air from the main line is diverted through the tank to volatilize the TEP for

subsurface delivery. The air, nitrous oxide, and TEP are injected continuously while the methane is injected on a pulsed schedule. The methane is closely monitored just prior to injecting into subsurface wells to ensure that the injection concentration does not exceed 4% by volume, thus avoiding the methane lower explosive limit (LEL) of 5%.

The gaseous phase bioremediation amendments will stimulate bacterial populations capable of direct aerobic and aerobic cometabolic bioremediation. The advantage of the aerobic cometabolic bioremediation is that at low VOC concentrations (as at this site) there may not be an adequate carbon source available to support bacterial growth for direct aerobic biodegradation. With the addition of an alternative carbon source (methane), the microbial population (methanotrophs) can multiply and produce an enzyme sMMO that degrades a number of VOCs to non-toxic end products. Furthermore, these methanotrophs typically adhere to soil grain surfaces and would be ideally located for the degradation of the remaining residual adsorbed contaminants.

2.3 REMEDIAL SYSTEM MONITORING AND SAMPLING

Following the implementation of the PHOSter™ technology in May of 2005, several sampling events have been conducted at the SMS site. Sampling has included air, groundwater, and discrete saturated soil sampling to evaluate performance and overall remedial effectiveness. As previously discussed, soil and groundwater concentrations had reached an asymptotic condition under the ongoing GWP&T remedial action, so implementation of the PHOSter™ system was designed to continue the positive contaminant reduction trend that had been achieved to date.

Air samples are tested from on-site monitoring wells two times per month by Earth Tech staff scientists. The air is monitored for methane and CO_2 in percent with a CES-LANDTEC GEMTM 500 portable gas analyzer. A MultiRAE meter is used to analyze for CO, O_2, and H_2S. A MultiRAE PID is used to monitor for VOCs.

The data indicate that organic vapors in the monitoring wells have in general been decreasing steadily since the installation of the PHOSter™ system. Methane concentrations have been somewhat variable but that is attributed to the fact that methane is being added in pulse doses to stimulate biological activity in the soil. The presence of methane in variable concentrations depending upon the timing of sampling events was expected and is desirable as an indication of the proper function of the PHOSter™ system. The O_2 levels have decreased, indicating increased aerobic biological activity that requires oxygen, and the CO_2 levels have increased, indicating complete degradation of the site contaminants.

Soil samples were collected from varying depths and locations within the water-bearing zone and analyzed for the presence of methanotrophs. Methanotrophs are a group of bacteria that are considered ubiquitous in the environment (Hanson and Hanson, 1996), but are often a minor group within the natural subsurface bacterial populations. Table 1 presents the methanotrophs data for the soil samples: total methanotrophs; Type I methanotrophs; and Type II methanotrophs. The Type I methanotrophs appear best adapted to grow at low methane concentrations. The growth of some Type II methanotrophs is favored when methane levels are high, when combined nitrogen and oxygen levels are low, and when copper is substantially depleted in the growth media. The conditions in groundwater appear to favor the growth of the Type II methanotrophs and the synthesis of sMMO that is essential for the rapid degradation of TCE and some other low molecular-weight halogenated hydrocarbons (Hanson and Hanson, 1996). However, Type I methanotrophs can also produce sMMO. The expression of the sMMO enzyme is the important mechanism of methanotrophs. The enzyme breaks down a number of VOCs including the targeted compounds at this site.

As expected, methanotrophs were detected in all six soil samples. An abundant methanotrophs population (10^5 to 10^8 cells per gram) was reported for soil samples collected at the targeted shallower depths (23.5 to 24.5 ft bgs). This methanotrophs population size is consistent with a successfully stimulated subsurface in the range that is conducive for VOC degradation. This coincides with the targeted amendment injection that was implemented after the June 2006 results were evaluated. After the June 2006 results were evaluated, Earth Tech turned off several injection points and directed the injection to focus on the three remaining hot spots: DW, SMS-12, and SMS-16. These microbial results indicate the successful stimulation of the methanotrophs in these targeted areas as indicated on Table 2 which shows all four methanotrophs data sets from June 2006, March 2007, January 2008 and November 2008.

2.4 PHOSter™ SYSTEM SAMPLING RESULTS AND EFFECTIVENESS EVALUATION

Four soil sampling events have been conducted to evaluate the PHOSter™ system since 2005: June 2006, March 2007, January 2008, and November 2008. In June 2006, six soil borings were advanced and subsurface soil samples were collected for analysis of VOCs, SVOCs, phospholipid fatty acids (PLFA) and methanotrophs. The results were presented in the Final PHOSter™ System Soil Sampling Report dated October 2006. The results indicated that contaminant concentrations were decreasing; however, soil samples collected near the former dry well had contaminant concentrations exceeding applicable cleanup criteria. Based on the analytical results, Earth Tech recommended that the PHOSter™ system continue to operate for an additional six months, at which time another round of soil samples would be collected and evaluated.

The second evaluation occurred in March 2007, when six soil borings were advanced and subsurface soil samples were collected for analysis of VOCs, PLFA and methanotrophs. The results were presented in the Final PHOSter™ System Soil Sampling Report dated June 2007. The results indicated that contaminant concentrations were decreasing; however, soil samples collected near the former dry well had contaminant concentrations that continued to exceed applicable cleanup criteria. Based on the analytical results, Earth Tech again recommended that the PHOSter™ system continue to operate for an additional six months, at which time another round of soil samples would be collected and evaluated.

The third evaluation occurred in January 2008, when six soil borings were advanced and subsurface soil samples were collected for analysis of VOCs, PLFA and methanotrophs. The results were presented in the Final PHOSter™ System Soil Sampling Report dated May 2008. When comparing the January 2008 data with the March 2007 data, the data indicated that total VOC contaminant concentrations increased significantly at borings SMS-12, SMS-16, SMS-16B and DW, while at borings SMS-12B and DWB there were significant decreases. The total VOC concentration exceeded the criterion at SMS-12, SMS-12B, SMS-16 and SMS-16B. The variation in concentrations between sampling rounds was attributed to the heterogeneous nature of the soil contaminant distribution.

2.5 TECHNOLOGY AND PROCESS OPTIMIZATION

Based on the analytical results collected over the last three sampling events, Earth Tech recommended modifying the existing system to better focus on the existing COCs and to optimize the system performance. Along with the modifications, continued operation of the system for an additional six month period was also recommended. System modifications included the replacement of the two old compressor units with a new rotary screw compressor and the elimination of the PHOSter™ aspect of the sparge technology. As previously discussed, the PHOSter™ technology was selected as an ideal technology for the remediation of chlorinated VOCs. However, based on the data collected over the last

three sampling events, chlorinated VOCs are no longer an issue at this site, indicating that the PHOSter™ application effectively achieved its goal. The existing data from the site indicates that the primary COCs are now limited to aromatic hydrocarbons (BTEX and TMB compounds), which are readily biodegradable under standard aerobic conditions.

In consideration of this positive change in site conditions, remediation over the last operational period focused on dissolved oxygen enrichment through biosparging to drive the aerobic degradation process. This was accomplished through the controlled injection of ambient air into select wells using the same base equipment established for the PHOSter™ application. The primary technological change was the elimination of the gaseous nutrients (nitrous oxide, TEP and methane) that drove the cometabolic degradation process.

In addition to the technology modification, remediation during this most recent period focused strictly on the saturated zone (22-25 ft bgs) using select injection wells and biosparging to optimize dissolved oxygen concentrations in groundwater and facilitate aerobic biodegradation of the residual organic compounds. After the system modifications were completed, the system was operated with six sparge points: AS-2, AS-4, AS-5, AS-7, AS-8 and AS-10. The flow rate at each sparge point was set at 180 cubic feet per hours (CFH). Performance of this optimization process was evaluated as part of the fourth monitoring event, which occurred in November 2008 and is the subject of this report.

3.0 BIOSPARGE PERFORMANCE EVALUATION

Through the course of the six month biosparge operation period, routine monitoring was conducted to ensure continual system operation and to optimize performance. Routine monitoring included the evaluation of system and well head pressures and the periodic collection of field data to evaluate DO and ORP conditions.

Following six additional months of active biosparge remediation, the same six sampling locations utilized for the January 2008 sampling event were targeted to evaluate the current conditions regarding the residual VOCs located in the shallow saturated zone. A total of six soil borings were advanced over a two day period (November 18 and 19, 2008) to collect soil samples from varying depths for laboratory analyses. A total of six soil borings were advanced and sampled for evaluation purposes (SMS-12, SMS-12B, SMS-16, SMS-16B, DW and DWB). Samples were collected from depths ranging from 16 to 31 feet, with specific focus on the 22 – 25 ft bgs saturated zone. All six saturated soil samples were shipped to Mitkem Corporation for VOC analysis and Microbial Insights, Inc. for analysis of PLFA and methanotrophs. Although the PHOSter™ technology was no longer being utilized, the PLFA and methanotrophs analyses were continued to evaluate the relative change in biological characteristics since the technology was modified.

3.1 SAMPLE NUMBERS AND COLLECTION POINTS

Figure 2 is a site map of SMS Instruments which shows the locations of the soil sampling locations. Boring logs are in Appendix A. The Form 1s from the Mitkem Laboratory data package are included in Appendix B. The Microbial Insights laboratory data package is included in Appendix C. Every effort was made to collect soil samples from the same intervals from which samples were collected during the January 2008 sampling effort. Samples were usually collected at the capillary fringe/water table (19-20 feet below ground surface [ft bgs]), the targeted zone containing elevated residual VOCs (22-25 ft bgs), and at the bottom of the soil boring (29-30 ft bgs), below the targeted treatment zone.

3.2 DATA INTERPRETATION AND EVALUATION

3.2.1 Bioremediation Process Description

As previously indicated, biosparging is designed to maximize oxygen transfer to groundwater, while minimizing contaminant volatilization, which is a primary focus of a standard air sparge application. The goal of biosparging is to optimize aerobic biodegradation conditions through the controlled injection of air into groundwater. For this site, the transfer of the adsorbed contaminants to the dissolved phase appears to be a slow process based on the low VOC concentrations in groundwater. Therefore, the most effective cleanup technology at this stage in the site cleanup continues to be *in situ* bioremediation. Several types of data are used to evaluate biodegradation with the two primary data results being the microbial population and contaminant concentration, which are discussed in the following sections.

3.2.2 Microbial Data Results

Total biomass (PLFA) in soil was measured during each sampling event. The results are presented in Table 3. During the previous three sampling events, the samples were collected from the shallow saturated zone (22-25 ft bgs). As shown on Table 3, there has not been a significant change in total biomass during the last three sampling events at any location (a significant change is defined as an order of magnitude increase or decrease in total biomass). During the last three sampling events, the samples

from the shallow saturated zone have all exhibited high biomass concentrations (greater than 10^7 cells per gram). The data also indicates that the change from PHOSter™ to biosparging had little affect on the existing biomass, which helps to confirm that the technology modification was warranted.

As shown on Table 2, the methanotrophs data do not indicate a significant change in population size from January 2008 to November 2008. The population size increased slightly at borings SMS-12 and SMS-16B. The population size decreased slightly at borings SMS 12B, SMS-16 and DW. The population size remained unchanged at boring DWB.

3.2.3 VOC Data Results

The laboratory results from the November 2008 sampling event indicated an overall decreasing trend in total VOC concentrations in groundwater when compared to previous events. In all cases, VOC concentrations had been reduced to below detection or below the cleanup goals. The exception was at monitoring well MW-6S where concentrations of chlorinated and non-chlorinated benzene related aromatics were present at concentrations ranging from slightly below to slightly above the cleanup criteria.

As a follow up to the groundwater sampling event, eighteen saturated soil samples were collected and analyzed for VOCs during the November 2008 sampling event from locations and depths at which elevated concentrations of VOCs concentrations had been reported during the June 2006, March 2007 and January 2008 soil sampling events. Table 4 presents a summary of the detected VOCs results for the November 2008 soil sampling event along with the NYSDEC unrestricted use Soil Cleanup Objectives (SCOs) (6 NYCRR Part 375 Table 375-6.8a). The unrestricted use criteria are the most stringent of the residential, protection of groundwater, and ecological SCOs as identified in Table 375-6.8(b). The majority of the compounds detected are chlorinated and non-chlorinated benzene related aromatics. These results are also summarized on Figure 3 (Summary of Total VOCs) and Figure 4 (Summary of Total BTEX). The majority of the VOCs that were detected were at concentrations below the NYSDEC SCOs.

The total VOC concentration SCO of 10,000 µg/kg was slightly exceeded in two samples during the November 2008 sampling event. Total VOC concentrations for these two samples were 11,207 µg/kg (SMS-12, 23.5-24.5 ft bgs), and 10,338 µg/kg (SMS-16B, 23.5-24.5 ft bgs). These two samples were collected from the soil borings in the area of the former underground storage tank (UST) shown on Figure 2 and were collected from the shallow saturated zone. In both cases, the primary COCs were 1,2,4- and 1,3,5-trimethylbenzene. The total VOCs concentration in the shallow saturated zone sample from DWB (22.5 – 23.5 ft bgs) reported a much higher concentration from January 2008 to November 2008 (229 µg/kg to 9,640 µg/kg), which likely resulted from a subtle difference in actual sample location between the two events. However, the November 2008 result remains much lower than the concentration reported during March 2007 sampling event from this location (181,540 µg/kg). This appears to be another example of how heterogeneous the contamination is at the Site; samples collected from nearby borings can show significant differences in concentrations.

BTEX concentration decreases were observed at all sampling locations when compared to the January 2008 event. Significant decreases were observed in soil samples collected from the two northern sampling points (SMS-12 and SMS-12B) and at sample location SMS-16. During the November 2008 sampling round, there was only one exceedance of a BTEX compound. Total xylenes exceeded the NYSDEC SCO of 260 µg/kg in one sample (310 µg/kg in sample SMS-16B [23.5-24.5 ft bgs]).

3.3 COMPARISON OF DATA FROM THE FOUR SAMPLING EVENTS

Table 5 presents a comparison of the VOCs results for the June 2006, March 2007, January 2008 and November 2008 soil samples. The data is also summarized on Figure 3 (total VOCs) and Figure 4 (total BTEX). These data indicate a decreasing trend in the total VOCs concentrations in the soil at four locations: SMS-12, SMS-12B and SMS-16 and SMS-16B. Only two of the samples collected in November 2008 had a total VOC concentration above 10,000 µg/kg (SMS-12, 23.5 – 24.5 ft bgs and SMS-16B, 23.5 – 24.5 ft bgs). Contamination appears to be limited to the 22 to 25 ft bgs interval. The data also indicate that residual soil contamination remains in two very small, isolated pockets as shown on Figure 5. For example, the original DW location from June 2006 indicated a total VOC concentration of 140,241 µg/kg in the 19-20 ft bgs sample interval. The two off-set borings (DW and DWB) drilled a few feet away in March 2007 had total VOC concentrations of 18 µg/kg and zero in the same depth interval. At boring location DW in the 24-25 ft bgs interval, the total VOC concentration in the June 2006 sample was 96,100 µg/kg while the total VOC concentration in the two March 2007 off-set borings (DW and DWB) had total VOC concentrations of zero and 181,540 µg/kg in the same depth interval.

The total VOC concentrations around borings SMS-12 and SMS-12B indicate a decreasing trend since 2006 and 2007 (concentrations above 100,000 µg/kg), as the concentrations from November 2008 are about 10,000 µg/kg. The November 2008 total VOC concentration at boring DW, 23.5-24.5 ft bgs (7,384 µg/kg) are similar to those from the January 2008 sampling round (6,237 µg/kg at 24-25 ft bgs). The November 2008 total VOC concentration at DWB 23.5-24.5 ft bgs was significantly higher (9,640 µg/kg) than reported during the January 2008 sampling round (229 µg/kg from 24 to 25 feet bgs), but was still below the criterion.

The isopleth map of the Total VOC concentrations in the 22.5 to 25 ft bgs interval (Figure 5) indicates that total VOC concentrations in the northern most area, SMS-12 and SMS-12B, has effectively been reduced as a function of this remedial action (concentrations are slightly above the 10,000 µg/kg criterion at SMS-12 and slightly below the criterion at SMS-12B during the November 2008 sampling round). The aerial extent of contamination at SMS-16 and SMS-16B has also effectively been reduced as the total VOC concentration at SMS-16 is less than 10 µg/kg. However, the total VOC concentration at SMS-16B remains slightly above the criterion at 10,338 µg/kg. Consequently, the 10,000 contour line area is significantly smaller than the January 2008 isopleth. These shifting isopleth lines indicate that the soil contamination in the shallow saturated soils is not a homogeneous mass but is present in small isolated pockets with significant variability in concentration.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

As presented in this report, the conversion from a PHOSter™ application to a biosparge application, and the focused approach using select injection wells, has resulted in the continual reduction in contaminant mass associated within the shallow saturated zone. As expected, BTEX compound concentrations in the areas of concern have readily deceased under aerobic conditions during the past six months, indicating that the enhancement of dissolved oxygen via biosparging has been an effective remedial optimization approach for this site. The more recalcitrant aromatics, such as the trimethylbenzene compounds, have also reported positive affects, but not to the same extent as the BTEX compounds, which are more easily degradable.

4.2 RECOMMENDATIONS

Based on the soil and groundwater results discussed above, Earth Tech recommends that biosparging be continued to focus on the limited areas (former dry well and soil boring SMS-12 locations) that were reported above the cleanup objectives for soil. Earth Tech will perform a system evaluation to continually optimize the bioremediation effort. A recommendation will be presented to NYSDEC outlining potential system modifications such as whether new injection points are needed to focus the remedial action on problem areas. The biosparging configuration will continue operations for several months followed by resampling and analysis of the soil in these final remaining areas. The next soil sampling event is tentatively scheduled for July 2009. The next five-quarter groundwater monitoring and sampling event is currently scheduled for February 2010. If the biosparging system is still in operation, the groundwater sampling event will be postponed until the biosparging system has been shut down.

TABLE 1
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING, NOVEMBER 2008
SUMMARY OF METHANOTROPHS DATA

Boring Location	SMS-12	SMS-12B	SMS-16	SMS-16B	DW	DWB
Sample ID	12 23.5-24.5	12B 23.5-24.5	16 23.5-24.5	16B 23.5-24.5	DW 23.5-24.5	DWB 23.5-24.5
Sample Date	11/18/08	11/18/08	11/18/08	11/18/08	11/19/08	11/19/08
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth (ft bgs)	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5
Units	cells/gram	cells/gram	cells/gram	cells/gram	cells/gram	cells/gram
Methanotrophs (total)	3.51E+06	5.95E+06	9.56E+06	1.66E+07	5.51E+07	1.27E+08
Type I MOB	7.85E+05	9.00E+05	6.14E+05	7.09E+06	9.52E+06	3.77E+07
Type II MOB	2.72E+06	5.05E+06	8.95E+06	9.55E+06	4.55E+07	8.83E+07

TABLE 2
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
SUMMARY OF METHANOTROPHS DATA (2006, 2007 AND 2008)

Boring Location	SMS-12	SMS-12	SMS-16	DW	DW	SMS-10	SMS-15	SMS-21
Sample ID	SMS-SB12-16-17	SMS-SB12-29-30	SMS-SB16-19-20	SMS-DW-19-20	SMS-DW-30-31	SMS-SB10-18-19	SMS-SB15-27-28	SMS-SB21-22-23
Sample Date	6/28/06	6/28/06	6/29/06	6/28/06	June 2006	6/28/06	6/29/06	6/28/06
Sample Depth (ft bgs)	16 - 17	29 - 30	19 - 20	19 - 20	30 - 31	18 - 19	27 - 28	22 - 23
Methanotrophs (total)	3.20E+07	7.37E+06	5.07E+06	2.90E+08	8.49E+05	3.77E+08	7.27E+04	2.31E+08
Type I MOB	1.56E+07	7.45E+05	1.46E+05	7.28E+07	2.52E+05	2.07E+08	1.27E+04	1.26E+08
Type II MOB	1.65E+07	6.62E+06	4.92E+06	2.17E+08	5.97E+05	1.70E+08	6.00E+04	1.05E+08

Boring Location	SMS-12	SMS-12B	SMS-16	SMS-16B	DW	DWB
Sample ID	SMS12235245	SMS12B235245	SMSSB16225235	SMSSB16B225235	SMSDW2425	SMSDWB2425
Sample Date	3/22/07	3/22/07	3/22/07	3/22/07	3/23/07	3/23/07
Sample Depth (ft bgs)	23.5 - 24.5	23.5 - 24.5	22.5 - 23.5	22.5 - 23.5	24 - 25	24 - 25
Methanotrophs (total)	2.65E+10	1.56E+10	4.67E+10	9.16E+10	7.57E+10	3.41E+10
Type I MOB	7.55E+08	8.91E+08	1.17E+10	6.20E+09	5.95E+09	3.31E+09
Type II MOB	2.58E+10	1.47E+10	4.55E+10	5.84E+10	6.97E+10	3.08E+10

Boring Location	SMS-12	SMS-12B	SMS-16	SMS-16B	DW	DWB
Sample ID	SMS12235245	SMS12B235245	SMSSB16225235	SMSSB16B225235	SMSDW2425	SMSDWB2425
Sample Date	1/16/08	1/16/08	1/16/08	1/16/08	1/17/08	1/17/08
Sample Depth (ft bgs)	23.5 - 24.5	23.5 - 24.5	22.5 - 23.5	22.5-23.5	24 - 25	24 - 25
Methanotrophs (total)	2.31E+05	2.95E+07	2.65E+07	8.57E+06	1.28E+08	1.06E+08
Type I MOB	1.15E+05	1.59E+06	1.11E+06	6.88E+05	2.60E+06	2.75E+06
Type II MOB	1.15E+05	2.79E+07	2.54E+07	7.88E+06	1.26E+08	1.03E+08

Boring Location	SMS-12	SMS-12B	SMS-16	SMS-16B	DW	DWB
Sample ID	12 23.5-24.5	12B 23.5-24.5	16 23.5-24.5	16B 23.5-24.5	DW 23.5-24.5	DWB 23.5-24.5
Sample Date	11/18/08	11/18/08	11/18/08	11/18/08	11/19/08	1/17/08
Sample Depth (ft bgs)	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5
Methanotrophs (total)	3.51E+06	5.95E+06	9.56E+06	1.66E+07	5.51E+07	1.27E+08
Type I MOB	7.85E+05	9.00E+05	6.14E+05	7.09E+06	9.52E+06	3.77E+07
Type II MOB	2.72E+06	5.05E+06	8.95E+06	9.55E+06	4.55E+07	8.83E+07

All sample units in cells/gram

TABLE 3
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
SUMMARY OF PHOSPHOLIPID FATTY ACID DATA (2006, 2007 AND 2008)

Boring Location	SMS-12	SMS-12	SMS-16	DW	DW	SMS-10	SMS-15	SMS-21
Sample ID	SMS-SB12-16-17	SMS-SB12-29-30	SMS-SB16-19-20	SMS-DW-19-20	SMS-DW-30-31	SMS-SB10-18-19	SMS-SB15-27-28	SMS-SB21-22-23
Sample Date	6/28/06	6/28/06	6/29/06	6/28/06	June 2006	6/28/06	6/29/06	6/28/06
Sample Depth (ft bgs)	16 - 17	29 - 30	19 - 20	19 - 20	30 - 31	18 - 19	27 - 28	22 - 23
Total biomass	3.30E+07	3.93E+06	3.12E+07	1.76E+08	2.17E+06	1.47E+08	2.44E+06	7.41E+07

Boring Location	SMS-12	SMS-12B	SMS-16	SMS-16B	DW	DWB
Sample ID	SMS12235245	SMS12B235245	SMSSB16225235	SMSSB16B225235	SMSDW2425	SMSDWB2425
Sample Date	3/22/07	3/22/07	3/22/07	3/22/07	3/23/07	3/23/07
Sample Depth (ft bgs)	23.5 - 24.5	23.5 - 24.5	22.5 - 23.5	22.5 - 23.5	24 - 25	24 - 25
Total biomass	9.92E+07	4.05E+07	1.26E+08	1.35E+08	1.12E+08	1.33E+08

Boring Location	SMS-12	SMS-12B	SMS-16	SMS-16B	DW	DWB
Sample ID	SMS12235245	SMS12B235245	SMSSB16225235	SMSSB16B225235	SMSDW2425	SMSDWB2425
Sample Date	1/16/08	1/16/08	1/16/08	1/16/08	1/17/08	1/17/08
Sample Depth (ft bgs)	23.5 - 24.5	23.5 - 24.5	22.5 - 23.5	22.5-23.5	24 - 25	24 - 25
Total biomass	5.58E+07	8.42E+07	1.58E+08	1.32E+08	1.12E+08	1.18E+08

Boring Location	SMS-12	SMS-12B	SMS-16	SMS-16B	DW	DWB
Sample ID	12 23.5-24.5	12B 23.5-24.5	16 23.5-24.5	16B 23.5-24.5	DW 23.5-24.5	DWB 23.5-24.5
Sample Date	11/18/08	11/18/08	11/18/08	11/18/08	11/19/08	1/17/08
Sample Depth (ft bgs)	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5	23.5 - 24.5
Total biomass	1.16E+08	1.19E+08	4.33E+07	1.61E+08	1.62E+08	1.63E+08

All sample units in cells/gram

TABLE 4
MULTI SITE G - SMS INSTRUMENTS (SITE# 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
SUMMARY OF VOLATILE ORGANIC COMPOUNDS IN SOIL, DETECTIONS ONLY (NOVEMBER 2008)

Sample Location	NYSDEC	SMS-12	SMS-12	SMS-12	SMS-12B	SMS-12B	SMS-12B	SMS-16	SMS-16	SMS-16
Sample ID	Soil	SMS-12 19-20	SMS 12 23.5-24.5	SMS 12 29-30	SMS-12B 19-20	SMS12B 23.5-24.5	SMS12B 29-30	SMS-16 19-20	16 23.5-24.5	16 29-30
Lab ID	Cleanup	G2173-03	G2173-11	G2173-12	G2173-04	G2173-13	G2173-14	G2173-05	G2173-16	G2173-17
Sample Depth (ft bgs)	Objectives	19-20	23.5-24.5	29-30	19-20	23.5-24.5	29-30	19-20	23.5-24.5	29-30
Sample Date		11/18/08	11/18/08	11/18/08	11/18/08	11/18/08	11/18/08	11/18/08	11/18/08	11/18/08
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	1.9 J	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	ND	***4,400*** D	ND	ND	2,200 D	ND	ND	2.2 J	ND
1,3,5-Trimethylbenzene	8,400	ND	3,200 D	ND	ND	4,300 D	ND	ND	3.3 J	ND
1,3-Dichlorobenzene	2,400	ND	190	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	ND	300 JD	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	NC	ND	780 D	ND	ND	900 D	ND	ND	ND	ND
Acetone	50	ND	***58***	ND	ND	***81***	ND	4.3 J	ND	7.8
Carbon disulfide	NC	ND	ND	ND	ND	4.9	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	NC	ND	200	ND	ND	32	ND	ND	ND	ND
m,p-Xylene	260	ND	8	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	50	ND	ND	11	ND	ND	13	ND	ND	ND
n-Butylbenzene	12,000	ND	1,200 D	ND	ND	1,700 D	ND	ND	ND	ND
n-Propylbenzene	3,900	ND	400 D	ND	ND	130	ND	ND	ND	ND
Naphthalene	12,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	11,000	ND	330 JD	ND	ND	170	ND	ND	ND	ND
tert-Butylbenzene	5,900	ND	130	ND	ND	120	ND	ND	ND	ND
Toluene	700	ND	11	ND	ND	ND	ND	ND	ND	ND
Xylene (Total)	260	ND	8	ND	ND	ND	ND	ND	ND	ND
Total BTEX		0	19	0	0	0	0	0	0	0
Total VOCs	<10,000	0	***11,207***	11	0	9,639.8	13	4.3	5.5	7.8
Total VOC TICs		1076 NJ	74,700 NJ	0	44.1	73,900 NJ	0	276 J	472 NJ	264 NJ

Notes: NC - No official NYSDEC Remedial Program Soil Cleanup Objective

BOLD / Italics - exceeds the NYSDEC Remedial Program Soil Cleanup Objective

J - Estimated value

D - Diluted sample

ND - Not detected

All results in µg/kg

Data validation has NOT been performed on this data

TABLE 4
MULTI SITE G - SMS INSTRUMENTS (SITE# 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
SUMMARY OF VOLATILE ORGANIC COMPOUNDS IN SOIL, DETECTIONS ONLY (NOVEMBER 2008)

Sample Location	NYSDEC	SMS-16B	SMS-16B	SMS-16B	DW	DW	DW	DWB	DWB	DWB
Sample ID	Soil	SMS-16B 19-20	16B 23.5-24.5	16B 29-30	DW 19-20	DW 23.5-24.5	DW 29-30	DWB 19-20	DWB 23.5-24.5	DWB 29-30
Lab ID	Cleanup	G2173-06	G2173-18	G2173-19	G2173-01	G2173-07	G2173-08	G2173-02	G2173-09	G2173-10
Sample Depth (ft bgs)	Objectives	19-20	23.5-24.5	29-30	19-20	23.5-24.5	29-30	19-20	23.5-24.5	29-30
Sample Date		11/18/08	11/18/08	11/18/08	11/19/08	11/19/08	11/19/08	11/19/08	11/19/08	11/19/08
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	ND	3,400 D	2.9 J	ND	130	ND	ND	***4,300*** D	ND
1,3,5-Trimethylbenzene	8,400	ND	4,700 D	3.6 J	ND	4,500 D	ND	ND	4,400 D	ND
1,3-Dichlorobenzene	2,400	ND	380 D	ND	ND	270	ND	ND	33	ND
1,4-Dichlorobenzene	1,800	ND	570 D	ND	ND	***1,900*** D	ND	ND	90	ND
4-Isopropyltoluene	NC	ND	190	ND	ND	220	ND	ND	240	ND
Acetone	50	ND	***78***	2.9 J	ND	30	ND	ND	***67***	ND
Carbon disulfide	NC	ND	3.8 J	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	59	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	NC	ND	110	ND	ND	15 J	ND	ND	33	ND
m,p-Xylene	260	ND	***310***	ND	ND	27	ND	ND	22	ND
Methylene chloride	50	ND	ND	ND	ND	ND	13	ND	ND	12
n-Butylbenzene	12,000	ND	170	ND	ND	ND	ND	ND	270	ND
n-Propylbenzene	3,900	ND	190	ND	ND	ND	ND	ND	48	ND
Naphthalene	12,000	ND	6.3 J	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	11,000	ND	71	ND	ND	52	ND	ND	83	ND
tert-Butylbenzene	5,900	ND	90	ND	ND	240	ND	ND	54	ND
Toluene	700	ND	9.9	ND	ND	ND	ND	ND	ND	ND
Xylene (Total)	260	ND	***310***	ND	ND	27	ND	ND	22	ND
Total BTEX		0	378.9	0	0	27	0	0	22	0
Total VOCs	<10,000	0	***10,338***	9.4	0	7,384	13	0	9,640	12
Total VOC TICs		0	5,780 NJ	321 J	0	83,500 NJ	0	93.1	9,430 NJ	0

Notes: NC - No official NYSDEC Remedial Program Soil Cleanup Objective

BOLD / Italics - exceeds the NYSDEC Remedial Program Soil Cleanup Objective

J - Estimated value

D - Diluted sample

ND - Not detected

All results in µg/kg

Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	SMS-10	SMS-10	SMS-10	SMS-12	SMS-12
Sample ID	Unre-	SB101819	SB102425	SB285295	B121617	B121920
Laboratory ID	strictive	E0901-10B	E0901-11B	E0901-12B	E0901-13B	F0378-01A
Sample Date	Soil	6/28/06	6/28/06	6/28/06	6/28/06	3/22/07
Sample Depth (ft bgs)	Objective	18-19	24-25	28.5-29.5	16-17	19-20
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	***320*** E	***230***	ND	ND	ND
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
2-Butanone	120	ND	ND	ND	ND	ND
Chloroform	370	ND	ND	2 J	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	4 J	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	4 J	ND	ND	ND
Xylenes (total)	260	ND	150	ND	ND	ND
Isopropylbenzene	NC	ND	ND	ND	ND	ND
n-Propylbenzene	3,900	ND	ND	ND	ND	ND
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	2,500 D	750 D	4 J	ND	ND
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	180	72	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	51	420 D	3 J	ND	ND
sec-Butylbenzene	11,000	72	ND	ND	ND	ND
4-Isopropyltoluene	NC	93	450 E	ND	ND	ND
1,3-Dichlorobenzene	2,400	270 E	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	330 DJ	ND	ND	ND	ND
n-Butylbenzene	12,000	140	620 D	ND	ND	ND
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Naphthalene	12,000	ND	4 J	ND	ND	ND
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	0	154	0	0	0
Total VOCs	<10,000	3,960	2,700	9	0	0
Total VOC TICs	NC	27,430 J	19,190 J	7,369 J	64 J	28,400 J

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	SMS-12	SMS-12	SMS-12	SMS-12	SMS-12
Sample ID	Unre-	SB121920	SMS121920	B12235245	B12235245	SB12235245
Laboratory ID	strictive	G0076-07A	G2173-03A	E0901-14B	F0378-02A	G0076-08A
Sample Date	Soil	1/16/08	11/18/08	6/28/06	3/22/07	1/16/08
Sample Depth (ft bgs)	Objective	19-20	19-20	23.5-24.5	23.5-24.5	23.5-24.5
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	ND	ND	***3,500*** E	ND	20 J
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
2-Butanone	120	7	ND	ND	ND	ND
Chloroform	370	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	ND	ND	ND	ND	93
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	ND	ND	550
Xylenes (total)	260	ND	ND	***3,800*** D	ND	***3,600***
Isopropylbenzene	NC	ND	ND	ND	ND	2,100
n-Propylbenzene	3,900	ND	ND	***7,000*** D	ND	2,800 D
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	ND	ND	***50,000*** D	260	***19,000*** D
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	ND	ND	1,800 DJ	ND	610
1,2,4-Trimethylbenzene	3,600	ND	ND	***55,000*** D	ND	***30,000*** D
sec-Butylbenzene	11,000	ND	ND	4,400 D	ND	1,600
4-Isopropyltoluene	NC	ND	ND	360 E	84	3,400 D
1,3-Dichlorobenzene	2,400	ND	ND	210	ND	1100
1,4-Dichlorobenzene	1,800	ND	ND	320 E	ND	***2,000***
n-Butylbenzene	12,000	ND	ND	***18,000*** D	ND	9,000 D
1,2 Dichlorobenzene	1,100	ND	ND	98	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	450
1,2,4-Trichlorobenzene	NC	ND	ND	2 J	ND	20 J
Naphthalene	12,000	ND	ND	3 J	ND	720
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	0	0	3,800	0	4,243
Total VOCs	<10,000	7	0	***144,493***	344	***77,063***
Total VOC TICs	NC	62 J	1,076 NJ	24,647 J	11,180 J	122,200 J

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	SMS-12	SMS-12	SMS-12	SMS-12	SMS-12
Sample ID	Unre-	SMS12235245	SB122930	B122930	SB122930	SMS122930
Laboratory ID	strictive	G2173-11A	E0901-15B	F0378-03A	G0076-09A	G2173-12A
Sample Date	Soil	11/18/08	6/28/06	3/22/07	1/16/08	11/18/08
Sample Depth (ft bgs)	Objective	23.5-24.5	29-30	29-30	29-30	29-30
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	***58***	ND	ND	ND	ND
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	11
2-Butanone	120	ND	ND	ND	25	ND
Chloroform	370	ND	3 J	ND	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	11	ND	ND	4 J	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	ND	ND	ND
Xylenes (total)	260	8	ND	ND	ND	ND
Isopropylbenzene	NC	200	ND	ND	ND	ND
n-Propylbenzene	3,900	400 D	3 J	ND	ND	ND
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	3,200 D	44	ND	ND	ND
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	130	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	***4,400*** D	72	ND	1 J	ND
sec-Butylbenzene	11,000	330 JD	ND	ND	ND	ND
4-Isopropyltoluene	NC	780 D	40	ND	ND	ND
1,3-Dichlorobenzene	2,400	190	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	300 JD	ND	ND	ND	ND
n-Butylbenzene	12,000	1,200 D	240	ND	ND	ND
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Naphthalene	12,000	ND	4 J	ND	ND	ND
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	19	0	0	4	0
Total VOCs	<10,000	***11,207***	406	0	30	11
Total VOC TICs	NC	74,700 NJ	1,182 J	ND	7 J	0

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	SMS-12B	SMS-12B	SMS-12B	SMS-12B	SMS-12B
Sample ID	Unre-	B12B1920	SB12B1920	SMS12B1920	B12B235245	SB12B235245
Laboratory ID	strictive	F0378-04A	G0076-10A	G2173-04A	F0378-05A	G0076-11A
Sample Date	Soil	3/22/07	1/16/08	11/18/08	3/22/07	1/16/08
Sample Depth (ft bgs)	Objective	19-20	19-20	19-20	23.5-24.5	23.5-24.5
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	ND	ND	ND	ND	ND
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
2-Butanone	120	ND	ND	ND	ND	ND
Chloroform	370	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	77
Bromodichloromethane	NC	ND	ND	ND	ND	250
Toluene	700	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	16,000 E
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	ND	ND	ND
Xylenes (total)	260	ND	ND	ND	***1,200***	52 J
Isopropylbenzene	NC	ND	ND	ND	2,300 D	300
n-Propylbenzene	3,900	ND	ND	ND	***4,600*** D	720
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	ND	ND	ND	***32,000*** D	3,100 D
4-Chlorotoluene	NC	ND	ND	ND	ND	21 J
tert-Butylbenzene	5,900	ND	ND	ND	ND	360
1,2,4-Trimethylbenzene	3,600	ND	ND	ND	***51,000*** D	3,300 D
sec-Butylbenzene	11,000	ND	ND	ND	3,400 D	900
4-Isopropyltoluene	NC	ND	ND	ND	4,700 D	1,600
1,3-Dichlorobenzene	2,400	ND	ND	ND	ND	120
1,4-Dichlorobenzene	1,800	ND	ND	ND	ND	100
n-Butylbenzene	12,000	ND	ND	ND	***15,000*** D	2,400 D
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	460
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Naphthalene	12,000	ND	ND	ND	160	71
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	0	0	0	1,200	52
Total VOCs	<10,000	0	0	0	***114,360***	***29,831***
Total VOC TICs	NC	ND	8 J	44.1	37,700 J	20,000 J

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	SMS-12B	SMS-12B	SMS-12B	SMS-12B	SMS-15
Sample ID	Unre-	SMS12B235245	B12B2930	SB12B2930	SMS12B2930	B15165175
Laboratory ID	strictive	G2173-13A	F0378-06A	G0076-12A	G2173-14A	E0901-19B
Sample Date	Soil	11/18/08	3/22/07	1/16/08	11/18/08	6/28/06
Sample Depth (ft bgs)	Objective	23.5-24.5	29-30	29-30	29-30	16.5-17.5
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	***81***	ND	ND	ND	ND
Carbon Disulfide*	NC	4.9	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	13	ND
2-Butanone	120	ND	ND	8	ND	ND
Chloroform	370	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	ND	ND	2 J	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	ND	ND	ND
Xylenes (total)	260	ND	ND	ND	ND	ND
Isopropylbenzene	NC	32	ND	ND	ND	ND
n-Propylbenzene	3,900	130	ND	ND	ND	ND
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	4,300 D	ND	2 J	ND	ND
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	120	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	2,200 D	ND	1 J	ND	ND
sec-Butylbenzene	11,000	170	ND	ND	ND	ND
4-Isopropyltoluene	NC	900 D	ND	ND	ND	ND
1,3-Dichlorobenzene	2,400	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	ND	ND	ND	ND	ND
n-Butylbenzene	12,000	1,700 D	ND	ND	ND	ND
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	1.9 J	ND	ND	ND	ND
Naphthalene	12,000	ND	ND	ND	ND	4 JB
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	0	0	2	0	0
Total VOCs	<10,000	9,639.8	0	13	13	4
Total VOC TICs	NC	73,900 NJ	ND	346 J	0	ND

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	SMS-15	SMS-15	SMS-16	SMS-16	SMS-16
Sample ID	Unre-	B152223	B152728	B16165175	SB161920	B161920
Laboratory ID	strictive	E0901-20B	E0901-22B	E0901-16B	E0901-21B	F0378-11A
Sample Date	Soil	6/28/06	6/28/06	6/29/06	6/29/06	3/22/07
Sample Depth (ft bgs)	Objective	22-23	27-28	16.5-17.5	19-20	19-20
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	ND	ND	ND	ND	ND
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
2-Butanone	120	ND	ND	ND	ND	ND
Chloroform	370	ND	ND	2 J	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	26 J
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	ND	ND	ND
Xylenes (total)	260	ND	ND	ND	ND	ND
Isopropylbenzene	NC	ND	ND	ND	ND	ND
n-Propylbenzene	3,900	ND	ND	ND	ND	ND
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	ND	ND	4 J	ND	70
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	ND	ND	6	ND	51 J
sec-Butylbenzene	11,000	ND	ND	ND	ND	ND
4-Isopropyltoluene	NC	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	2,400	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	ND	ND	ND	ND	ND
n-Butylbenzene	12,000	ND	ND	7	ND	ND
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Naphthalene	12,000	3 JB	ND	ND	ND	ND
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	0	0	0	0	0
Total VOCs	<10,000	3	0	19	0	147
Total VOC TICs	NC	ND	ND	163 J	ND	42,000 J

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	SMS-16	SMS-16	SMS-16	SMS-16	SMS-16
Sample ID	Unre-	SB161920	SMS-16 19-20	SB1622.523.5	B16235245	SB16235245
Laboratory ID	strictive	G0076-04A	G2173-05A	E0901-17B	F0378-12A	G0076-05A
Sample Date	Soil	1/16/08	11/18/08	6/29/06	3/22/07	1/16/08
Sample Depth (ft bgs)	Objective	19-20	19-20	22.5-23.5	23.5-24.5	23.5-24.5
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	ND	4.3 J	***960***	47	***690***
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
2-Butanone	120	7	ND	ND	ND	***370***
Chloroform	370	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	300 J
Toluene	700	1 J	ND	ND	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	20,000 E
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	***2,100*** E	ND	570
Xylenes (total)	260	ND	ND	***13,000*** D	ND	***4,500***
Isopropylbenzene	NC	ND	ND	1,400 DJ	ND	660
n-Propylbenzene	3,900	ND	ND	1,200 E	ND	1,200
2-Chlorotoluene	NC	ND	ND	ND	ND	93 J
1,3,5-Trimethylbenzene	8,400	ND	ND	***24,000*** D	120	***17,000*** D
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	ND	ND	ND	ND	660
1,2,4-Trimethylbenzene	3,600	ND	ND	***32,000*** D	55	***15,000*** D
sec-Butylbenzene	11,000	ND	ND	1,000	ND	1,300
4-Isopropyltoluene	NC	ND	ND	ND	ND	2,200
1,3-Dichlorobenzene	2,400	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	ND	ND	1,800 E	ND	***2,600***
n-Butylbenzene	12,000	ND	ND	1,700 E	ND	5,700
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Naphthalene	12,000	ND	ND	130	ND	2,100
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	1	0	15,100	0	5,070
Total VOCs	<10,000	8	4.3	***79,290***	222	***74,943***
Total VOC TICs	NC	7 J	276 J	35,950 J	33,300 J	171,200 J

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
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J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	SMS-16	SMS-16	SMS-16	SMS-16	SMS-16
Sample ID	Unre-	16 23.5-24.5	SB162930	B162930	SB162930	16 29-30
Laboratory ID	strictive	G2173-16A	E0901-18B	F0378-13A	G0076-06A	G2173-17A
Sample Date	Soil	11/18/08	6/29/06	3/22/07	1/16/08	11/18/08
Sample Depth (ft bgs)	Objective	23.5-24.5	29-30	29-30	29-30	29-30
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	ND	ND	ND	ND	7.8
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
2-Butanone	120	ND	ND	ND	16	ND
Chloroform	370	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	ND	ND	ND
Xylenes (total)	260	ND	ND	ND	ND	ND
Isopropylbenzene	NC	ND	ND	ND	ND	ND
n-Propylbenzene	3,900	ND	ND	ND	ND	ND
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	3.3 J	ND	ND	ND	ND
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	2.2 J	ND	ND	ND	ND
sec-Butylbenzene	11,000	ND	ND	ND	ND	ND
4-Isopropyltoluene	NC	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	2,400	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	ND	ND	ND	ND	ND
n-Butylbenzene	12,000	ND	ND	ND	ND	ND
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Naphthalene	12,000	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	0	0	0	0	0
Total VOCs	<10,000	5.5	0	0	16	7.8
Total VOC TICs	NC	472 NJ	ND	ND	114 J	264 NJ

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	SMS-16B	SMS-16B	SMS-16B	SMS-16B	SMS-16B
Sample ID	Unre-	B16B1920	SB16B1920	SMS16B19-20	B16B225235	SB16B225235
Laboratory ID	strictive	F0378-07A	G0076-01A	G2173-06A	F0378-08A	G0076-02A
Sample Date	Soil	3/22/07	1/16/08	11/18/08	3/22/07	1/16/08
Sample Depth (ft bgs)	Objective	19-20	19-20	19-20	22.5-23.5	22.5-23.5
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	ND	ND	ND	ND	ND
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
2-Butanone	120	ND	12	ND	ND	33 J
Chloroform	370	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	30 J
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	ND	ND	ND	ND	27 J
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	ND	ND	45 J
Xylenes (total)	260	ND	ND	ND	50 J	***380***
Isopropylbenzene	NC	ND	ND	ND	ND	85
n-Propylbenzene	3,900	ND	ND	ND	ND	ND
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	ND	ND	ND	480	***8,700*** D
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	ND	ND	ND	ND	240
1,2,4-Trimethylbenzene	3,600	ND	ND	ND	300	1,100
sec-Butylbenzene	11,000	ND	ND	ND	ND	250
4-Isopropyltoluene	NC	ND	ND	ND	120	750
1,3-Dichlorobenzene	2,400	ND	ND	ND	ND	300
1,4-Dichlorobenzene	1,800	ND	ND	ND	ND	680
n-Butylbenzene	12,000	ND	ND	ND	ND	1,200
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Naphthalene	12,000	ND	ND	ND	ND	110
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	0	0	0	50	452
Total VOCs	<10,000	0	12	0	950	***13,930***
Total VOC TICs	NC	8,120 J	5 J	0	104,500 J	195,000 J

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	SMS-16B	SMS-16B	SMS-16B	SMS-16B	SMS-21
Sample ID	Unre-	16B 23.5-24.5	B16B2930	SB16B2930	16B 29-30	B211920
Laboratory ID	strictive	G2173-18A	F0378-09A	G0076-03A	G2173-19A	E0901-06B
Sample Date	Soil	11/18/08	3/22/07	1/16/08	11/18/08	6/28/06
Sample Depth (ft bgs)	Objective	23.5-24.5	29-30	29-30	29-30	19-20
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	***78***	ND	ND	2.9 J	ND
Carbon Disulfide*	NC	3.8 J	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
2-Butanone	120	ND	ND	18	ND	ND
Chloroform	370	ND	ND	ND	ND	2 J
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	9.9	ND	2 J	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	59	ND	ND	ND	ND
Xylenes (total)	260	***310***	ND	ND	ND	3 J
Isopropylbenzene	NC	110	ND	ND	ND	ND
n-Propylbenzene	3,900	190	ND	ND	ND	ND
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	4,700 D	ND	ND	3.6 J	ND
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	90	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	3,400 D	ND	ND	2.9 J	ND
sec-Butylbenzene	11,000	71	ND	ND	ND	ND
4-Isopropyltoluene	NC	190	ND	ND	ND	ND
1,3-Dichlorobenzene	2,400	380 D	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	570 D	ND	ND	ND	3 J
n-Butylbenzene	12,000	170	ND	ND	ND	ND
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Naphthalene	12,000	6.3 J	ND	ND	ND	ND
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	379	0	2	0	3
Total VOCs	<10,000	***10,338***	0	20	9.4	8
Total VOC TICs	NC	5,780 NJ	ND	857 J	321	ND

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	SMS-21	SMS-21	DW	DW	DW
Sample ID	Unre-	B212223	B212930	DW-1920	DW-1920	DW-1920
Laboratory ID	strictive	E0901-07B	E0901-09B	E0901-01B	F0378-15A	G0076-17A
Sample Date	Soil	6/28/06	6/28/06	6/28/06	3/23/07	1/17/08
Sample Depth (ft bgs)	Objective	22-23	29-30	19-20	19-20	19-20
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	***110***	ND	***66***	ND	ND
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
2-Butanone	120	ND	ND	ND	ND	ND
Chloroform	370	ND	ND	18 J	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	6	ND	ND	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	37	ND	ND
Ethylbenzene	1,000	ND	ND	400	ND	ND
Xylenes (total)	260	ND	ND	***20,000*** D	ND	ND
Isopropylbenzene	NC	ND	ND	210	ND	ND
n-Propylbenzene	3,900	140	ND	280	ND	ND
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	300 DJ	ND	***34,000*** D	ND	ND
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	170 DJ	ND	***22,000*** D	ND	ND
sec-Butylbenzene	11,000	190	ND	300	ND	ND
4-Isopropyltoluene	NC	360 E	ND	1,000	ND	ND
1,3-Dichlorobenzene	2,400	ND	ND	***8,700*** D	ND	ND
1,4-Dichlorobenzene	1,800	ND	ND	***41,000*** D	ND	ND
n-Butylbenzene	12,000	490 D	ND	ND	ND	ND
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	10,000 D	ND	ND
Naphthalene	12,000	ND	ND	1,900 D	18 J	ND
1,2,3-Trichlorobenzene	NC	ND	ND	330	ND	ND
Total BTEX	NC	6	0	20,400	0	0
Total VOCs	<10,000	1,766	0	***140,241***	18	0
Total VOC TICs	NC	21,130 J	ND	63,300 J	2,270 J	83 J

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	DW	DW	DW	DW	DW
Sample ID	Unre-	DW 19-20	DW215225	DW-2425	DW-2425	DW-2425
Laboratory ID	strictive	G2173-01A	E0901-03B	E0901-04B	F0378-16A	G0076-18A
Sample Date	Soil	11/19/08	6/28/06	6/28/06	3/23/07	1/17/08
Sample Depth (ft bgs)	Objective	19-20	21.5-22.5	24-25	24-25	24-25
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	ND	***70***	ND	ND	ND
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
2-Butanone	120	ND	ND	ND	ND	ND
Chloroform	370	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	2 J	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	ND	8	ND	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	130	***3,700***	ND	56 J
Xylenes (total)	260	ND	***3400*** D	***33,000***	ND	***630***
Isopropylbenzene	NC	ND	130	1,900	ND	60
n-Propylbenzene	3,900	ND	93	2,400	ND	ND
2-Chlorotoluene	NC	ND	72	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	ND	***9700*** D	***17,000***	ND	2,000
4-Chlorotoluene	NC	ND	ND	ND	ND	94
tert-Butylbenzene	5,900	ND	ND	600 J	ND	100
1,2,4-Trimethylbenzene	3,600	ND	***7800*** D	***30,000***	ND	1,100
sec-Butylbenzene	11,000	ND	100	1,800	ND	200
4-Isopropyltoluene	NC	ND	170	ND	ND	410
1,3-Dichlorobenzene	2,400	ND	140	ND	ND	ND
1,4-Dichlorobenzene	1,800	ND	***4600*** D	***3,900***	ND	440
n-Butylbenzene	12,000	ND	ND	ND	ND	990
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	86
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Naphthalene	12,000	ND	69	1,800	ND	71 B
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	0	3,538	36,700	0	686
Total VOCs	<10,000	0	***26,484***	***96,100***	0	6,237
Total VOC TICs	NC	0	17,426 J	950,800 J	474 J	96,300 J

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	DW	DW	DW	DW	DW
Sample ID	Unre-	DW-23.5-24.5	DW-2930	DW-2930	DW 29-30	DW-3031
Laboratory ID	strictive	G2173-07A	F0378-17A	G0076-19A	G2173-08A	E0901-05B
Sample Date	Soil	11/19/08	3/23/07	1/17/08	11/19/08	6/28/06
Sample Depth (ft bgs)	Objective	23.5-24.5	29-30	29-30	29-30	30-31
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	30	ND	ND	ND	ND
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	13	ND
2-Butanone	120	ND	ND	8	ND	ND
Chloroform	370	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	ND	ND	2 J	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	ND	ND	ND
Xylenes (total)	260	27	ND	ND	ND	ND
Isopropylbenzene	NC	15 J	ND	ND	ND	ND
n-Propylbenzene	3,900	ND	ND	ND	ND	ND
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	4,500 D	ND	ND	ND	ND
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	240	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	130	2 J	ND	ND	ND
sec-Butylbenzene	11,000	52	ND	ND	ND	ND
4-Isopropyltoluene	NC	220	ND	ND	ND	ND
1,3-Dichlorobenzene	2,400	270	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	***1,900 D***	ND	ND	ND	ND
n-Butylbenzene	12,000	ND	ND	ND	ND	ND
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Naphthalene	12,000	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	27	0	2	0	0
Total VOCs	<10,000	7,384	2	10	13	0
Total VOC TICs	NC	83,500 NJ	159 J	ND	ND	ND

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

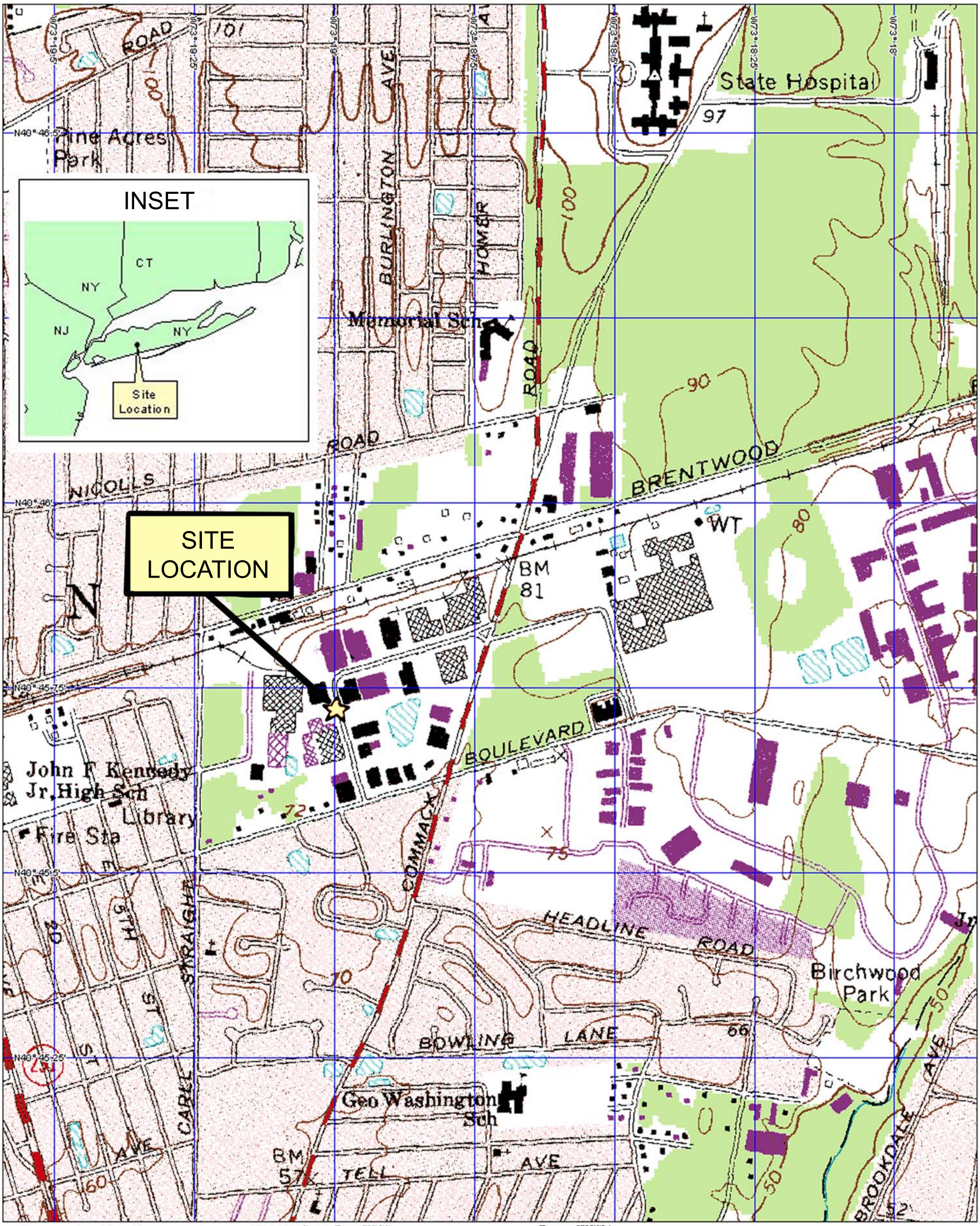
Sample Location	NYSDEC	DWB	DWB	DWB	DWB	DWB
Sample ID	Unre-	DWB-1920	DWB-1920	DWB 19-20	DWB-2425	DWB-2425
Laboratory ID	strictive	F0378-18A	G0076-14A	G2137-02A	F0378-19A	G0076-15A
Sample Date	Soil	3/23/07	1/17/08	11/19/08	3/23/07	1/17/08
Sample Depth (ft bgs)	Objective	19-20	19-20	19-20	24-25	24-25
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	ND	ND	ND	ND	3 J
Carbon Disulfide*	NC	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
2-Butanone	120	ND	3 J	ND	ND	6
Chloroform	370	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	ND	ND	1 J
Bromodichloromethane	NC	ND	ND	ND	ND	ND
Toluene	700	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	ND	***3,100*** D	ND
Xylenes (total)	260	ND	ND	ND	***23,000*** D	9
Isopropylbenzene	NC	ND	ND	ND	5,200 D	1 J
n-Propylbenzene	3,900	ND	ND	ND	***10,000*** D	ND
2-Chlorotoluene	NC	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	ND	ND	ND	***41,000*** D	75
4-Chlorotoluene	NC	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	ND	ND	ND	ND	3 J
1,2,4-Trimethylbenzene	3,600	ND	ND	ND	***73,000*** D	76
sec-Butylbenzene	11,000	ND	ND	ND	2,200 E	5 J
4-Isopropyltoluene	NC	ND	ND	ND	4,700 D	13
1,3-Dichlorobenzene	2,400	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	ND	ND	ND	1,400	5 J
n-Butylbenzene	12,000	ND	ND	ND	***17,000*** D	29
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Naphthalene	12,000	ND	ND	ND	940	3 JB
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND	ND
Total BTEX	NC	0	0	0	26,100	9
Total VOCs	<10,000	0	3	0	***181,540***	229
Total VOC TICs	NC	1,179 J	39 J	0	9,660 J	7,080 J

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data

TABLE 5
MULTI SITE G - SMS INSTRUMENTS (SITE # 1-52-026)
PHOSTER SYSTEM SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS, DETECTIONS ONLY
COMPARISON OF JUNE 2006, MARCH 2007, JANUARY 2008 AND NOVEMBER 2008 DATA

Sample Location	NYSDEC	DWB	DWB	DWB	DWB
Sample ID	Unre-	DWB 23.5-24.5	DWB-2930	DWB-2930	DWB 29-30
Laboratory ID	strictive	G2173-09A	F0378-20A	G0076-16A	G2173-10A
Sample Date	Soil	11/19/08	3/23/07	1/17/08	11/19/08
Sample Depth (ft bgs)	Objective	23.5 - 24.5	29-30	29-30	29-30
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	50	***67***	ND	ND	ND
Carbon Disulfide*	NC	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	12
2-Butanone	120	ND	ND	ND	ND
Chloroform	370	ND	ND	ND	ND
1,1,1-Trichloroethane	680	ND	ND	ND	ND
Trichloroethene	470	ND	ND	ND	ND
1,2-Dichloropropane	NC	ND	ND	4 J	ND
Bromodichloromethane	NC	ND	ND	ND	ND
Toluene	700	ND	ND	ND	ND
1,1,2-Trichloroethane	NC	ND	ND	ND	ND
Chlorobenzene	1,100	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	ND	ND
Xylenes (total)	260	22	ND	ND	ND
Isopropylbenzene	NC	33	ND	ND	ND
n-Propylbenzene	3,900	48	ND	ND	ND
2-Chlorotoluene	NC	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	4,400 D	ND	ND	ND
4-Chlorotoluene	NC	ND	ND	ND	ND
tert-Butylbenzene	5,900	54	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	***4,300*** D	ND	ND	ND
sec-Butylbenzene	11,000	83	ND	ND	ND
4-Isopropyltoluene	NC	240	ND	ND	ND
1,3-Dichlorobenzene	2,400	33	ND	ND	ND
1,4-Dichlorobenzene	1,800	90	ND	ND	ND
n-Butylbenzene	12,000	270	ND	ND	ND
1,2 Dichlorobenzene	1,100	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NC	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND
Naphthalene	12,000	ND	ND	ND	ND
1,2,3-Trichlorobenzene	NC	ND	ND	ND	ND
Total BTEX	NC	22	0	0	0
Total VOCs	<10,000	9,640	0	4	12
Total VOC TICs	NC	9,430 NJ	51 J	7 J	0

Notes:
Soil cleanup objectives taken from 6 NYCRR Part 375-6.8(a)
NC - No Soil Cleanup Objective
BOLD/ITALICS - exceeds the unrestricted Soil Cleanup Objective
J - Estimated value
E - Result exceeds the calibration range, estimated value
D - Diluted sample
Data validation has NOT been performed on this data



Scale 1:12,800

350 FT

N

SOURCE:
Delorme 3-D TopoQuads
Greenlawn, NY
New York
7.5 Minute Series, 1979

Figure 1 - Site Location

SMS INSTRUMENTS
SITE #1-52-026
MULTI SITE G
120 MARCUS BLVD
DEERPARK, NY

EARTH TECH

SMS Instruments

SMS-23
SMS-13
SMS-22
SMS-17
SMS-15
SMS-12
SMS-12B
SMS-24
SMS-10
SMS-19
AS-10
SVE-C
SMS-18
SMS-16
SMS-7
SVE-A
SMS-16B
AS-12
SMS-21
AS-11
SMS-20
SVE-B
AS-8
AS-9
SMS-8
SMS-6
SMS-1
SVE-D
AS-7
AS-6
DWB
AS-4
AS-5
EW-3
SMS-2
SVE-F
SMS-9
AS-1
SVE-E
MW-6S
SVE-H
SVE-G
MW-6D
MW-5
DW
SMS-5
AS-2
AS-3
SMS-3
SMS-4
SMS-14
SMS-11

JIM-MAR

20 0 20 40 Feet

LEGEND

- Previous Borings
- SMS-16 — New Soil Borings (each new location was offset by 1-2 ft from the previous location).
- Air Sparge and Soil Vapor Extraction Point
- Monitoring Wells
- Extraction Well

Prepared by : EARTH TECH

SUBMITTED BY : PK	MULTI SITE G - SMS INSTRUMENTS SITE SITE NO. 1-52-026		
DRAWN BY : VM	SOIL BORING LOCATION		
APPROVED BY : PK	DATE : NOVEMBER 2008	SCALE : AS SHOWN	DRAWING NO. : 2

SMS Instruments

SMS-12	Jun 2006	Mar 2007	Jan 2008	Nov 2008
16-17	ND	–	–	–
19-20	–	ND	7	ND
23.5-24.5	144,493	344	77,063	11,207
29-30	406	ND	30	11

SMS-15	Jun 2006
16.5-17.5	4
22-23	3
27-28	ND

SMS-12B	Mar 2007	Jan 2008	Nov 2008
19-20	ND	ND	ND
23.5-24.5	114,360	29,831	9,640
29-30	ND	13	13

SMS-16	Jun 2006	Mar 2007	Jan 2008	Nov 2008
16.5-17.5	19	–	–	–
19-20	ND	147	8	4.3
22.5-23.5	79,290	–	–	–
23.5-24.5	–	222	74,943	5.5
29-30	ND	ND	16	7.8

SMS-10	Jun 2006
18-19	3,960
24-25	2,700
28.5-29.5	9

SMS-16B	Mar 2007	Jan 2008	Nov 2008
19-20	ND	12	ND
22.5-23.5	950	13,900	–
23.5-24.5	–	–	10,338
29-30	ND	20	9.4

DWB	Mar 2007	Jan 2008	Nov 2008
19-20	ND	3	ND
23.5-24.5	–	–	9,640
24-25	181,540	229	–
29-30	ND	4	12

SMS-21	Jun 2006
19-20	8
22-23	1,766
29-30	ND

DW	Jun 2006	Mar 2007	Jan 2008	Nov 2008
19-20	140,241	18	ND	ND
21.5-22.5	26,284	–	–	–
23.5-24.5	–	–	–	7,384
24-25	96,100	ND	6,237	–
29-30	–	2	10	13
30-31	ND	–	–	–

SMS-23 SMS-13 SMS-22 SMS-12 SMS-15 SMS-17 SMS-12B SMS-24 SMS-10 SMS-19 SMS-18 SVE-C SMS-7 SVE-A AS-10 AS-12 SMS-16 SMS-16B SMS-21 AS-11 SMS-20 SVE-B AS-8 AS-9 SMS-8 SMS-6 SMS-1 SVE-D AS-7 AS-6 AS-4 AS-5 DWB SMS-2 EW-3 SVE-F SMS-9 AS-1 SVE-E MW-6S SVE-H SVE-G MW-6D MW-5 DW SMS-5 AS-2 AS-3 SMS-3 SMS-4 SMS-14 SMS-11 JIM-MAR

20 0 20 40 Feet

LEGEND

- ○ Previous Borings
- ● SMS-16 New Soil Borings (each new location was offset by 1-2 ft from the previous location).
- △ Air Sparge and Soil Vapor Extraction Point
- ⊕ Monitoring Wells
- ⊕ Extraction Well

All Concentration in µg/kg

Prepared by : EARTH TECH

SUBMITTED BY : PK

DRAWN BY : VM

APPROVED BY : PK

MULTI SITE G - SMS INSTRUMENTS SITE
SITE NO. 1-52-026

SUMMARY OF VOCs IN SOIL

DATE : NOVEMBER 2008

SCALE : AS SHOWN

DRAWING NO. : 3

N

SMS Instruments

SMS-12	2006	2007	JAN 2008	NOV 2008
16-17	ND	-	-	-
19-20	-	ND	ND	ND
23.5-24.5	3,800	ND	4,243	19
29-30	ND	ND	ND	ND

SMS-12B	2007	JAN 2008	NOV 2008
19-20	ND	ND	ND
23.5-24.5	1,200	52	ND
29-30	ND	ND	ND

SMS-16	2006	2007	JAN 2008	NOV 2008
16.5-17.5	ND	-	-	-
19-20	-	ND	ND	ND
22.5-23.5	15,100	-	-	-
23.5-24.5	-	ND	5,070	ND
29-30	ND	ND	ND	ND

SMS-16B	2007	JAN 2008	NOV 2008
19-20	ND	ND	ND
23.5-24.5	50	425	378.9
29-30	ND	ND	ND

DWB	2007	JAN 2008	NOV 2008
19-20	ND	ND	ND
23.5-24.5	-	-	22
24-25	26,100	9	-
29-30	ND	ND	ND

SMS-10	2006
18-19	ND
24-25	154
28.5-29.5	ND

SMS-15	2006
16.5-17.5	ND
22-23	ND
27-28	ND

SMS-21	2006
19-20	3
22-23	6
29-30	ND

DW	2006	2007	JAN 2008	NOV 2008
19-20	20,400	ND	ND	ND
21.5-22.5	3,538	-	-	-
23.5-24.5	-	-	-	27
24-25	36,700	ND	686	-
29-30	-	ND	ND	ND
30-31	ND	-	-	-

SMS-23 SMS-13 SMS-22 SMS-12 SMS-15 SMS-17 SMS-12B SMS-24 SMS-10 SMS-19 AS-10 SVE-C SMS-18 SMS-16 SMS-7 SVE-A SMS-16B AS-12 SMS-21 AS-11 SMS-20 SVE-B AS-8 SMS-8 AS-9 SMS-6 SMS-1 AS-7 SVE-D AS-6 DWB AS-4 AS-5 SMS-2 EW-3 SVE-F AS-1 SVE-E MW-6S SVE-H SVE-G MW-6D MW-5 DW SMS-5 AS-2 AS-3 SMS-3 SMS-4 SMS-14 SMS-11 JIM-MAR

20 0 20 40 Feet

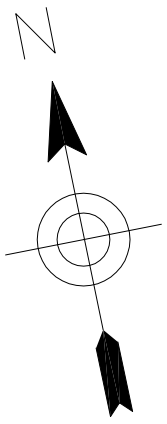
LEGEND

- ○ Previous Borings
- ● SMS-16 New Soil Borings (each new location was offset by 1-2 ft from the previous location).
- △ Air Sparge and Soil Vapor Extraction Point
- ⊕ Monitoring Wells
- ⊕ Extraction Well

All Concentration in µg/kg

Prepared by : EARTH TECH

SUBMITTED BY : PK	MULTI SITE G - SMS INSTRUMENTS SITE SITE NO. 1-52-026 **SUMMARY OF BTEX IN SOIL**
DRAWN BY : VM	
APPROVED BY : PK	DATE : NOVEMBER 2008 / SCALE : AS SHOWN / DRAWING NO. : 4



SMS Instruments

SMS-23
SMS-13
SMS-22
SMS-17
SMS-15
10,000
10,000
SMS-12
SMS
100,000
10,000
100,000
SMS-24
SMS-10
SMS-19
10,000
10,000
AS-10
SVE-C
SMS-18
SMS-16
SMS-7
SVE-A
SMS-16B
10,000
AS-12
10,000
AS-11
SMS-21
SMS-20
SVE-B
AS-8
10,000
10,000
SMS-8
AS-9
SMS-6
SMS-1
100,000
AS-7
SVE-D
AS-6
DWB
AS-4
AS-5
SMS-2
EW-3
SVE-F
AS-1
SMS-9
SVE-E
MW-6S
SVE-H
SVE-G
MW-6D
MW-5
DW
SMS-5
AS-2
AS-3
SMS-3
SMS-4
SMS-14
SMS-11

JIM-MAR

20 0 20 40 Feet

LEGEND

- Previous Borings
- SMS-16 — New Soil Borings (each new location was offset by 1-2 ft from the previous location).
- Air Sparge and Soil Vapor Extraction Point
- Monitoring Wells
- Extraction Well

10,000 JUNE 2006

10,000 MARCH 2007

10,000 JANUARY 2008

10,000 NOVEMBER 2008

10,000 Concentration Isopleth in µg/kg Total VOCs RSCO is 10,000 µg/kg

Prepared by : EARTH TECH

SUBMITTED BY : PK	MULTI SITE G - SMS INSTRUMENTS SITE SITE NO. 1-52-026
DRAWN BY : VM	**TOTAL VOCs ISOPLETH MAP** 22.5-25.0 FT INTERVAL
APPROVED BY : PK	JUNE 2006, MARCH 2007, JANUARY 2008 & NOVEMBER 2008
DATE : NOVEMBER 2008	SCALE : AS SHOWN
DRAWING NO. : 5	

Appendix A

Soil Boring Logs
November 2008 Soil Boring Event

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DIRECT PUSH BORING LOG

Boring No.: SB-12

PROJECT: SMS Instruments			PAGE 1 OF 2	
PROJECT No.: 95900	CONTRACTOR: LAWES		DATE:	11/18/08
LOCATION: Deer Park, NY	DRILLERS NAME:	Scott	ET REP.:	KS
WATER LEVELS	DESIGNATION OF DRILL RIG:	Geoprobe 66 DT		
DATE / TIME / DEPTH	SIZE AND TYPE OF EQUIPMENT:			
	REFERENCE ELEVATION:	DEPTH OF BOREHOLE:	30	
	THICKNESS OF OVERBURDEN:	DISPOSITION OF BOREHOLE:		
LABORATORY ANALYSES: VOCs, methanotrophs				

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
			0	Asphalt angular large gravel, coarse medium brown sand
1			0	Angular gravel and dark brown coarse sand
2			0	Medium and coarse tan sand
3			0	
4			0	Medium reddish brown sand and rounded gravel
5		0		
6			0	Medium, coarse tan sand with rounded angular gravel
7				
8				
9			0	
10			0.0	
		0		
11			0.0	
12			0.0	Pale tan/white medium and fine sand with medium rounded gravel
13			0	
14				
15			1.8	
		0		
16				
			0	Pale tan coarse sand with rounded gravel with reddish mottles
17				
18			1.8	
			0	
19			18	Saturated grey coarse sand with mixed gravel
20	910		27	**Collect sample SB12-19-20**

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DIRECT PUSH BORING LOG

Boring No.: SB-12

PROJECT: SMS Instruments

PROJECT No.: 95900

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
20				
21		0		
22			74.0 591	Medium coarse grey sand with gravel, saturated, black stain
23			211	
24			371.0	Large grey gravel with coarse sand
25	923			**Collect sample SB12-23.5-24.5**
26			20 1.6	Saturated mixed sand with large angular gravel, light tan
27			2.4	
28			0	
29			0.0	
30	938			**Collect sample SB12-29-30**
31				End of boring
42				
33				
34				
35				
36				
37				
38				
39				
40				

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DIRECT PUSH BORING LOG

Boring No.: SB-12 B

PROJECT: SMS Instruments				PAGE 1 OF 2	
PROJECT No.: 95900		CONTRACTOR: LAWES		DATE:	11/18/08
LOCATION: Deer Park, NY		DRILLERS NAME:	Scott	ET REP.:	KS
WATER LEVELS		DESIGNATION OF DRILL RIG:	Geoprobe 66 DT		
DATE	TIME	DEPTH	SIZE AND TYPE OF EQUIPMENT:		
			REFERENCE ELEVATION:	DEPTH OF BOREHOLE:	30
			THICKNESS OF OVERBURDEN:	DISPOSITION OF BOREHOLE:	
LABORATORY ANALYSES: VOCs, methanotrophs					

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
				Hand augered to 5 Feet
1		5.0	0	Asphalt, large gravel with coarse dark brown sand
2				
3				
4				
5			0	Medium and coarse tan sand with large rounded gravel
6		5.0		
7			0	
8			0	
9			1.2	
10				
11		0	2.2	
12		4.0	13	Coarse pale tan sand with rounded gravel and reddish grey /mottling
13			16	
14			24	
15				
16		0		
17		3.5	3.3	Coarse tan gravel with coarse sand
18			10 5.4	
19			5.2	Gravel with coarse tan sand, saturated
20	1108			**collect sample SB-12B-19-20**

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DIRECT PUSH BORING LOG

Boring No.: SB-12 B

PROJECT: SMS Instruments

PROJECT No.: 95900

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
20				
21		0		
22			402.0	Coarse grey fine sand with rounded gravel
23			597 897	
24			1638.0	Rounded gravel, coarse sand, stained with odor
25	1120			**collect sample SB-12B-23.5-24.5**
26		5.0	18 22.0	Saturated coarse tan sand with gravel
27			16.0	
28			20	
29			17.0	
30	1134			**collect sample SB-12B-29-30**
31				End of boring
42				
33				
34				
35				
36				
37				
38				
39				
40				

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DIRECT PUSH BORING LOG

Boring No.: SB-16

PROJECT: SMS Instruments				PAGE 1 OF 2	
PROJECT No.: 95900		CONTRACTOR: LAWES		DATE:	11/18/08
LOCATION: Deer Park, NY		DRILLERS NAME:	Scott	ET REP.:	KS
WATER LEVELS		DESIGNATION OF DRILL RIG:	Geoprobe 66 DT		
DATE	TIME	DEPTH	SIZE AND TYPE OF EQUIPMENT:		
			REFERENCE ELEVATION:	DEPTH OF BOREHOLE:	30
			THICKNESS OF OVERBURDEN:	DISPOSITION OF BOREHOLE:	
LABORATORY ANALYSES: VOCs, methanotrophs					

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
				Hand augered to 5 ft
1			0	Asphalt, gravel and dark brown coarse sand
2				
3				
4				
5		0		
6			0	Coarse light tan sand with angular gravel
7			0	
8			0	Reddish brown coarse sand with large angular and rounded gravel
9			0	Light grey coarse sand with angular gravel
10				
11				
12			3.7	Coarse pale tan sand with large rounded gravel
13			4.7 4.8	
14			3.6	
15		0		
16				
17				
18			4	Coarse pale tan sand with large rounded gravel
19			1.8	Coarse pale grey sand with large rounded gravel
20	1330		4	**collect sample SB-16-19-20**

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DIRECT PUSH BORING LOG

Boring No.: SB-16

PROJECT: SMS Instruments

PROJECT No.: 95900

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
20				
21		0.0		
22				
23				
24		1.5	0	Coarse light tan sand with small angular rounded gravel
25				**collect sample SB-16-23.5-24.5**
26				Coarse light tan sand with small angular rounded gravel
27				
28				
29				**collect sample SB-16-29-30**
30		0.5	0.0	Large to medium rounded gravel with some coarse tan sand
31				End of boring
42				
33				
34				
35				
36				
37				
38				
39				
40				

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DIRECT PUSH BORING LOG

Boring No.: SB-16 B

PROJECT: SMS Instruments				PAGE 1 OF 3	
PROJECT No.: 95900		CONTRACTOR: LAWES		DATE:	11/18/08
LOCATION: Deer Park, NY		DRILLERS NAME:	Scott	ET REP.:	KS
WATER LEVELS		DESIGNATION OF DRILL RIG:	Geoprobe 66DT DT		
DATE	TIME	DEPTH	SIZE AND TYPE OF EQUIPMENT:		
			REFERENCE ELEVATION:	DEPTH OF BOREHOLE:	30
			THICKNESS OF OVERBURDEN:	DISPOSITION OF BOREHOLE:	
LABORATORY ANALYSES: VOCs, methanotrophs					

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
				Hand augered to 5 ft
1				Asphalt, angular gravel with dark brown medium and coarse sand
2			0	
3				
4			0	
5			0	Coarse grey light tan sand with some rounded gravel
6			0	
7			0	
8				
9			0	Rounded/angular gravel with coarse tan sand
10				
11				
12			0.2	Angular coarse gravel with coarse tan sand
13			0	
14			0	Reddish grey with tan coarse sand and gravel
15			0.6	
16				
17		0.0		
18			1.7	Mottled reddish and black coarse sand and gravel
19		2.5	0	Greyish tan sand with large gravel, saturated
20	1511		0	**collect sample SB-16B-19-20**

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DIRECT PUSH BORING LOG

Boring No.: SB-16 B

PROJECT: SMS Instruments

PROJECT No.: 95900

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
20				
		0		
21			329	Coarse black sand, saturated, with black stains
22			1955	Coarse dark grey sand
23	1520		2973	
24			498	**collect sample SB-16B-23.5-24.5**
25			124	Coarse rounded gravel tan with some coarse tan gravel
26				
27			2	Coarse tan gravel to 28 ft
28			1.7	Coarse tan saturated sand with some rounded gravel
29			0.6	
30	1535		0.3	**collect sample SB-16B-29-30**
				End of boring
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

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DIRECT PUSH BORING LOG

Boring No.: DW

PROJECT: SMS Instruments			PAGE 1 OF 2	
PROJECT No.: 95900	CONTRACTOR: LAWES		DATE:	11/19/08
LOCATION: Deer Park, NY	DRILLERS NAME:	Scott	ET REP.:	KS
WATER LEVELS	DESIGNATION OF DRILL RIG:	Geoprobe 66 DT		
DATE / TIME / DEPTH	SIZE AND TYPE OF EQUIPMENT:			
	REFERENCE ELEVATION:	DEPTH OF BOREHOLE:	30	
	THICKNESS OF OVERBURDEN:	DISPOSITION OF BOREHOLE:	grouted	

LABORATORY ANALYSES: VOCs, methanotrophs

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
				Hand augered to 5 ft
1		5.0	0.0	Asphalt, coarse gravel with coarse brown red sand
2			0	
3			0	
4			0	
5		0		
6		4.0	0	Coarse brown sand with gravel
7			0	
			0	
8			0	
			0	
9			0	
			0	Coarse light tan brown sand with gravel
10			0.0	
11		0.0		
12		3.0	0.0	
			0.0	
13			0.0	Medium, coarse sand with black/grey mottles with round gravel
14			0	
			0	
15				
16		0		
17				
18		2.0	3.2	Light tan sand with rounded gravel
19			8.2	Dark grey coarse sand, saturated
20	800		800	**Collect sample DW-19-20, MS, MSD**

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DIRECT PUSH BORING LOG

Boring No.: DW

PROJECT: SMS Instruments

PROJECT No.: 95900

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
20				
21				
22			162	Light grey coarse sand with some rounded gravel
23			570	Fine rounded gravel with light tan coarse sand
24	810		685 3221	**Collect sample DW-23.5-24.5**
25			1.2	Coarse light tan sand with some rounded gravel
26			2.3	
27			1.7	
28			1.6	
29			1.6	Coarse reddish brown/grey gravel with coarse sand
30	830			**Collect sample DW-29-30**
31				End of boring
42				
33				
34				
35				
36				
37				
38				
39				
40				

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DIRECT PUSH BORING LOG

Boring No.: DW B

PROJECT: SMS Instruments				PAGE 1 OF 2	
PROJECT No.: 95900		CONTRACTOR: LAWES		DATE:	11/19/2008
LOCATION: Deer Park, NY		DRILLERS NAME:	Scott	ET REP.:	KS
WATER LEVELS		DESIGNATION OF DRILL RIG:	Geoprobe 66 DT		
DATE	TIME	DEPTH	SIZE AND TYPE OF EQUIPMENT:		
			REFERENCE ELEVATION:	DEPTH OF BOREHOLE:	30
			THICKNESS OF OVERBURDEN:	DISPOSITION OF BOREHOLE:	
LABORATORY ANALYSES: VOCs, methanotrophs					

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
				Hand augered to 5 ft. Asphalt with angular gravel
1			0	Dark brown/black coarse sand, with slight odor
				clay layer at 1.5 ft
2			0	Light brown medium sand with rounded gravel
			0	
3				Light tan medium sand with rounded gravel
			0	
4			0	
			0.0	
5				
6				
		0		
7				
		2.5	0	Coarse pale tan sand with rounded gravel
8				
			0	
9				Reddish coarse sand with reddish rounded gravel
			1	
10				
		0		
11			0	Coarse tan sand with angular gravel
		4	0	
12				Light rounded gravel with traces of coarse sand
			0	
13				Coarse tan sand with rounded and angular gravel
			0	
14				
			0.3	
15				
		0		
16				
			0	Light grey saturated coarse sand with rounded gravel with red mottles
17		3.5		
			0	
18				
			0	
19				Saturated rounded gravel with coarse sand
	950		0	**collect sample DWB19-20**
20				

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DIRECT PUSH BORING LOG

Boring No.: DW B

PROJECT: SMS Instruments

PROJECT No.: 95900

Depth (ft)	Sample Number & Time	Rec. (feet)	PID Readings (ppm)	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
20				
21		0		
22		4.0	234 1048	Saturated dark grey coarse sand with gravel Gravel with coarse and medium grey sand
23			1189	Light grey coarse sand with gravel
24	1005		6096 1005	**collect sample DWB23.5-24.5**
25			1617	
26			0 1.7	
27			1.3 0	Coarse tan sand with rounded and angular gravel
28			1	
29			0	Coarse tan sand with large rounded gravel
30	1018			**collect sample DWB29-30**
				End of boring
31				
42				
33				
34				
35				
36				
37				
38				
39				
40				

Appendix B

Laboratory Data Package (Form 1s)
November 2008 Sampling Event

MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

December 9, 2008

Earth Tech – AECOM
300 Broadacres Drive
Bloomfield, NJ 07003
Attn: Mr. Paul Kareth

RE: Client Project: SMS Instruments
Lab Work Order #: G2173

Dear Mr. Kareth:

Enclosed please find the data report of the required analyses for the samples associated with the above referenced project. If you have any questions regarding this report, please call me.

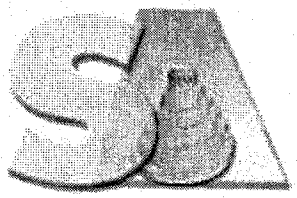
We appreciate your business.

Sincerely,

Shirley Ng
Project Manager

175 Metro Center Boulevard • Warwick, Rhode Island 02886-1755 • 401-732-3400 • Fax 401-732-3499
www.mitkem.com

MITKEM
LABORATORIES



* Data Summary Pack *

Mitkem Laboratories

New York State Department of Environmental Conservation
Sample Identification and Analytical Requirements Summary

Project Name : SMS Instruments, 152026 **SDG :** G2173

Customer Sample ID	Laboratory Sample ID	Analytical Requirements				
		MSVOA Method #	MSSEMI Method #	GC* Method #	ME	Other
DW 19-20	G2173-01	SW8260_LOW_S				
DWB 19-20	G2173-02	SW8260_LOW_S				
SMS-12 19-20	G2173-03	SW8260_LOW_S				
SMS-12B 19-20	G2173-04	SW8260_LOW_S				
SMS-16 19-20	G2173-05	SW8260_LOW_S				
SMS-16B 19-20	G2173-06	SW8260_LOW_S				
DW 23.5-24.5	G2173-07	SW8260_LOW_S				
DW 23.5-24.5	G2173-07	SW8260_MED_S				
DW 29-30	G2173-08	SW8260_LOW_S				
DWB 23.5-24.5	G2173-09	SW8260_LOW_S				
DWB 23.5-24.5	G2173-09	SW8260_MED_S				
DWB 29-30	G2173-10	SW8260_LOW_S				
SMS 12 23.5-24.5	G2173-11	SW8260_LOW_S				
SMS 12 23.5-24.5	G2173-11	SW8260_MED_S				
SMS12 29-30	G2173-12	SW8260_LOW_S				
SMS 12B 23.5-24.5	G2173-13	SW8260_LOW_S				
SMS 12B 23.5-24.5	G2173-13	SW8260_MED_S				
SMS 12B 29-30	G2173-14	SW8260_LOW_S				
FIELD BLANK	G2173-15	SW8260_W				
16 23.5-24.5	G2173-16	SW8260_LOW_S				
16 29-30	G2173-17	SW8260_LOW_S				
16B 23.5-24.5	G2173-18	SW8260_LOW_S				
16B 23.5-24.5	G2173-18	SW8260_MED_S				
16B 29-30	G2173-19	SW8260_LOW_S				

Mitkem Laboratories

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSVOA

Project Name : SMS Instruments, 152026 **SDG :** G2173

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8260_LOW_S					
G2173-01A	SL	11/19/2008	11/20/2008	NA	11/24/2008
G2173-01AMS	SL	11/19/2008	11/20/2008	NA	11/27/2008
G2173-01AMSD	SL	11/19/2008	11/20/2008	NA	11/27/2008
G2173-02A	SL	11/19/2008	11/20/2008	NA	11/24/2008
G2173-03A	SL	11/18/2008	11/20/2008	NA	11/24/2008
G2173-04A	SL	11/18/2008	11/20/2008	NA	11/24/2008
G2173-05A	SL	11/18/2008	11/20/2008	NA	11/24/2008
G2173-06A	SL	11/18/2008	11/20/2008	NA	11/25/2008
G2173-07A	SL	11/19/2008	11/20/2008	NA	11/27/2008
G2173-08A	SL	11/19/2008	11/20/2008	NA	12/2/2008
G2173-09A	SL	11/19/2008	11/20/2008	NA	11/27/2008
G2173-10A	SL	11/19/2008	11/20/2008	NA	12/2/2008
G2173-11A	SL	11/18/2008	11/20/2008	NA	11/25/2008
G2173-12A	SL	11/18/2008	11/20/2008	NA	12/2/2008
G2173-13A	SL	11/18/2008	11/20/2008	NA	11/25/2008
G2173-14A	SL	11/18/2008	11/20/2008	NA	12/2/2008
G2173-16A	SL	11/18/2008	11/20/2008	NA	11/25/2008
G2173-17A	SL	11/18/2008	11/20/2008	NA	11/25/2008
G2173-18A	SL	11/18/2008	11/20/2008	NA	11/27/2008
G2173-19A	SL	11/18/2008	11/20/2008	NA	11/25/2008
SW8260_MED_S					
G2173-07A	SL	11/19/2008	11/20/2008	12/2/2008	12/2/2008
G2173-09A	SL	11/19/2008	11/20/2008	12/2/2008	12/2/2008
G2173-11A	SL	11/18/2008	11/20/2008	11/29/2008	11/29/2008
G2173-13A	SL	11/18/2008	11/20/2008	11/29/2008	11/29/2008
G2173-18A	SL	11/18/2008	11/20/2008	12/2/2008	12/2/2008
SW8260_W					
G2173-15A	AQ	11/19/2008	11/20/2008	NA	11/22/2008

Mitkem Laboratories

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSVOA

Project Name : SMS Instruments, 152026 **SDG :** G2173

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Low/Medium Level	Dil/Conc Factor
SW8260_LOW_S					
G2173-01A	SL	SW8260_LOW_S	NA	LOW	1
G2173-01AMS	SL	SW8260_LOW_S	NA	LOW	1
G2173-01AMSD	SL	SW8260_LOW_S	NA	LOW	1
G2173-02A	SL	SW8260_LOW_S	NA	LOW	1
G2173-03A	SL	SW8260_LOW_S	NA	LOW	1
G2173-04A	SL	SW8260_LOW_S	NA	LOW	1
G2173-05A	SL	SW8260_LOW_S	NA	LOW	1
G2173-06A	SL	SW8260_LOW_S	NA	LOW	1
G2173-07A	SL	SW8260_LOW_S	NA	LOW	1
G2173-08A	SL	SW8260_LOW_S	NA	LOW	1
G2173-09A	SL	SW8260_LOW_S	NA	LOW	1
G2173-10A	SL	SW8260_LOW_S	NA	LOW	1
G2173-11A	SL	SW8260_LOW_S	NA	LOW	1
G2173-12A	SL	SW8260_LOW_S	NA	LOW	1
G2173-13A	SL	SW8260_LOW_S	NA	LOW	1
G2173-14A	SL	SW8260_LOW_S	NA	LOW	1
G2173-16A	SL	SW8260_LOW_S	NA	LOW	1
G2173-17A	SL	SW8260_LOW_S	NA	LOW	1
G2173-18A	SL	SW8260_LOW_S	NA	LOW	1
G2173-19A	SL	SW8260_LOW_S	NA	LOW	1
SW8260_MED_S					
G2173-07A	SL	SW8260_MED_S	SW5035_MED_PR	MED	1
G2173-09A	SL	SW8260_MED_S	SW5035_MED_PR	MED	1
G2173-11A	SL	SW8260_MED_S	SW5035_MED_PR	MED	1
G2173-13A	SL	SW8260_MED_S	SW5035_MED_PR	MED	1
G2173-18A	SL	SW8260_MED_S	SW5035_MED_PR	MED	1
SW8260_W					
G2173-15A	AQ	SW8260_W	NA	LOW	1

Analytical Data Package for Earth Tech Northeast, Inc.

Client Project: SMS Instruments

SDG# MG2173

Mitkem Work Order ID: G2173

December 9, 2008

Prepared For:

Earth Tech – AECOM
300 Broadacres Drive
Bloomfield, NJ 07003
Attn: Mr. Paul Kareth

Prepared By:

Mitkem Laboratories
175 Metro Center Boulevard
Warwick, RI 02886
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SDG Narrative

Mitkem Laboratories submits the enclosed data package in response to Earth Tech Northeast, Inc.'s SMS Instruments project. Under this deliverable, analysis results are presented for nineteen aqueous samples that were received between November 20, 2008. Analyses were performed per specifications in the project's contract and chain of custody forms. Following the narrative is the Mitkem Work Order for cross-referencing sample client ID with laboratory sample ID.

The analyses were performed according to NYSDEC ASP protocols (2000update) and reported per NYSDEC ASP requirement for Category B deliverable.

The following observation and/or deviations are observed for the following analyses:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous – under this category, the justification is explained.
- M6 software did not integrate peak
- M7 partial peak integration

The enclosed report includes the originals of all data with the exception of logbook pages and certain initial calibrations. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. The originals of initial calibrations that are shared among several cases are maintained on file at the laboratory, with photocopies included in the data package.

2. Volatile Analysis:

Surrogate recovery: recoveries were within the QC limits with the exception of toluene-d8 and bromofluorobenzene in samples SMS 12 23.5-24.5, SMS 12B 23.5-24.5, DW 23.5-24.5, DWB 23.5-24.5, 16B 23.5-24.5, DW 23.5-24.5ME and DWB 23.5-24.5ME. The recovery of bromofluorobenzene was outside the QC limits in sample 16B 23.5-24.5ME.

Lab control sample: spike recoveries were within the QC limits with the exception of iodomethane and 2-hexanone in V6TLCSD. The spike recovery of iodomethane was outside the QC limits in V6ULCS and V6DLCS. Replicate RPDs were within the QC limits with the exception of acetone and naphthalene in VS5LCS and VS5LCSD.

Matrix spike/ matrix spike duplicate: duplicate analysis was performed on sample DW 19-20. Spike recoveries were within the QC limits with the exception of fifty-six recoveries. Replicate RPDs were within the QC limits with the exception of acetone.

Sample analysis: due to high concentration of target analytes, sample DW 23.5-24.5 was initially analyzed using 1.2g of sample instead of normally 5g. This sample was re-analyzed by medium level approach as DW 23.5-24.5ME. Samples DWB 23.5-24.5, SMS 12 23.5-24.5, SMS 12B 23.5-24.5 and 16B 23.5-24.5 were re-analyzed by medium level approach as DWB 23.5-24.5 ME, SMS 12 23.5-24.5 ME, SMS 12B 23.5-24.5 ME and 16B 23.5-24.5 ME respectively. The recovery of internal standard 1,4-dichlorobenzene-d4 was outside the QC limits in sample DWB 23.5-24.5, the internal standard recoveries were within the QC limits for the medium level analysis for this sample. Due to the complexity of sample SMS 12B 23.5-24.5, tentatively identified compounds could not be evaluated from low-level analysis, please refer to medium level analysis for tentatively identified compounds information for this sample. No other unusual observation was made for the analysis.

All pages in this report have been numbered consecutively, starting with the title page and ending with a page saying only "Last Page of Data Report".

I certify that this data package is in compliance, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Shirley Ng
Project Manager
12/9/08

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DW 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-01A

Sample wt/vol: 5.40 (g/mL) G Lab File ID: V6G2940.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/24/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.5	U
74-87-3	Chloromethane	5.5	U
75-01-4	Vinyl chloride	5.5	U
74-83-9	Bromomethane	5.5	U
75-00-3	Chloroethane	5.5	U
75-69-4	Trichlorofluoromethane	5.5	U
75-35-4	1,1-Dichloroethene	5.5	U
67-64-1	Acetone	5.5	U
74-88-4	Iodomethane	5.5	U
75-15-0	Carbon disulfide	5.5	U
75-09-2	Methylene chloride	5.5	U
156-60-5	trans-1,2-Dichloroethene	5.5	U
1634-04-4	Methyl tert-butyl ether	5.5	U
75-34-3	1,1-Dichloroethane	5.5	U
108-05-4	Vinyl acetate	5.5	U
78-93-3	2-Butanone	5.5	U
156-59-2	cis-1,2-Dichloroethene	5.5	U
594-20-7	2,2-Dichloropropane	5.5	U
74-97-5	Bromochloromethane	5.5	U
67-66-3	Chloroform	5.5	U
71-55-6	1,1,1-Trichloroethane	5.5	U
563-58-6	1,1-Dichloropropene	5.5	U
56-23-5	Carbon tetrachloride	5.5	U
107-06-2	1,2-Dichloroethane	5.5	U
71-43-2	Benzene	5.5	U
79-01-6	Trichloroethene	5.5	U
78-87-5	1,2-Dichloropropane	5.5	U
74-95-3	Dibromomethane	5.5	U
75-27-4	Bromodichloromethane	5.5	U
10061-01-5	cis-1,3-Dichloropropene	5.5	U
108-10-1	4-Methyl-2-pentanone	5.5	U
108-88-3	Toluene	5.5	U
10061-02-6	trans-1,3-Dichloropropene	5.5	U
79-00-5	1,1,2-Trichloroethane	5.5	U
142-28-9	1,3-Dichloropropane	5.5	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DW 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-01A

Sample wt/vol: 5.40 (g/mL) G Lab File ID: V6G2940.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/24/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	5.5	U
591-78-6	2-Hexanone	5.5	U
124-48-1	Dibromochloromethane	5.5	U
106-93-4	1,2-Dibromoethane	5.5	U
108-90-7	Chlorobenzene	5.5	U
630-20-6	1,1,1,2-Tetrachloroethane	5.5	U
100-41-4	Ethylbenzene	5.5	U
1330-20-7	m,p-Xylene	5.5	U
95-47-6	o-Xylene	5.5	U
1330-20-7	Xylene (Total)	5.5	U
100-42-5	Styrene	5.5	U
75-25-2	Bromoform	5.5	U
98-82-8	Isopropylbenzene	5.5	U
79-34-5	1,1,2,2-Tetrachloroethane	5.5	U
108-86-1	Bromobenzene	5.5	U
96-18-4	1,2,3-Trichloropropane	5.5	U
103-65-1	n-Propylbenzene	5.5	U
95-49-8	2-Chlorotoluene	5.5	U
108-67-8	1,3,5-Trimethylbenzene	5.5	U
106-43-4	4-Chlorotoluene	5.5	U
98-06-6	tert-Butylbenzene	5.5	U
95-63-6	1,2,4-Trimethylbenzene	5.5	U
135-98-8	sec-Butylbenzene	5.5	U
99-87-6	4-Isopropyltoluene	5.5	U
541-73-1	1,3-Dichlorobenzene	5.5	U
106-46-7	1,4-Dichlorobenzene	5.5	U
104-51-8	n-Butylbenzene	5.5	U
95-50-1	1,2-Dichlorobenzene	5.5	U
96-12-8	1,2-Dibromo-3-chloropropane	5.5	U
120-82-1	1,2,4-Trichlorobenzene	5.5	U
87-68-3	Hexachlorobutadiene	5.5	U
87-61-6	1,2,3-Trichlorobenzene	5.5	U
91-20-3	Naphthalene	5.5	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

DW 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-01A

Sample wt/vol: 5.40 (g/mL) G Lab File ID: V6G2940.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/24/2008

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/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DW 19-20MS

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-01AMS

Sample wt/vol: 5.40 (g/mL) G Lab File ID: V6G3082.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/27/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	21	
74-87-3	Chloromethane	32	
75-01-4	Vinyl chloride	36	
74-83-9	Bromomethane	32	
75-00-3	Chloroethane	34	
75-69-4	Trichlorofluoromethane	47	
75-35-4	1,1-Dichloroethene	60	
67-64-1	Acetone	13	
74-88-4	Iodomethane	53	
75-15-0	Carbon disulfide	36	
75-09-2	Methylene chloride	56	
156-60-5	trans-1,2-Dichloroethene	48	
1634-04-4	Methyl tert-butyl ether	52	
75-34-3	1,1-Dichloroethane	48	
108-05-4	Vinyl acetate	19	
78-93-3	2-Butanone	5.7	
156-59-2	cis-1,2-Dichloroethene	47	
594-20-7	2,2-Dichloropropane	38	
74-97-5	Bromochloromethane	48	
67-66-3	Chloroform	46	
71-55-6	1,1,1-Trichloroethane	48	
563-58-6	1,1-Dichloropropene	41	
56-23-5	Carbon tetrachloride	45	
107-06-2	1,2-Dichloroethane	41	
71-43-2	Benzene	39	
79-01-6	Trichloroethene	46	
78-87-5	1,2-Dichloropropane	42	
74-95-3	Dibromomethane	42	
75-27-4	Bromodichloromethane	43	
10061-01-5	cis-1,3-Dichloropropene	37	
108-10-1	4-Methyl-2-pentanone	71	
108-88-3	Toluene	35	
10061-02-6	trans-1,3-Dichloropropene	35	
79-00-5	1,1,2-Trichloroethane	64	
142-28-9	1,3-Dichloropropane	44	

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DW 19-20MS

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-01AMS

Sample wt/vol: 5.40 (g/mL) G Lab File ID: V6G3082.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/27/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	47	
591-78-6	2-Hexanone	50	
124-48-1	Dibromochloromethane	47	
106-93-4	1,2-Dibromoethane	46	
108-90-7	Chlorobenzene	43	
630-20-6	1,1,1,2-Tetrachloroethane	48	
100-41-4	Ethylbenzene	36	
1330-20-7	m,p-Xylene	33	
95-47-6	o-Xylene	38	
1330-20-7	Xylene (Total)	71	
100-42-5	Styrene	16	
75-25-2	Bromoform	43	
98-82-8	Isopropylbenzene	30	
79-34-5	1,1,2,2-Tetrachloroethane	54	
108-86-1	Bromobenzene	43	
96-18-4	1,2,3-Trichloropropane	41	
103-65-1	n-Propylbenzene	23	
95-49-8	2-Chlorotoluene	38	
108-67-8	1,3,5-Trimethylbenzene	40	
106-43-4	4-Chlorotoluene	18	
98-06-6	tert-Butylbenzene	36	
95-63-6	1,2,4-Trimethylbenzene	14	
135-98-8	sec-Butylbenzene	23	
99-87-6	4-Isopropyltoluene	5.5	U
541-73-1	1,3-Dichlorobenzene	36	
106-46-7	1,4-Dichlorobenzene	35	
104-51-8	n-Butylbenzene	9.5	
95-50-1	1,2-Dichlorobenzene	31	
96-12-8	1,2-Dibromo-3-chloropropane	44	
120-82-1	1,2,4-Trichlorobenzene	20	
87-68-3	Hexachlorobutadiene	27	
87-61-6	1,2,3-Trichlorobenzene	18	
91-20-3	Naphthalene	13	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DW 19-20MSD

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-01AMSD

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V6G3083.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/27/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	24	
74-87-3	Chloromethane	30	
75-01-4	Vinyl chloride	36	
74-83-9	Bromomethane	35	
75-00-3	Chloroethane	36	
75-69-4	Trichlorofluoromethane	49	
75-35-4	1,1-Dichloroethene	62	
67-64-1	Acetone	5.3	J
74-88-4	Iodomethane	54	
75-15-0	Carbon disulfide	38	
75-09-2	Methylene chloride	58	
156-60-5	trans-1,2-Dichloroethene	49	
1634-04-4	Methyl tert-butyl ether	54	
75-34-3	1,1-Dichloroethane	49	
108-05-4	Vinyl acetate	19	
78-93-3	2-Butanone	5.2	J
156-59-2	cis-1,2-Dichloroethene	49	
594-20-7	2,2-Dichloropropane	39	
74-97-5	Bromochloromethane	51	
67-66-3	Chloroform	48	
71-55-6	1,1,1-Trichloroethane	49	
563-58-6	1,1-Dichloropropene	43	
56-23-5	Carbon tetrachloride	46	
107-06-2	1,2-Dichloroethane	43	
71-43-2	Benzene	41	
79-01-6	Trichloroethene	47	
78-87-5	1,2-Dichloropropane	43	
74-95-3	Dibromomethane	44	
75-27-4	Bromodichloromethane	46	
10061-01-5	cis-1,3-Dichloropropene	40	
108-10-1	4-Methyl-2-pentanone	68	
108-88-3	Toluene	37	
10061-02-6	trans-1,3-Dichloropropene	37	
79-00-5	1,1,2-Trichloroethane	52	
142-28-9	1,3-Dichloropropane	45	

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DW 19-20MSD

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-01AMSD

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V6G3083.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/27/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	48	
591-78-6	2-Hexanone	75	
124-48-1	Dibromochloromethane	48	
106-93-4	1,2-Dibromoethane	47	
108-90-7	Chlorobenzene	43	
630-20-6	1,1,1,2-Tetrachloroethane	49	
100-41-4	Ethylbenzene	38	
1330-20-7	m,p-Xylene	34	
95-47-6	o-Xylene	40	
1330-20-7	Xylene (Total)	74	
100-42-5	Styrene	19	
75-25-2	Bromoform	45	
98-82-8	Isopropylbenzene	31	
79-34-5	1,1,2,2-Tetrachloroethane	47	
108-86-1	Bromobenzene	44	
96-18-4	1,2,3-Trichloropropane	41	
103-65-1	n-Propylbenzene	25	
95-49-8	2-Chlorotoluene	39	
108-67-8	1,3,5-Trimethylbenzene	35	
106-43-4	4-Chlorotoluene	17	
98-06-6	tert-Butylbenzene	37	
95-63-6	1,2,4-Trimethylbenzene	11	
135-98-8	sec-Butylbenzene	26	
99-87-6	4-Isopropyltoluene	5.7	U
541-73-1	1,3-Dichlorobenzene	34	
106-46-7	1,4-Dichlorobenzene	34	
104-51-8	n-Butylbenzene	11	
95-50-1	1,2-Dichlorobenzene	31	
96-12-8	1,2-Dibromo-3-chloropropane	41	
120-82-1	1,2,4-Trichlorobenzene	19	
87-68-3	Hexachlorobutadiene	29	
87-61-6	1,2,3-Trichlorobenzene	18	
91-20-3	Naphthalene	14	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DWB 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-02A

Sample wt/vol: 5.60 (g/mL) G Lab File ID: V6G2959.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 9.0 Date Analyzed: 11/24/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	4.9	U
74-87-3	Chloromethane	4.9	U
75-01-4	Vinyl chloride	4.9	U
74-83-9	Bromomethane	4.9	U
75-00-3	Chloroethane	4.9	U
75-69-4	Trichlorofluoromethane	4.9	U
75-35-4	1,1-Dichloroethene	4.9	U
67-64-1	Acetone	4.9	U
74-88-4	Iodomethane	4.9	U
75-15-0	Carbon disulfide	4.9	U
75-09-2	Methylene chloride	4.9	U
156-60-5	trans-1,2-Dichloroethene	4.9	U
1634-04-4	Methyl tert-butyl ether	4.9	U
75-34-3	1,1-Dichloroethane	4.9	U
108-05-4	Vinyl acetate	4.9	U
78-93-3	2-Butanone	4.9	U
156-59-2	cis-1,2-Dichloroethene	4.9	U
594-20-7	2,2-Dichloropropane	4.9	U
74-97-5	Bromochloromethane	4.9	U
67-66-3	Chloroform	4.9	U
71-55-6	1,1,1-Trichloroethane	4.9	U
563-58-6	1,1-Dichloropropene	4.9	U
56-23-5	Carbon tetrachloride	4.9	U
107-06-2	1,2-Dichloroethane	4.9	U
71-43-2	Benzene	4.9	U
79-01-6	Trichloroethene	4.9	U
78-87-5	1,2-Dichloropropane	4.9	U
74-95-3	Dibromomethane	4.9	U
75-27-4	Bromodichloromethane	4.9	U
10061-01-5	cis-1,3-Dichloropropene	4.9	U
108-10-1	4-Methyl-2-pentanone	4.9	U
108-88-3	Toluene	4.9	U
10061-02-6	trans-1,3-Dichloropropene	4.9	U
79-00-5	1,1,2-Trichloroethane	4.9	U
142-28-9	1,3-Dichloropropane	4.9	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DWB 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-02A

Sample wt/vol: 5.60 (g/mL) G Lab File ID: V6G2959.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 9.0 Date Analyzed: 11/24/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	4.9	U
591-78-6	2-Hexanone	4.9	U
124-48-1	Dibromochloromethane	4.9	U
106-93-4	1,2-Dibromoethane	4.9	U
108-90-7	Chlorobenzene	4.9	U
630-20-6	1,1,1,2-Tetrachloroethane	4.9	U
100-41-4	Ethylbenzene	4.9	U
1330-20-7	m,p-Xylene	4.9	U
95-47-6	o-Xylene	4.9	U
1330-20-7	Xylene (Total)	4.9	U
100-42-5	Styrene	4.9	U
75-25-2	Bromoform	4.9	U
98-82-8	Isopropylbenzene	4.9	U
79-34-5	1,1,2,2-Tetrachloroethane	4.9	U
108-86-1	Bromobenzene	4.9	U
96-18-4	1,2,3-Trichloropropane	4.9	U
103-65-1	n-Propylbenzene	4.9	U
95-49-8	2-Chlorotoluene	4.9	U
108-67-8	1,3,5-Trimethylbenzene	4.9	U
106-43-4	4-Chlorotoluene	4.9	U
98-06-6	tert-Butylbenzene	4.9	U
95-63-6	1,2,4-Trimethylbenzene	4.9	U
135-98-8	sec-Butylbenzene	4.9	U
99-87-6	4-Isopropyltoluene	4.9	U
541-73-1	1,3-Dichlorobenzene	4.9	U
106-46-7	1,4-Dichlorobenzene	4.9	U
104-51-8	n-Butylbenzene	4.9	U
95-50-1	1,2-Dichlorobenzene	4.9	U
96-12-8	1,2-Dibromo-3-chloropropane	4.9	U
120-82-1	1,2,4-Trichlorobenzene	4.9	U
87-68-3	Hexachlorobutadiene	4.9	U
87-61-6	1,2,3-Trichlorobenzene	4.9	U
91-20-3	Naphthalene	4.9	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

DWB 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-02A

Sample wt/vol: 5.60 (g/mL) G Lab File ID: V6G2959.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 9.0 Date Analyzed: 11/24/2008

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/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS-12 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-03A

Sample wt/vol: 5.30 (g/mL) G Lab File ID: V6G2960.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 11/24/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.4	U
74-87-3	Chloromethane	5.4	U
75-01-4	Vinyl chloride	5.4	U
74-83-9	Bromomethane	5.4	U
75-00-3	Chloroethane	5.4	U
75-69-4	Trichlorofluoromethane	5.4	U
75-35-4	1,1-Dichloroethene	5.4	U
67-64-1	Acetone	5.4	U
74-88-4	Iodomethane	5.4	U
75-15-0	Carbon disulfide	5.4	U
75-09-2	Methylene chloride	5.4	U
156-60-5	trans-1,2-Dichloroethene	5.4	U
1634-04-4	Methyl tert-butyl ether	5.4	U
75-34-3	1,1-Dichloroethane	5.4	U
108-05-4	Vinyl acetate	5.4	U
78-93-3	2-Butanone	5.4	U
156-59-2	cis-1,2-Dichloroethene	5.4	U
594-20-7	2,2-Dichloropropane	5.4	U
74-97-5	Bromochloromethane	5.4	U
67-66-3	Chloroform	5.4	U
71-55-6	1,1,1-Trichloroethane	5.4	U
563-58-6	1,1-Dichloropropene	5.4	U
56-23-5	Carbon tetrachloride	5.4	U
107-06-2	1,2-Dichloroethane	5.4	U
71-43-2	Benzene	5.4	U
79-01-6	Trichloroethene	5.4	U
78-87-5	1,2-Dichloropropane	5.4	U
74-95-3	Dibromomethane	5.4	U
75-27-4	Bromodichloromethane	5.4	U
10061-01-5	cis-1,3-Dichloropropene	5.4	U
108-10-1	4-Methyl-2-pentanone	5.4	U
108-88-3	Toluene	5.4	U
10061-02-6	trans-1,3-Dichloropropene	5.4	U
79-00-5	1,1,2-Trichloroethane	5.4	U
142-28-9	1,3-Dichloropropane	5.4	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS-12 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-03A

Sample wt/vol: 5.30 (g/mL) G Lab File ID: V6G2960.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 11/24/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	5.4	U
591-78-6	2-Hexanone	5.4	U
124-48-1	Dibromochloromethane	5.4	U
106-93-4	1,2-Dibromoethane	5.4	U
108-90-7	Chlorobenzene	5.4	U
630-20-6	1,1,1,2-Tetrachloroethane	5.4	U
100-41-4	Ethylbenzene	5.4	U
1330-20-7	m,p-Xylene	5.4	U
95-47-6	o-Xylene	5.4	U
1330-20-7	Xylene (Total)	5.4	U
100-42-5	Styrene	5.4	U
75-25-2	Bromoform	5.4	U
98-82-8	Isopropylbenzene	5.4	U
79-34-5	1,1,2,2-Tetrachloroethane	5.4	U
108-86-1	Bromobenzene	5.4	U
96-18-4	1,2,3-Trichloropropane	5.4	U
103-65-1	n-Propylbenzene	5.4	U
95-49-8	2-Chlorotoluene	5.4	U
108-67-8	1,3,5-Trimethylbenzene	5.4	U
106-43-4	4-Chlorotoluene	5.4	U
98-06-6	tert-Butylbenzene	5.4	U
95-63-6	1,2,4-Trimethylbenzene	5.4	U
135-98-8	sec-Butylbenzene	5.4	U
99-87-6	4-Isopropyltoluene	5.4	U
541-73-1	1,3-Dichlorobenzene	5.4	U
106-46-7	1,4-Dichlorobenzene	5.4	U
104-51-8	n-Butylbenzene	5.4	U
95-50-1	1,2-Dichlorobenzene	5.4	U
96-12-8	1,2-Dibromo-3-chloropropane	5.4	U
120-82-1	1,2,4-Trichlorobenzene	5.4	U
87-68-3	Hexachlorobutadiene	5.4	U
87-61-6	1,2,3-Trichlorobenzene	5.4	U
91-20-3	Naphthalene	5.4	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SMS-12 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-03A

Sample wt/vol: 5.30 (g/mL) G Lab File ID: V6G2960.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 11/24/2008

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/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	34694-70-7	1,3,5,6-Tetramethyladamantan	15.182	13	NJ
02		Unknown-01	15.602	26	J
03		Unknown-02	15.997	15	J
04		Unknown-03	16.447	23	J
05		Unknown-04	16.496	89	J
06		Unknown-05	16.691	52	J
07		Unknown-06	16.727	140	J
08		Unknown-07	16.904	260	J
09		Unknown-08	17.336	130	J
10		Unknown-09	17.543	78	J
11	000100-23-6	Decahydro-8a-ethyl-1,1,4a,6-	17.701	250	NJ
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS-12B 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-04A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V6G2961.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/24/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.0	U
74-87-3	Chloromethane	6.0	U
75-01-4	Vinyl chloride	6.0	U
74-83-9	Bromomethane	6.0	U
75-00-3	Chloroethane	6.0	U
75-69-4	Trichlorofluoromethane	6.0	U
75-35-4	1,1-Dichloroethene	6.0	U
67-64-1	Acetone	6.0	U
74-88-4	Iodomethane	6.0	U
75-15-0	Carbon disulfide	6.0	U
75-09-2	Methylene chloride	6.0	U
156-60-5	trans-1,2-Dichloroethene	6.0	U
1634-04-4	Methyl tert-butyl ether	6.0	U
75-34-3	1,1-Dichloroethane	6.0	U
108-05-4	Vinyl acetate	6.0	U
78-93-3	2-Butanone	6.0	U
156-59-2	cis-1,2-Dichloroethene	6.0	U
594-20-7	2,2-Dichloropropane	6.0	U
74-97-5	Bromochloromethane	6.0	U
67-66-3	Chloroform	6.0	U
71-55-6	1,1,1-Trichloroethane	6.0	U
563-58-6	1,1-Dichloropropene	6.0	U
56-23-5	Carbon tetrachloride	6.0	U
107-06-2	1,2-Dichloroethane	6.0	U
71-43-2	Benzene	6.0	U
79-01-6	Trichloroethene	6.0	U
78-87-5	1,2-Dichloropropane	6.0	U
74-95-3	Dibromomethane	6.0	U
75-27-4	Bromodichloromethane	6.0	U
10061-01-5	cis-1,3-Dichloropropene	6.0	U
108-10-1	4-Methyl-2-pentanone	6.0	U
108-88-3	Toluene	6.0	U
10061-02-6	trans-1,3-Dichloropropene	6.0	U
79-00-5	1,1,2-Trichloroethane	6.0	U
142-28-9	1,3-Dichloropropane	6.0	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS-12B 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-04A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V6G2961.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/24/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	6.0	U
591-78-6	2-Hexanone	6.0	U
124-48-1	Dibromochloromethane	6.0	U
106-93-4	1,2-Dibromoethane	6.0	U
108-90-7	Chlorobenzene	6.0	U
630-20-6	1,1,1,2-Tetrachloroethane	6.0	U
100-41-4	Ethylbenzene	6.0	U
1330-20-7	m,p-Xylene	6.0	U
95-47-6	o-Xylene	6.0	U
1330-20-7	Xylene (Total)	6.0	U
100-42-5	Styrene	6.0	U
75-25-2	Bromoform	6.0	U
98-82-8	Isopropylbenzene	6.0	U
79-34-5	1,1,2,2-Tetrachloroethane	6.0	U
108-86-1	Bromobenzene	6.0	U
96-18-4	1,2,3-Trichloropropane	6.0	U
103-65-1	n-Propylbenzene	6.0	U
95-49-8	2-Chlorotoluene	6.0	U
108-67-8	1,3,5-Trimethylbenzene	6.0	U
106-43-4	4-Chlorotoluene	6.0	U
98-06-6	tert-Butylbenzene	6.0	U
95-63-6	1,2,4-Trimethylbenzene	6.0	U
135-98-8	sec-Butylbenzene	6.0	U
99-87-6	4-Isopropyltoluene	6.0	U
541-73-1	1,3-Dichlorobenzene	6.0	U
106-46-7	1,4-Dichlorobenzene	6.0	U
104-51-8	n-Butylbenzene	6.0	U
95-50-1	1,2-Dichlorobenzene	6.0	U
96-12-8	1,2-Dibromo-3-chloropropane	6.0	U
120-82-1	1,2,4-Trichlorobenzene	6.0	U
87-68-3	Hexachlorobutadiene	6.0	U
87-61-6	1,2,3-Trichlorobenzene	6.0	U
91-20-3	Naphthalene	6.0	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SMS-12B 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-04A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V6G2961.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/24/2008

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/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	16.903	7.8	J
02		Unknown-02	17.475	14	J
03		Unknown-03	17.719	16	J
04		Unknown-04	18.224	6.3	J
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS-16 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-05A

Sample wt/vol: 6.30 (g/mL) G Lab File ID: V6G2962.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 22 Date Analyzed: 11/24/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.1	U
74-87-3	Chloromethane	5.1	U
75-01-4	Vinyl chloride	5.1	U
74-83-9	Bromomethane	5.1	U
75-00-3	Chloroethane	5.1	U
75-69-4	Trichlorofluoromethane	5.1	U
75-35-4	1,1-Dichloroethene	5.1	U
67-64-1	Acetone	4.3	J
74-88-4	Iodomethane	5.1	U
75-15-0	Carbon disulfide	5.1	U
75-09-2	Methylene chloride	5.1	U
156-60-5	trans-1,2-Dichloroethene	5.1	U
1634-04-4	Methyl tert-butyl ether	5.1	U
75-34-3	1,1-Dichloroethane	5.1	U
108-05-4	Vinyl acetate	5.1	U
78-93-3	2-Butanone	5.1	U
156-59-2	cis-1,2-Dichloroethene	5.1	U
594-20-7	2,2-Dichloropropane	5.1	U
74-97-5	Bromochloromethane	5.1	U
67-66-3	Chloroform	5.1	U
71-55-6	1,1,1-Trichloroethane	5.1	U
563-58-6	1,1-Dichloropropene	5.1	U
56-23-5	Carbon tetrachloride	5.1	U
107-06-2	1,2-Dichloroethane	5.1	U
71-43-2	Benzene	5.1	U
79-01-6	Trichloroethene	5.1	U
78-87-5	1,2-Dichloropropane	5.1	U
74-95-3	Dibromomethane	5.1	U
75-27-4	Bromodichloromethane	5.1	U
10061-01-5	cis-1,3-Dichloropropene	5.1	U
108-10-1	4-Methyl-2-pentanone	5.1	U
108-88-3	Toluene	5.1	U
10061-02-6	trans-1,3-Dichloropropene	5.1	U
79-00-5	1,1,2-Trichloroethane	5.1	U
142-28-9	1,3-Dichloropropane	5.1	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS-16 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-05A

Sample wt/vol: 6.30 (g/mL) G Lab File ID: V6G2962.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 22 Date Analyzed: 11/24/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	5.1	U
591-78-6	2-Hexanone	5.1	U
124-48-1	Dibromochloromethane	5.1	U
106-93-4	1,2-Dibromoethane	5.1	U
108-90-7	Chlorobenzene	5.1	U
630-20-6	1,1,1,2-Tetrachloroethane	5.1	U
100-41-4	Ethylbenzene	5.1	U
1330-20-7	m,p-Xylene	5.1	U
95-47-6	o-Xylene	5.1	U
1330-20-7	Xylene (Total)	5.1	U
100-42-5	Styrene	5.1	U
75-25-2	Bromoform	5.1	U
98-82-8	Isopropylbenzene	5.1	U
79-34-5	1,1,2,2-Tetrachloroethane	5.1	U
108-86-1	Bromobenzene	5.1	U
96-18-4	1,2,3-Trichloropropane	5.1	U
103-65-1	n-Propylbenzene	5.1	U
95-49-8	2-Chlorotoluene	5.1	U
108-67-8	1,3,5-Trimethylbenzene	5.1	U
106-43-4	4-Chlorotoluene	5.1	U
98-06-6	tert-Butylbenzene	5.1	U
95-63-6	1,2,4-Trimethylbenzene	5.1	U
135-98-8	sec-Butylbenzene	5.1	U
99-87-6	4-Isopropyltoluene	5.1	U
541-73-1	1,3-Dichlorobenzene	5.1	U
106-46-7	1,4-Dichlorobenzene	5.1	U
104-51-8	n-Butylbenzene	5.1	U
95-50-1	1,2-Dichlorobenzene	5.1	U
96-12-8	1,2-Dibromo-3-chloropropane	5.1	U
120-82-1	1,2,4-Trichlorobenzene	5.1	U
87-68-3	Hexachlorobutadiene	5.1	U
87-61-6	1,2,3-Trichlorobenzene	5.1	U
91-20-3	Naphthalene	5.1	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SMS-16 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-05A

Sample wt/vol: 6.30 (g/mL) G Lab File ID: V6G2962.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 22 Date Analyzed: 11/24/2008

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/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	15.206	24	J
02		Unknown-02	15.419	25	J
03		Unknown-03	15.705	21	J
04		Unknown-04	15.784	22	J
05		Unknown-05	15.918	34	J
06		Unknown-06	15.985	25	J
07		Unknown-07	16.264	21	J
08		Unknown-08	16.337	24	J
09		Unknown-09	16.441	27	J
10		Unknown-10	16.727	25	J
11		Unknown-11	17.001	28	J
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS-16B 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-06A

Sample wt/vol: 6.40 (g/mL) G Lab File ID: V6G2963.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 17 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	4.7	U
74-87-3	Chloromethane	4.7	U
75-01-4	Vinyl chloride	4.7	U
74-83-9	Bromomethane	4.7	U
75-00-3	Chloroethane	4.7	U
75-69-4	Trichlorofluoromethane	4.7	U
75-35-4	1,1-Dichloroethene	4.7	U
67-64-1	Acetone	4.7	U
74-88-4	Iodomethane	4.7	U
75-15-0	Carbon disulfide	4.7	U
75-09-2	Methylene chloride	4.7	U
156-60-5	trans-1,2-Dichloroethene	4.7	U
1634-04-4	Methyl tert-butyl ether	4.7	U
75-34-3	1,1-Dichloroethane	4.7	U
108-05-4	Vinyl acetate	4.7	U
78-93-3	2-Butanone	4.7	U
156-59-2	cis-1,2-Dichloroethene	4.7	U
594-20-7	2,2-Dichloropropane	4.7	U
74-97-5	Bromochloromethane	4.7	U
67-66-3	Chloroform	4.7	U
71-55-6	1,1,1-Trichloroethane	4.7	U
563-58-6	1,1-Dichloropropene	4.7	U
56-23-5	Carbon tetrachloride	4.7	U
107-06-2	1,2-Dichloroethane	4.7	U
71-43-2	Benzene	4.7	U
79-01-6	Trichloroethene	4.7	U
78-87-5	1,2-Dichloropropane	4.7	U
74-95-3	Dibromomethane	4.7	U
75-27-4	Bromodichloromethane	4.7	U
10061-01-5	cis-1,3-Dichloropropene	4.7	U
108-10-1	4-Methyl-2-pentanone	4.7	U
108-88-3	Toluene	4.7	U
10061-02-6	trans-1,3-Dichloropropene	4.7	U
79-00-5	1,1,2-Trichloroethane	4.7	U
142-28-9	1,3-Dichloropropane	4.7	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS-16B 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-06A

Sample wt/vol: 6.40 (g/mL) G Lab File ID: V6G2963.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 17 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	4.7	U
591-78-6	2-Hexanone	4.7	U
124-48-1	Dibromochloromethane	4.7	U
106-93-4	1,2-Dibromoethane	4.7	U
108-90-7	Chlorobenzene	4.7	U
630-20-6	1,1,1,2-Tetrachloroethane	4.7	U
100-41-4	Ethylbenzene	4.7	U
1330-20-7	m,p-Xylene	4.7	U
95-47-6	o-Xylene	4.7	U
1330-20-7	Xylene (Total)	4.7	U
100-42-5	Styrene	4.7	U
75-25-2	Bromoform	4.7	U
98-82-8	Isopropylbenzene	4.7	U
79-34-5	1,1,2,2-Tetrachloroethane	4.7	U
108-86-1	Bromobenzene	4.7	U
96-18-4	1,2,3-Trichloropropane	4.7	U
103-65-1	n-Propylbenzene	4.7	U
95-49-8	2-Chlorotoluene	4.7	U
108-67-8	1,3,5-Trimethylbenzene	4.7	U
106-43-4	4-Chlorotoluene	4.7	U
98-06-6	tert-Butylbenzene	4.7	U
95-63-6	1,2,4-Trimethylbenzene	4.7	U
135-98-8	sec-Butylbenzene	4.7	U
99-87-6	4-Isopropyltoluene	4.7	U
541-73-1	1,3-Dichlorobenzene	4.7	U
106-46-7	1,4-Dichlorobenzene	4.7	U
104-51-8	n-Butylbenzene	4.7	U
95-50-1	1,2-Dichlorobenzene	4.7	U
96-12-8	1,2-Dibromo-3-chloropropane	4.7	U
120-82-1	1,2,4-Trichlorobenzene	4.7	U
87-68-3	Hexachlorobutadiene	4.7	U
87-61-6	1,2,3-Trichlorobenzene	4.7	U
91-20-3	Naphthalene	4.7	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SMS-16B 19-20

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-06A

Sample wt/vol: 6.40 (g/mL) G Lab File ID: V6G2963.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 17 Date Analyzed: 11/25/2008

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/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DW 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-07A

Sample wt/vol: 1.20 (g/mL) G Lab File ID: V6G3075.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 11/27/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	24	U
74-87-3	Chloromethane	24	U
75-01-4	Vinyl chloride	24	U
74-83-9	Bromomethane	24	U
75-00-3	Chloroethane	24	U
75-69-4	Trichlorofluoromethane	24	U
75-35-4	1,1-Dichloroethene	24	U
67-64-1	Acetone	30	
74-88-4	Iodomethane	24	U
75-15-0	Carbon disulfide	24	U
75-09-2	Methylene chloride	24	U
156-60-5	trans-1,2-Dichloroethene	24	U
1634-04-4	Methyl tert-butyl ether	24	U
75-34-3	1,1-Dichloroethane	24	U
108-05-4	Vinyl acetate	24	U
78-93-3	2-Butanone	24	U
156-59-2	cis-1,2-Dichloroethene	24	U
594-20-7	2,2-Dichloropropane	24	U
74-97-5	Bromochloromethane	24	U
67-66-3	Chloroform	24	U
71-55-6	1,1,1-Trichloroethane	24	U
563-58-6	1,1-Dichloropropene	24	U
56-23-5	Carbon tetrachloride	24	U
107-06-2	1,2-Dichloroethane	24	U
71-43-2	Benzene	24	U
79-01-6	Trichloroethene	24	U
78-87-5	1,2-Dichloropropane	24	U
74-95-3	Dibromomethane	24	U
75-27-4	Bromodichloromethane	24	U
10061-01-5	cis-1,3-Dichloropropene	24	U
108-10-1	4-Methyl-2-pentanone	24	U
108-88-3	Toluene	24	U
10061-02-6	trans-1,3-Dichloropropene	24	U
79-00-5	1,1,2-Trichloroethane	24	U
142-28-9	1,3-Dichloropropane	24	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DW 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-07A

Sample wt/vol: 1.20 (g/mL) G Lab File ID: V6G3075.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 11/27/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	24	U
591-78-6	2-Hexanone	24	U
124-48-1	Dibromochloromethane	24	U
106-93-4	1,2-Dibromoethane	24	U
108-90-7	Chlorobenzene	24	U
630-20-6	1,1,1,2-Tetrachloroethane	24	U
100-41-4	Ethylbenzene	24	U
1330-20-7	m,p-Xylene	27	
95-47-6	o-Xylene	24	U
1330-20-7	Xylene (Total)	27	
100-42-5	Styrene	24	U
75-25-2	Bromoform	24	U
98-82-8	Isopropylbenzene	15	J
79-34-5	1,1,2,2-Tetrachloroethane	24	U
108-86-1	Bromobenzene	24	U
96-18-4	1,2,3-Trichloropropane	24	U
103-65-1	n-Propylbenzene	24	U
95-49-8	2-Chlorotoluene	24	U
108-67-8	1,3,5-Trimethylbenzene	1900	E
106-43-4	4-Chlorotoluene	24	U
98-06-6	tert-Butylbenzene	240	
95-63-6	1,2,4-Trimethylbenzene	130	
135-98-8	sec-Butylbenzene	52	
99-87-6	4-Isopropyltoluene	220	
541-73-1	1,3-Dichlorobenzene	270	
106-46-7	1,4-Dichlorobenzene	1400	E
104-51-8	n-Butylbenzene	24	U
95-50-1	1,2-Dichlorobenzene	24	U
96-12-8	1,2-Dibromo-3-chloropropane	24	U
120-82-1	1,2,4-Trichlorobenzene	24	U
87-68-3	Hexachlorobutadiene	24	U
87-61-6	1,2,3-Trichlorobenzene	24	U
91-20-3	Naphthalene	24	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

DW 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-07A

Sample wt/vol: 1.20 (g/mL) G Lab File ID: V6G3075.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 11/27/2008

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/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	592-27-8	Heptane, 2-methyl-	7.389	5700	NJ
02	589-81-1	Heptane, 3-methyl-	7.572	8200	NJ
03	6876-23-9	Cyclohexane, 1,2-dimethyl-,	8.247	4800	NJ
04		Unknown-01	8.983	5400	J
05		Unknown-02	9.062	8800	J
06		Unknown-03	9.421	12000	J
07	19489-10-2	cis-1-Ethyl-3-methyl-cyclohe	10.054	10000	NJ
08		Unknown-04	10.443	6600	J
09		Unknown-05	10.565	4200	J
10		Unknown-06	10.741	4900	J
11		Unknown-07	10.863	7700	J
12		Unknown-08	11.112	5200	J
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DW 23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-07A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1K2158.D

Level: (TRACE/LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 12/02/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	320	U
74-87-3	Chloromethane	320	U
75-01-4	Vinyl chloride	320	U
74-83-9	Bromomethane	320	U
75-00-3	Chloroethane	320	U
75-69-4	Trichlorofluoromethane	320	U
75-35-4	1,1-Dichloroethene	320	U
67-64-1	Acetone	320	U
74-88-4	Iodomethane	320	U
75-15-0	Carbon disulfide	320	U
75-09-2	Methylene chloride	320	U
156-60-5	trans-1,2-Dichloroethene	320	U
1634-04-4	Methyl tert-butyl ether	320	U
75-34-3	1,1-Dichloroethane	320	U
108-05-4	Vinyl acetate	320	U
78-93-3	2-Butanone	320	U
156-59-2	cis-1,2-Dichloroethene	320	U
594-20-7	2,2-Dichloropropane	320	U
74-97-5	Bromochloromethane	320	U
67-66-3	Chloroform	320	U
71-55-6	1,1,1-Trichloroethane	320	U
563-58-6	1,1-Dichloropropene	320	U
56-23-5	Carbon tetrachloride	320	U
107-06-2	1,2-Dichloroethane	320	U
71-43-2	Benzene	320	U
79-01-6	Trichloroethene	190	BJ
78-87-5	1,2-Dichloropropane	320	U
74-95-3	Dibromomethane	320	U
75-27-4	Bromodichloromethane	320	U
10061-01-5	cis-1,3-Dichloropropene	320	U
108-10-1	4-Methyl-2-pentanone	320	U
108-88-3	Toluene	320	U
10061-02-6	trans-1,3-Dichloropropene	320	U
79-00-5	1,1,2-Trichloroethane	320	U
142-28-9	1,3-Dichloropropane	320	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DW 23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-07A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1K2158.D

Level: (TRACE/LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 12/02/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	320	U
591-78-6	2-Hexanone	320	U
124-48-1	Dibromochloromethane	320	U
106-93-4	1,2-Dibromoethane	320	U
108-90-7	Chlorobenzene	320	U
630-20-6	1,1,1,2-Tetrachloroethane	320	U
100-41-4	Ethylbenzene	320	U
1330-20-7	m,p-Xylene	110	J
95-47-6	o-Xylene	320	U
1330-20-7	Xylene (Total)	110	J
100-42-5	Styrene	320	U
75-25-2	Bromoform	320	U
98-82-8	Isopropylbenzene	320	U
79-34-5	1,1,2,2-Tetrachloroethane	320	U
108-86-1	Bromobenzene	320	U
96-18-4	1,2,3-Trichloropropane	320	U
103-65-1	n-Propylbenzene	320	U
95-49-8	2-Chlorotoluene	320	U
108-67-8	1,3,5-Trimethylbenzene	4500	
106-43-4	4-Chlorotoluene	320	U
98-06-6	tert-Butylbenzene	620	
95-63-6	1,2,4-Trimethylbenzene	400	
135-98-8	sec-Butylbenzene	170	J
99-87-6	4-Isopropyltoluene	320	U
541-73-1	1,3-Dichlorobenzene	410	
106-46-7	1,4-Dichlorobenzene	1900	
104-51-8	n-Butylbenzene	320	U
95-50-1	1,2-Dichlorobenzene	320	U
96-12-8	1,2-Dibromo-3-chloropropane	320	U
120-82-1	1,2,4-Trichlorobenzene	320	U
87-68-3	Hexachlorobutadiene	320	U
87-61-6	1,2,3-Trichlorobenzene	320	U
91-20-3	Naphthalene	340	

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

DW 23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-07A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1K2158.D

Level: (TRACE or LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 12/02/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Purge Volume: 5.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	1072-05-5	Heptane, 2,6-dimethyl-	8.580	32000	NJ
02		Unknown-01	8.737	57000	J
03	3073-66-3	Cyclohexane, 1,1,3-trimethyl	8.934	35000	NJ
04		Unknown-02	9.289	72000	J
05	2216-33-3	Octane, 3-methyl-	9.437	49000	NJ
06		Unknown-03	10.314	44000	J
07		Unknown-04	10.609	45000	J
08		Unknown-05	10.718	44000	J
09		Unknown-06	11.082	39000	J
10		Unknown-07	11.122	67000	J
11	5911-04-6	Nonane, 3-methyl-	11.240	68000	NJ
12		Unknown-08	14.265	40000	J
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DW 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-08A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5K3623.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 12/02/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.7	U
74-87-3	Chloromethane	5.7	U
75-01-4	Vinyl chloride	5.7	U
74-83-9	Bromomethane	5.7	U
75-00-3	Chloroethane	5.7	U
75-69-4	Trichlorofluoromethane	5.7	U
75-35-4	1,1-Dichloroethene	5.7	U
67-64-1	Acetone	5.7	U
74-88-4	Iodomethane	5.7	U
75-15-0	Carbon disulfide	5.7	U
75-09-2	Methylene chloride	13	
156-60-5	trans-1,2-Dichloroethene	5.7	U
1634-04-4	Methyl tert-butyl ether	5.7	U
75-34-3	1,1-Dichloroethane	5.7	U
108-05-4	Vinyl acetate	5.7	U
78-93-3	2-Butanone	5.7	U
156-59-2	cis-1,2-Dichloroethene	5.7	U
594-20-7	2,2-Dichloropropane	5.7	U
74-97-5	Bromochloromethane	5.7	U
67-66-3	Chloroform	5.7	U
71-55-6	1,1,1-Trichloroethane	5.7	U
563-58-6	1,1-Dichloropropene	5.7	U
56-23-5	Carbon tetrachloride	5.7	U
107-06-2	1,2-Dichloroethane	5.7	U
71-43-2	Benzene	5.7	U
79-01-6	Trichloroethene	5.7	U
78-87-5	1,2-Dichloropropane	5.7	U
74-95-3	Dibromomethane	5.7	U
75-27-4	Bromodichloromethane	5.7	U
10061-01-5	cis-1,3-Dichloropropene	5.7	U
108-10-1	4-Methyl-2-pentanone	5.7	U
108-88-3	Toluene	5.7	U
10061-02-6	trans-1,3-Dichloropropene	5.7	U
79-00-5	1,1,2-Trichloroethane	5.7	U
142-28-9	1,3-Dichloropropane	5.7	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DW 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-08A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5K3623.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 12/02/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	5.7	U
591-78-6	2-Hexanone	5.7	U
124-48-1	Dibromochloromethane	5.7	U
106-93-4	1,2-Dibromoethane	5.7	U
108-90-7	Chlorobenzene	5.7	U
630-20-6	1,1,1,2-Tetrachloroethane	5.7	U
100-41-4	Ethylbenzene	5.7	U
1330-20-7	m,p-Xylene	5.7	U
95-47-6	o-Xylene	5.7	U
1330-20-7	Xylene (Total)	5.7	U
100-42-5	Styrene	5.7	U
75-25-2	Bromoform	5.7	U
98-82-8	Isopropylbenzene	5.7	U
79-34-5	1,1,2,2-Tetrachloroethane	5.7	U
108-86-1	Bromobenzene	5.7	U
96-18-4	1,2,3-Trichloropropane	5.7	U
103-65-1	n-Propylbenzene	5.7	U
95-49-8	2-Chlorotoluene	5.7	U
108-67-8	1,3,5-Trimethylbenzene	5.7	U
106-43-4	4-Chlorotoluene	5.7	U
98-06-6	tert-Butylbenzene	5.7	U
95-63-6	1,2,4-Trimethylbenzene	5.7	U
135-98-8	sec-Butylbenzene	5.7	U
99-87-6	4-Isopropyltoluene	5.7	U
541-73-1	1,3-Dichlorobenzene	5.7	U
106-46-7	1,4-Dichlorobenzene	5.7	U
104-51-8	n-Butylbenzene	5.7	U
95-50-1	1,2-Dichlorobenzene	5.7	U
96-12-8	1,2-Dibromo-3-chloropropane	5.7	U
120-82-1	1,2,4-Trichlorobenzene	5.7	U
87-68-3	Hexachlorobutadiene	5.7	U
87-61-6	1,2,3-Trichlorobenzene	5.7	U
91-20-3	Naphthalene	5.7	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

DW 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-08A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5K3623.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 13 Date Analyzed: 12/02/2008

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/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

SW846

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DWB 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-09A

Sample wt/vol: 4.00 (g/mL) G Lab File ID: V6G3077.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 14 Date Analyzed: 11/27/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	7.3	U
74-87-3	Chloromethane	7.3	U
75-01-4	Vinyl chloride	7.3	U
74-83-9	Bromomethane	7.3	U
75-00-3	Chloroethane	7.3	U
75-69-4	Trichlorofluoromethane	7.3	U
75-35-4	1,1-Dichloroethene	7.3	U
67-64-1	Acetone	67	
74-88-4	Iodomethane	7.3	U
75-15-0	Carbon disulfide	7.3	U
75-09-2	Methylene chloride	7.3	U
156-60-5	trans-1,2-Dichloroethene	7.3	U
1634-04-4	Methyl tert-butyl ether	7.3	U
75-34-3	1,1-Dichloroethane	7.3	U
108-05-4	Vinyl acetate	7.3	U
78-93-3	2-Butanone	7.3	U
156-59-2	cis-1,2-Dichloroethene	7.3	U
594-20-7	2,2-Dichloropropane	7.3	U
74-97-5	Bromochloromethane	7.3	U
67-66-3	Chloroform	7.3	U
71-55-6	1,1,1-Trichloroethane	7.3	U
563-58-6	1,1-Dichloropropene	7.3	U
56-23-5	Carbon tetrachloride	7.3	U
107-06-2	1,2-Dichloroethane	7.3	U
71-43-2	Benzene	7.3	U
79-01-6	Trichloroethene	7.3	U
78-87-5	1,2-Dichloropropane	7.3	U
74-95-3	Dibromomethane	7.3	U
75-27-4	Bromodichloromethane	7.3	U
10061-01-5	cis-1,3-Dichloropropene	7.3	U
108-10-1	4-Methyl-2-pentanone	7.3	U
108-88-3	Toluene	7.3	U
10061-02-6	trans-1,3-Dichloropropene	7.3	U
79-00-5	1,1,2-Trichloroethane	7.3	U
142-28-9	1,3-Dichloropropane	7.3	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DWB 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-09A

Sample wt/vol: 4.00 (g/mL) G Lab File ID: V6G3077.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 14 Date Analyzed: 11/27/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	7.3	U
591-78-6	2-Hexanone	7.3	U
124-48-1	Dibromochloromethane	7.3	U
106-93-4	1,2-Dibromoethane	7.3	U
108-90-7	Chlorobenzene	7.3	U
630-20-6	1,1,1,2-Tetrachloroethane	7.3	U
100-41-4	Ethylbenzene	7.3	U
1330-20-7	m,p-Xylene	22	
95-47-6	o-Xylene	7.3	U
1330-20-7	Xylene (Total)	22	
100-42-5	Styrene	7.3	U
75-25-2	Bromoform	7.3	U
98-82-8	Isopropylbenzene	33	
79-34-5	1,1,2,2-Tetrachloroethane	7.3	U
108-86-1	Bromobenzene	7.3	U
96-18-4	1,2,3-Trichloropropane	7.3	U
103-65-1	n-Propylbenzene	48	
95-49-8	2-Chlorotoluene	7.3	U
108-67-8	1,3,5-Trimethylbenzene	790	E
106-43-4	4-Chlorotoluene	7.3	U
98-06-6	tert-Butylbenzene	54	
95-63-6	1,2,4-Trimethylbenzene	700	E
135-98-8	sec-Butylbenzene	83	
99-87-6	4-Isopropyltoluene	240	
541-73-1	1,3-Dichlorobenzene	33	
106-46-7	1,4-Dichlorobenzene	90	
104-51-8	n-Butylbenzene	270	
95-50-1	1,2-Dichlorobenzene	7.3	U
96-12-8	1,2-Dibromo-3-chloropropane	7.3	U
120-82-1	1,2,4-Trichlorobenzene	7.3	U
87-68-3	Hexachlorobutadiene	7.3	U
87-61-6	1,2,3-Trichlorobenzene	7.3	U
91-20-3	Naphthalene	7.3	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

DWB 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-09A

Sample wt/vol: 4.00 (g/mL) G Lab File ID: V6G3077.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 14 Date Analyzed: 11/27/2008

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/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	7.584	1900	J
02		Unknown-02	8.028	930	J
03		Unknown-03	8.253	980	J
04		Unknown-04	8.995	2200	J
05		Unknown-05	9.074	1300	J
06	2216-34-4	Octane, 4-methyl-	9.415	500	NJ
07		Unknown-06	9.579	330	J
08		Unknown-07	10.449	290	J
09		Unknown-08	10.857	300	J
10		Unknown-09	11.203	240	J
11		Unknown-10	12.481	240	J
12	535-77-3	Benzene, 1-methyl-3-(1-methy	13.016	220	NJ
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DWB 23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-09A

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V1K2159.D

Level: (TRACE/LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 14 Date Analyzed: 12/02/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	320	U
74-87-3	Chloromethane	320	U
75-01-4	Vinyl chloride	320	U
74-83-9	Bromomethane	320	U
75-00-3	Chloroethane	320	U
75-69-4	Trichlorofluoromethane	320	U
75-35-4	1,1-Dichloroethene	320	U
67-64-1	Acetone	320	U
74-88-4	Iodomethane	320	U
75-15-0	Carbon disulfide	320	U
75-09-2	Methylene chloride	320	U
156-60-5	trans-1,2-Dichloroethene	320	U
1634-04-4	Methyl tert-butyl ether	320	U
75-34-3	1,1-Dichloroethane	320	U
108-05-4	Vinyl acetate	320	U
78-93-3	2-Butanone	320	U
156-59-2	cis-1,2-Dichloroethene	320	U
594-20-7	2,2-Dichloropropane	320	U
74-97-5	Bromochloromethane	320	U
67-66-3	Chloroform	320	U
71-55-6	1,1,1-Trichloroethane	320	U
563-58-6	1,1-Dichloropropene	320	U
56-23-5	Carbon tetrachloride	320	U
107-06-2	1,2-Dichloroethane	320	U
71-43-2	Benzene	320	U
79-01-6	Trichloroethene	160	BJ
78-87-5	1,2-Dichloropropane	320	U
74-95-3	Dibromomethane	320	U
75-27-4	Bromodichloromethane	320	U
10061-01-5	cis-1,3-Dichloropropene	320	U
108-10-1	4-Methyl-2-pentanone	320	U
108-88-3	Toluene	320	U
10061-02-6	trans-1,3-Dichloropropene	320	U
79-00-5	1,1,2-Trichloroethane	320	U
142-28-9	1,3-Dichloropropane	320	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DWB 23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-09A

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V1K2159.D

Level: (TRACE/LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 14 Date Analyzed: 12/02/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	320	U
591-78-6	2-Hexanone	320	U
124-48-1	Dibromochloromethane	320	U
106-93-4	1,2-Dibromoethane	320	U
108-90-7	Chlorobenzene	320	U
630-20-6	1,1,1,2-Tetrachloroethane	320	U
100-41-4	Ethylbenzene	320	U
1330-20-7	m,p-Xylene	98	J
95-47-6	o-Xylene	320	U
1330-20-7	Xylene (Total)	98	J
100-42-5	Styrene	320	U
75-25-2	Bromoform	320	U
98-82-8	Isopropylbenzene	250	J
79-34-5	1,1,2,2-Tetrachloroethane	320	U
108-86-1	Bromobenzene	320	U
96-18-4	1,2,3-Trichloropropane	320	U
103-65-1	n-Propylbenzene	450	
95-49-8	2-Chlorotoluene	320	U
108-67-8	1,3,5-Trimethylbenzene	4400	
106-43-4	4-Chlorotoluene	320	U
98-06-6	tert-Butylbenzene	320	U
95-63-6	1,2,4-Trimethylbenzene	4300	
135-98-8	sec-Butylbenzene	500	
99-87-6	4-Isopropyltoluene	900	
541-73-1	1,3-Dichlorobenzene	92	J
106-46-7	1,4-Dichlorobenzene	200	J
104-51-8	n-Butylbenzene	2300	
95-50-1	1,2-Dichlorobenzene	320	U
96-12-8	1,2-Dibromo-3-chloropropane	320	U
120-82-1	1,2,4-Trichlorobenzene	320	U
87-68-3	Hexachlorobutadiene	320	U
87-61-6	1,2,3-Trichlorobenzene	320	U
91-20-3	Naphthalene	320	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

DWB 23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-09A

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V1K2159.D

Level: (TRACE or LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 14 Date Analyzed: 12/02/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Purge Volume: 5.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	589-81-1	Heptane, 3-methyl-	7.451	41000	NJ
02	638-04-0	Cyclohexane, 1,3-dimethyl-,	7.668	34000	NJ
03	1072-05-5	Heptane, 2,6-dimethyl-	8.574	37000	NJ
04	2216-30-0	Heptane, 2,5-dimethyl-	8.722	38000	NJ
05	1678-91-7	Cyclohexane, ethyl-	8.840	30000	NJ
06	3074-71-3	Heptane, 2,3-dimethyl-	9.156	26000	NJ
07	1839-63-0	Cyclohexane, 1,3,5-trimethyl	9.215	34000	NJ
08	2216-34-4	Octane, 4-methyl-	9.274	48000	NJ
09	2216-33-3	Octane, 3-methyl-	9.432	51000	NJ
10		Unknown-01	10.299	29000	J
11		Unknown-02	10.594	28000	J
12		Unknown-03	10.712	28000	J
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DWB 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-10A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5K3624.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 11 Date Analyzed: 12/02/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.6	U
74-87-3	Chloromethane	5.6	U
75-01-4	Vinyl chloride	5.6	U
74-83-9	Bromomethane	5.6	U
75-00-3	Chloroethane	5.6	U
75-69-4	Trichlorofluoromethane	5.6	U
75-35-4	1,1-Dichloroethene	5.6	U
67-64-1	Acetone	5.6	U
74-88-4	Iodomethane	5.6	U
75-15-0	Carbon disulfide	5.6	U
75-09-2	Methylene chloride	12	
156-60-5	trans-1,2-Dichloroethene	5.6	U
1634-04-4	Methyl tert-butyl ether	5.6	U
75-34-3	1,1-Dichloroethane	5.6	U
108-05-4	Vinyl acetate	5.6	U
78-93-3	2-Butanone	5.6	U
156-59-2	cis-1,2-Dichloroethene	5.6	U
594-20-7	2,2-Dichloropropane	5.6	U
74-97-5	Bromochloromethane	5.6	U
67-66-3	Chloroform	5.6	U
71-55-6	1,1,1-Trichloroethane	5.6	U
563-58-6	1,1-Dichloropropene	5.6	U
56-23-5	Carbon tetrachloride	5.6	U
107-06-2	1,2-Dichloroethane	5.6	U
71-43-2	Benzene	5.6	U
79-01-6	Trichloroethene	5.6	U
78-87-5	1,2-Dichloropropane	5.6	U
74-95-3	Dibromomethane	5.6	U
75-27-4	Bromodichloromethane	5.6	U
10061-01-5	cis-1,3-Dichloropropene	5.6	U
108-10-1	4-Methyl-2-pentanone	5.6	U
108-88-3	Toluene	5.6	U
10061-02-6	trans-1,3-Dichloropropene	5.6	U
79-00-5	1,1,2-Trichloroethane	5.6	U
142-28-9	1,3-Dichloropropane	5.6	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DWB 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-10A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5K3624.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 11 Date Analyzed: 12/02/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	5.6	U
591-78-6	2-Hexanone	5.6	U
124-48-1	Dibromochloromethane	5.6	U
106-93-4	1,2-Dibromoethane	5.6	U
108-90-7	Chlorobenzene	5.6	U
630-20-6	1,1,1,2-Tetrachloroethane	5.6	U
100-41-4	Ethylbenzene	5.6	U
1330-20-7	m,p-Xylene	5.6	U
95-47-6	o-Xylene	5.6	U
1330-20-7	Xylene (Total)	5.6	U
100-42-5	Styrene	5.6	U
75-25-2	Bromoform	5.6	U
98-82-8	Isopropylbenzene	5.6	U
79-34-5	1,1,2,2-Tetrachloroethane	5.6	U
108-86-1	Bromobenzene	5.6	U
96-18-4	1,2,3-Trichloropropane	5.6	U
103-65-1	n-Propylbenzene	5.6	U
95-49-8	2-Chlorotoluene	5.6	U
108-67-8	1,3,5-Trimethylbenzene	5.6	U
106-43-4	4-Chlorotoluene	5.6	U
98-06-6	tert-Butylbenzene	5.6	U
95-63-6	1,2,4-Trimethylbenzene	5.6	U
135-98-8	sec-Butylbenzene	5.6	U
99-87-6	4-Isopropyltoluene	5.6	U
541-73-1	1,3-Dichlorobenzene	5.6	U
106-46-7	1,4-Dichlorobenzene	5.6	U
104-51-8	n-Butylbenzene	5.6	U
95-50-1	1,2-Dichlorobenzene	5.6	U
96-12-8	1,2-Dibromo-3-chloropropane	5.6	U
120-82-1	1,2,4-Trichlorobenzene	5.6	U
87-68-3	Hexachlorobutadiene	5.6	U
87-61-6	1,2,3-Trichlorobenzene	5.6	U
91-20-3	Naphthalene	5.6	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

DWB 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-10A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5K3624.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 11 Date Analyzed: 12/02/2008

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/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SMS 12 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-11A

Sample wt/vol: 5.70 (g/mL) G Lab File ID: V6G2968.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 17 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.3	U
74-87-3	Chloromethane	5.3	U
75-01-4	Vinyl chloride	5.3	U
74-83-9	Bromomethane	5.3	U
75-00-3	Chloroethane	5.3	U
75-69-4	Trichlorofluoromethane	5.3	U
75-35-4	1,1-Dichloroethene	5.3	U
67-64-1	Acetone	58	
74-88-4	Iodomethane	5.3	U
75-15-0	Carbon disulfide	5.3	U
75-09-2	Methylene chloride	5.3	U
156-60-5	trans-1,2-Dichloroethene	5.3	U
1634-04-4	Methyl tert-butyl ether	5.3	U
75-34-3	1,1-Dichloroethane	5.3	U
108-05-4	Vinyl acetate	5.3	U
78-93-3	2-Butanone	5.3	U
156-59-2	cis-1,2-Dichloroethene	5.3	U
594-20-7	2,2-Dichloropropane	5.3	U
74-97-5	Bromochloromethane	5.3	U
67-66-3	Chloroform	5.3	U
71-55-6	1,1,1-Trichloroethane	5.3	U
563-58-6	1,1-Dichloropropene	5.3	U
56-23-5	Carbon tetrachloride	5.3	U
107-06-2	1,2-Dichloroethane	5.3	U
71-43-2	Benzene	5.3	U
79-01-6	Trichloroethene	5.3	U
78-87-5	1,2-Dichloropropane	5.3	U
74-95-3	Dibromomethane	5.3	U
75-27-4	Bromodichloromethane	5.3	U
10061-01-5	cis-1,3-Dichloropropene	5.3	U
108-10-1	4-Methyl-2-pentanone	5.3	U
108-88-3	Toluene	11	
10061-02-6	trans-1,3-Dichloropropene	5.3	U
79-00-5	1,1,2-Trichloroethane	5.3	U
142-28-9	1,3-Dichloropropane	5.3	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SMS 12 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-11A

Sample wt/vol: 5.70 (g/mL) G Lab File ID: V6G2968.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 17 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	5.3	U
591-78-6	2-Hexanone	5.3	U
124-48-1	Dibromochloromethane	5.3	U
106-93-4	1,2-Dibromoethane	5.3	U
108-90-7	Chlorobenzene	5.3	U
630-20-6	1,1,1,2-Tetrachloroethane	5.3	U
100-41-4	Ethylbenzene	5.3	U
1330-20-7	m,p-Xylene	8.0	
95-47-6	o-Xylene	5.3	U
1330-20-7	Xylene (Total)	8.0	
100-42-5	Styrene	5.3	U
75-25-2	Bromoform	5.3	U
98-82-8	Isopropylbenzene	200	
79-34-5	1,1,2,2-Tetrachloroethane	5.3	U
108-86-1	Bromobenzene	5.3	U
96-18-4	1,2,3-Trichloropropane	5.3	U
103-65-1	n-Propylbenzene	560	E
95-49-8	2-Chlorotoluene	5.3	U
108-67-8	1,3,5-Trimethylbenzene	1200	E
106-43-4	4-Chlorotoluene	5.3	U
98-06-6	tert-Butylbenzene	130	
95-63-6	1,2,4-Trimethylbenzene	1200	E
135-98-8	sec-Butylbenzene	220	E
99-87-6	4-Isopropyltoluene	410	E
541-73-1	1,3-Dichlorobenzene	190	
106-46-7	1,4-Dichlorobenzene	240	E
104-51-8	n-Butylbenzene	310	E
95-50-1	1,2-Dichlorobenzene	5.3	U
96-12-8	1,2-Dibromo-3-chloropropane	5.3	U
120-82-1	1,2,4-Trichlorobenzene	5.3	U
87-68-3	Hexachlorobutadiene	5.3	U
87-61-6	1,2,3-Trichlorobenzene	5.3	U
91-20-3	Naphthalene	5.3	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SMS 12 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-11A

Sample wt/vol: 5.70 (g/mL) G Lab File ID: V6G2968.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 17 Date Analyzed: 11/25/2008

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/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS 12
23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-11A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V1K2073.D

Level: (TRACE/LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 17 Date Analyzed: 11/29/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	350	U
74-87-3	Chloromethane	350	U
75-01-4	Vinyl chloride	350	U
74-83-9	Bromomethane	350	U
75-00-3	Chloroethane	350	U
75-69-4	Trichlorofluoromethane	350	U
75-35-4	1,1-Dichloroethene	350	U
67-64-1	Acetone	350	U
74-88-4	Iodomethane	350	U
75-15-0	Carbon disulfide	350	U
75-09-2	Methylene chloride	350	U
156-60-5	trans-1,2-Dichloroethene	350	U
1634-04-4	Methyl tert-butyl ether	350	U
75-34-3	1,1-Dichloroethane	350	U
108-05-4	Vinyl acetate	350	U
78-93-3	2-Butanone	350	U
156-59-2	cis-1,2-Dichloroethene	350	U
594-20-7	2,2-Dichloropropane	350	U
74-97-5	Bromochloromethane	350	U
67-66-3	Chloroform	350	U
71-55-6	1,1,1-Trichloroethane	350	U
563-58-6	1,1-Dichloropropene	350	U
56-23-5	Carbon tetrachloride	350	U
107-06-2	1,2-Dichloroethane	350	U
71-43-2	Benzene	350	U
79-01-6	Trichloroethene	350	U
78-87-5	1,2-Dichloropropane	350	U
74-95-3	Dibromomethane	350	U
75-27-4	Bromodichloromethane	350	U
10061-01-5	cis-1,3-Dichloropropene	350	U
108-10-1	4-Methyl-2-pentanone	350	U
108-88-3	Toluene	350	U
10061-02-6	trans-1,3-Dichloropropene	350	U
79-00-5	1,1,2-Trichloroethane	350	U
142-28-9	1,3-Dichloropropane	350	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS 12
23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-11A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V1K2073.D

Level: (TRACE/LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 17 Date Analyzed: 11/29/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	350	U
591-78-6	2-Hexanone	350	U
124-48-1	Dibromochloromethane	350	U
106-93-4	1,2-Dibromoethane	350	U
108-90-7	Chlorobenzene	350	U
630-20-6	1,1,1,2-Tetrachloroethane	350	U
100-41-4	Ethylbenzene	350	U
1330-20-7	m,p-Xylene	350	U
95-47-6	o-Xylene	350	U
1330-20-7	Xylene (Total)	350	U
100-42-5	Styrene	350	U
75-25-2	Bromoform	350	U
98-82-8	Isopropylbenzene	220	J
79-34-5	1,1,2,2-Tetrachloroethane	350	U
108-86-1	Bromobenzene	350	U
96-18-4	1,2,3-Trichloropropane	350	U
103-65-1	n-Propylbenzene	400	
95-49-8	2-Chlorotoluene	350	U
108-67-8	1,3,5-Trimethylbenzene	3200	
106-43-4	4-Chlorotoluene	350	U
98-06-6	tert-Butylbenzene	280	J
95-63-6	1,2,4-Trimethylbenzene	4400	
135-98-8	sec-Butylbenzene	330	J
99-87-6	4-Isopropyltoluene	780	
541-73-1	1,3-Dichlorobenzene	300	J
106-46-7	1,4-Dichlorobenzene	300	J
104-51-8	n-Butylbenzene	1200	
95-50-1	1,2-Dichlorobenzene	350	U
96-12-8	1,2-Dibromo-3-chloropropane	350	U
120-82-1	1,2,4-Trichlorobenzene	110	J
87-68-3	Hexachlorobutadiene	350	U
87-61-6	1,2,3-Trichlorobenzene	350	U
91-20-3	Naphthalene	530	

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SMS 12
23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-11A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V1K2073.D

Level: (TRACE or LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 17 Date Analyzed: 11/29/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Purge Volume: 5.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	10.308	9400	J
02		Unknown-02	10.604	10000	J
03		Unknown-03	10.712	10000	J
04		Unknown-04	11.067	5600	J
05	874-41-9	Benzene, 1-ethyl-2,4-dimethy	13.225	4800	NJ
06	527-84-4	Benzene, 1-methyl-2-(1-methy	13.303	5900	NJ
07		Unknown-05	13.432	4700	J
08		Unknown-06	13.747	4000	J
09	527-53-7	Benzene, 1,2,3,5-tetramethyl	13.816	4900	NJ
10	824-90-8	1-Phenyl-1-butene	14.259	8400	NJ
11		Unknown-07	14.437	7000	J
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS12 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-12A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5K3625.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 12/02/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.8	U
74-87-3	Chloromethane	5.8	U
75-01-4	Vinyl chloride	5.8	U
74-83-9	Bromomethane	5.8	U
75-00-3	Chloroethane	5.8	U
75-69-4	Trichlorofluoromethane	5.8	U
75-35-4	1,1-Dichloroethene	5.8	U
67-64-1	Acetone	5.8	U
74-88-4	Iodomethane	5.8	U
75-15-0	Carbon disulfide	5.8	U
75-09-2	Methylene chloride	11	
156-60-5	trans-1,2-Dichloroethene	5.8	U
1634-04-4	Methyl tert-butyl ether	5.8	U
75-34-3	1,1-Dichloroethane	5.8	U
108-05-4	Vinyl acetate	5.8	U
78-93-3	2-Butanone	5.8	U
156-59-2	cis-1,2-Dichloroethene	5.8	U
594-20-7	2,2-Dichloropropane	5.8	U
74-97-5	Bromochloromethane	5.8	U
67-66-3	Chloroform	5.8	U
71-55-6	1,1,1-Trichloroethane	5.8	U
563-58-6	1,1-Dichloropropene	5.8	U
56-23-5	Carbon tetrachloride	5.8	U
107-06-2	1,2-Dichloroethane	5.8	U
71-43-2	Benzene	5.8	U
79-01-6	Trichloroethene	5.8	U
78-87-5	1,2-Dichloropropane	5.8	U
74-95-3	Dibromomethane	5.8	U
75-27-4	Bromodichloromethane	5.8	U
10061-01-5	cis-1,3-Dichloropropene	5.8	U
108-10-1	4-Methyl-2-pentanone	5.8	U
108-88-3	Toluene	5.8	U
10061-02-6	trans-1,3-Dichloropropene	5.8	U
79-00-5	1,1,2-Trichloroethane	5.8	U
142-28-9	1,3-Dichloropropane	5.8	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS12 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-12A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5K3625.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 12/02/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	5.8	U
591-78-6	2-Hexanone	5.8	U
124-48-1	Dibromochloromethane	5.8	U
106-93-4	1,2-Dibromoethane	5.8	U
108-90-7	Chlorobenzene	5.8	U
630-20-6	1,1,1,2-Tetrachloroethane	5.8	U
100-41-4	Ethylbenzene	5.8	U
1330-20-7	m,p-Xylene	5.8	U
95-47-6	o-Xylene	5.8	U
1330-20-7	Xylene (Total)	5.8	U
100-42-5	Styrene	5.8	U
75-25-2	Bromoform	5.8	U
98-82-8	Isopropylbenzene	5.8	U
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U
108-86-1	Bromobenzene	5.8	U
96-18-4	1,2,3-Trichloropropane	5.8	U
103-65-1	n-Propylbenzene	5.8	U
95-49-8	2-Chlorotoluene	5.8	U
108-67-8	1,3,5-Trimethylbenzene	5.8	U
106-43-4	4-Chlorotoluene	5.8	U
98-06-6	tert-Butylbenzene	5.8	U
95-63-6	1,2,4-Trimethylbenzene	5.8	U
135-98-8	sec-Butylbenzene	5.8	U
99-87-6	4-Isopropyltoluene	5.8	U
541-73-1	1,3-Dichlorobenzene	5.8	U
106-46-7	1,4-Dichlorobenzene	5.8	U
104-51-8	n-Butylbenzene	5.8	U
95-50-1	1,2-Dichlorobenzene	5.8	U
96-12-8	1,2-Dibromo-3-chloropropane	5.8	U
120-82-1	1,2,4-Trichlorobenzene	5.8	U
87-68-3	Hexachlorobutadiene	5.8	U
87-61-6	1,2,3-Trichlorobenzene	5.8	U
91-20-3	Naphthalene	5.8	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SMS12 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-12A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5K3625.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 12/02/2008

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/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS 12B
23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-13A

Sample wt/vol: 6.00 (g/mL) G Lab File ID: V6G2970.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 12 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	4.7	U
74-87-3	Chloromethane	4.7	U
75-01-4	Vinyl chloride	4.7	U
74-83-9	Bromomethane	4.7	U
75-00-3	Chloroethane	4.7	U
75-69-4	Trichlorofluoromethane	4.7	U
75-35-4	1,1-Dichloroethene	4.7	U
67-64-1	Acetone	81	
74-88-4	Iodomethane	4.7	U
75-15-0	Carbon disulfide	4.9	
75-09-2	Methylene chloride	4.7	U
156-60-5	trans-1,2-Dichloroethene	4.7	U
1634-04-4	Methyl tert-butyl ether	4.7	U
75-34-3	1,1-Dichloroethane	4.7	U
108-05-4	Vinyl acetate	4.7	U
78-93-3	2-Butanone	4.7	U
156-59-2	cis-1,2-Dichloroethene	4.7	U
594-20-7	2,2-Dichloropropane	4.7	U
74-97-5	Bromochloromethane	4.7	U
67-66-3	Chloroform	4.7	U
71-55-6	1,1,1-Trichloroethane	4.7	U
563-58-6	1,1-Dichloropropene	4.7	U
56-23-5	Carbon tetrachloride	4.7	U
107-06-2	1,2-Dichloroethane	4.7	U
71-43-2	Benzene	4.7	U
79-01-6	Trichloroethene	4.7	U
78-87-5	1,2-Dichloropropane	4.7	U
74-95-3	Dibromomethane	4.7	U
75-27-4	Bromodichloromethane	4.7	U
10061-01-5	cis-1,3-Dichloropropene	4.7	U
108-10-1	4-Methyl-2-pentanone	4.7	U
108-88-3	Toluene	4.7	U
10061-02-6	trans-1,3-Dichloropropene	4.7	U
79-00-5	1,1,2-Trichloroethane	4.7	U
142-28-9	1,3-Dichloropropane	4.7	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS 12B
23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-13A

Sample wt/vol: 6.00 (g/mL) G Lab File ID: V6G2970.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 12 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	4.7	U
591-78-6	2-Hexanone	4.7	U
124-48-1	Dibromochloromethane	4.7	U
106-93-4	1,2-Dibromoethane	4.7	U
108-90-7	Chlorobenzene	4.7	U
630-20-6	1,1,1,2-Tetrachloroethane	4.7	U
100-41-4	Ethylbenzene	4.7	U
1330-20-7	m,p-Xylene	4.7	U
95-47-6	o-Xylene	4.7	U
1330-20-7	Xylene (Total)	4.7	U
100-42-5	Styrene	4.7	U
75-25-2	Bromoform	4.7	U
98-82-8	Isopropylbenzene	32	
79-34-5	1,1,2,2-Tetrachloroethane	4.7	U
108-86-1	Bromobenzene	4.7	U
96-18-4	1,2,3-Trichloropropane	4.7	U
103-65-1	n-Propylbenzene	130	
95-49-8	2-Chlorotoluene	4.7	U
108-67-8	1,3,5-Trimethylbenzene	1000	E
106-43-4	4-Chlorotoluene	4.7	U
98-06-6	tert-Butylbenzene	120	
95-63-6	1,2,4-Trimethylbenzene	790	E
135-98-8	sec-Butylbenzene	170	
99-87-6	4-Isopropyltoluene	410	E
541-73-1	1,3-Dichlorobenzene	4.7	U
106-46-7	1,4-Dichlorobenzene	4.7	U
104-51-8	n-Butylbenzene	350	E
95-50-1	1,2-Dichlorobenzene	4.7	U
96-12-8	1,2-Dibromo-3-chloropropane	4.7	U
120-82-1	1,2,4-Trichlorobenzene	1.9	J
87-68-3	Hexachlorobutadiene	4.7	U
87-61-6	1,2,3-Trichlorobenzene	4.7	U
91-20-3	Naphthalene	4.7	U

SW846

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SMS 12B
23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-13A

Sample wt/vol: 6.00 (g/mL) G Lab File ID: V6G2970.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 12 Date Analyzed: 11/25/2008

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/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS 12B
23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-13A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1K2074.D

Level: (TRACE/LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 12 Date Analyzed: 11/29/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	320	U
74-87-3	Chloromethane	320	U
75-01-4	Vinyl chloride	320	U
74-83-9	Bromomethane	320	U
75-00-3	Chloroethane	320	U
75-69-4	Trichlorofluoromethane	320	U
75-35-4	1,1-Dichloroethene	320	U
67-64-1	Acetone	320	U
74-88-4	Iodomethane	320	U
75-15-0	Carbon disulfide	320	U
75-09-2	Methylene chloride	320	U
156-60-5	trans-1,2-Dichloroethene	320	U
1634-04-4	Methyl tert-butyl ether	320	U
75-34-3	1,1-Dichloroethane	320	U
108-05-4	Vinyl acetate	320	U
78-93-3	2-Butanone	320	U
156-59-2	cis-1,2-Dichloroethene	320	U
594-20-7	2,2-Dichloropropane	320	U
74-97-5	Bromochloromethane	320	U
67-66-3	Chloroform	320	U
71-55-6	1,1,1-Trichloroethane	320	U
563-58-6	1,1-Dichloropropene	320	U
56-23-5	Carbon tetrachloride	320	U
107-06-2	1,2-Dichloroethane	320	U
71-43-2	Benzene	320	U
79-01-6	Trichloroethene	320	U
78-87-5	1,2-Dichloropropane	320	U
74-95-3	Dibromomethane	320	U
75-27-4	Bromodichloromethane	320	U
10061-01-5	cis-1,3-Dichloropropene	320	U
108-10-1	4-Methyl-2-pentanone	320	U
108-88-3	Toluene	320	U
10061-02-6	trans-1,3-Dichloropropene	320	U
79-00-5	1,1,2-Trichloroethane	320	U
142-28-9	1,3-Dichloropropane	320	U

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS 12B
23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-13A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1K2074.D

Level: (TRACE/LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 12 Date Analyzed: 11/29/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	320	U
591-78-6	2-Hexanone	320	U
124-48-1	Dibromochloromethane	320	U
106-93-4	1,2-Dibromoethane	320	U
108-90-7	Chlorobenzene	320	U
630-20-6	1,1,1,2-Tetrachloroethane	320	U
100-41-4	Ethylbenzene	320	U
1330-20-7	m,p-Xylene	320	U
95-47-6	o-Xylene	320	U
1330-20-7	Xylene (Total)	320	U
100-42-5	Styrene	320	U
75-25-2	Bromoform	320	U
98-82-8	Isopropylbenzene	320	U
79-34-5	1,1,2,2-Tetrachloroethane	320	U
108-86-1	Bromobenzene	320	U
96-18-4	1,2,3-Trichloropropane	320	U
103-65-1	n-Propylbenzene	130	J
95-49-8	2-Chlorotoluene	320	U
108-67-8	1,3,5-Trimethylbenzene	4300	
106-43-4	4-Chlorotoluene	320	U
98-06-6	tert-Butylbenzene	240	J
95-63-6	1,2,4-Trimethylbenzene	2200	
135-98-8	sec-Butylbenzene	330	
99-87-6	4-Isopropyltoluene	900	
541-73-1	1,3-Dichlorobenzene	320	U
106-46-7	1,4-Dichlorobenzene	320	U
104-51-8	n-Butylbenzene	1700	
95-50-1	1,2-Dichlorobenzene	320	U
96-12-8	1,2-Dibromo-3-chloropropane	320	U
120-82-1	1,2,4-Trichlorobenzene	77	J
87-68-3	Hexachlorobutadiene	320	U
87-61-6	1,2,3-Trichlorobenzene	320	U
91-20-3	Naphthalene	94	J

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SMS 12B
23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-13A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1K2074.D

Level: (TRACE or LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 12 Date Analyzed: 11/29/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Purge Volume: 5.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	2216-34-4	Octane, 4-methyl-	9.279	8700	NJ
02		Unknown-01	10.599	9300	J
03		Unknown-02	10.717	10000	J
04		Unknown-03	11.062	5100	J
05		Unknown-04	11.111	5400	J
06		Unknown-05	11.230	5600	J
07	2847-72-5	Decane, 4-methyl-	12.018	6500	NJ
08	874-41-9	Benzene, 1-ethyl-2,4-dimethy	13.220	4800	NJ
09	874-41-9	Benzene, 1-ethyl-2,4-dimethy	13.299	5300	NJ
10	874-35-1	1H-Indene, 2,3-dihydro-5-met	14.254	8000	NJ
11	119-64-2	Naphthalene, 1,2,3,4-tetrahy	14.432	5200	NJ
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS 12B 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-14A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5K3626.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 19 Date Analyzed: 12/02/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.1	U
74-87-3	Chloromethane	6.1	U
75-01-4	Vinyl chloride	6.1	U
74-83-9	Bromomethane	6.1	U
75-00-3	Chloroethane	6.1	U
75-69-4	Trichlorofluoromethane	6.1	U
75-35-4	1,1-Dichloroethene	6.1	U
67-64-1	Acetone	6.1	U
74-88-4	Iodomethane	6.1	U
75-15-0	Carbon disulfide	6.1	U
75-09-2	Methylene chloride	13	
156-60-5	trans-1,2-Dichloroethene	6.1	U
1634-04-4	Methyl tert-butyl ether	6.1	U
75-34-3	1,1-Dichloroethane	6.1	U
108-05-4	Vinyl acetate	6.1	U
78-93-3	2-Butanone	6.1	U
156-59-2	cis-1,2-Dichloroethene	6.1	U
594-20-7	2,2-Dichloropropane	6.1	U
74-97-5	Bromochloromethane	6.1	U
67-66-3	Chloroform	6.1	U
71-55-6	1,1,1-Trichloroethane	6.1	U
563-58-6	1,1-Dichloropropene	6.1	U
56-23-5	Carbon tetrachloride	6.1	U
107-06-2	1,2-Dichloroethane	6.1	U
71-43-2	Benzene	6.1	U
79-01-6	Trichloroethene	6.1	U
78-87-5	1,2-Dichloropropane	6.1	U
74-95-3	Dibromomethane	6.1	U
75-27-4	Bromodichloromethane	6.1	U
10061-01-5	cis-1,3-Dichloropropene	6.1	U
108-10-1	4-Methyl-2-pentanone	6.1	U
108-88-3	Toluene	6.1	U
10061-02-6	trans-1,3-Dichloropropene	6.1	U
79-00-5	1,1,2-Trichloroethane	6.1	U
142-28-9	1,3-Dichloropropane	6.1	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SMS 12B 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-14A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5K3626.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 19 Date Analyzed: 12/02/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	6.1	U
591-78-6	2-Hexanone	6.1	U
124-48-1	Dibromochloromethane	6.1	U
106-93-4	1,2-Dibromoethane	6.1	U
108-90-7	Chlorobenzene	6.1	U
630-20-6	1,1,1,2-Tetrachloroethane	6.1	U
100-41-4	Ethylbenzene	6.1	U
1330-20-7	m,p-Xylene	6.1	U
95-47-6	o-Xylene	6.1	U
1330-20-7	Xylene (Total)	6.1	U
100-42-5	Styrene	6.1	U
75-25-2	Bromoform	6.1	U
98-82-8	Isopropylbenzene	6.1	U
79-34-5	1,1,2,2-Tetrachloroethane	6.1	U
108-86-1	Bromobenzene	6.1	U
96-18-4	1,2,3-Trichloropropane	6.1	U
103-65-1	n-Propylbenzene	6.1	U
95-49-8	2-Chlorotoluene	6.1	U
108-67-8	1,3,5-Trimethylbenzene	6.1	U
106-43-4	4-Chlorotoluene	6.1	U
98-06-6	tert-Butylbenzene	6.1	U
95-63-6	1,2,4-Trimethylbenzene	6.1	U
135-98-8	sec-Butylbenzene	6.1	U
99-87-6	4-Isopropyltoluene	6.1	U
541-73-1	1,3-Dichlorobenzene	6.1	U
106-46-7	1,4-Dichlorobenzene	6.1	U
104-51-8	n-Butylbenzene	6.1	U
95-50-1	1,2-Dichlorobenzene	6.1	U
96-12-8	1,2-Dibromo-3-chloropropane	6.1	U
120-82-1	1,2,4-Trichlorobenzene	6.1	U
87-68-3	Hexachlorobutadiene	6.1	U
87-61-6	1,2,3-Trichlorobenzene	6.1	U
91-20-3	Naphthalene	6.1	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SMS 12B 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-14A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5K3626.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 19 Date Analyzed: 12/02/2008

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/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FIELD BLANK

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: G2173-15A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1K1890.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. Date Analyzed: 11/22/2008

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

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

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
67-64-1	Acetone	5.0	U
74-88-4	Iodomethane	5.0	U
75-15-0	Carbon disulfide	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
108-05-4	Vinyl acetate	5.0	U
78-93-3	2-Butanone	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
594-20-7	2,2-Dichloropropane	5.0	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
563-58-6	1,1-Dichloropropene	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
71-43-2	Benzene	5.0	U
79-01-6	Trichloroethene	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
74-95-3	Dibromomethane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
142-28-9	1,3-Dichloropropane	5.0	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

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Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: G2173-15A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1K1890.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. Date Analyzed: 11/22/2008

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

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

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
108-86-1	Bromobenzene	5.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
103-65-1	n-Propylbenzene	5.0	U
95-49-8	2-Chlorotoluene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
106-43-4	4-Chlorotoluene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

FIELD BLANK

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: G2173-15A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1K1890.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. Date Analyzed: 11/22/2008

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 Purge Volume: 5.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

16 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-16A

Sample wt/vol: 5.90 (g/mL) G Lab File ID: V6G2972.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 14 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	4.9	U
74-87-3	Chloromethane	4.9	U
75-01-4	Vinyl chloride	4.9	U
74-83-9	Bromomethane	4.9	U
75-00-3	Chloroethane	4.9	U
75-69-4	Trichlorofluoromethane	4.9	U
75-35-4	1,1-Dichloroethene	4.9	U
67-64-1	Acetone	4.9	U
74-88-4	Iodomethane	4.9	U
75-15-0	Carbon disulfide	4.9	U
75-09-2	Methylene chloride	4.9	U
156-60-5	trans-1,2-Dichloroethene	4.9	U
1634-04-4	Methyl tert-butyl ether	4.9	U
75-34-3	1,1-Dichloroethane	4.9	U
108-05-4	Vinyl acetate	4.9	U
78-93-3	2-Butanone	4.9	U
156-59-2	cis-1,2-Dichloroethene	4.9	U
594-20-7	2,2-Dichloropropane	4.9	U
74-97-5	Bromochloromethane	4.9	U
67-66-3	Chloroform	4.9	U
71-55-6	1,1,1-Trichloroethane	4.9	U
563-58-6	1,1-Dichloropropene	4.9	U
56-23-5	Carbon tetrachloride	4.9	U
107-06-2	1,2-Dichloroethane	4.9	U
71-43-2	Benzene	4.9	U
79-01-6	Trichloroethene	4.9	U
78-87-5	1,2-Dichloropropane	4.9	U
74-95-3	Dibromomethane	4.9	U
75-27-4	Bromodichloromethane	4.9	U
10061-01-5	cis-1,3-Dichloropropene	4.9	U
108-10-1	4-Methyl-2-pentanone	4.9	U
108-88-3	Toluene	4.9	U
10061-02-6	trans-1,3-Dichloropropene	4.9	U
79-00-5	1,1,2-Trichloroethane	4.9	U
142-28-9	1,3-Dichloropropane	4.9	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

16 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-16A

Sample wt/vol: 5.90 (g/mL) G Lab File ID: V6G2972.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 14 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	4.9	U
591-78-6	2-Hexanone	4.9	U
124-48-1	Dibromochloromethane	4.9	U
106-93-4	1,2-Dibromoethane	4.9	U
108-90-7	Chlorobenzene	4.9	U
630-20-6	1,1,1,2-Tetrachloroethane	4.9	U
100-41-4	Ethylbenzene	4.9	U
1330-20-7	m,p-Xylene	4.9	U
95-47-6	o-Xylene	4.9	U
1330-20-7	Xylene (Total)	4.9	U
100-42-5	Styrene	4.9	U
75-25-2	Bromoform	4.9	U
98-82-8	Isopropylbenzene	4.9	U
79-34-5	1,1,2,2-Tetrachloroethane	4.9	U
108-86-1	Bromobenzene	4.9	U
96-18-4	1,2,3-Trichloropropane	4.9	U
103-65-1	n-Propylbenzene	4.9	U
95-49-8	2-Chlorotoluene	4.9	U
108-67-8	1,3,5-Trimethylbenzene	3.3	J
106-43-4	4-Chlorotoluene	4.9	U
98-06-6	tert-Butylbenzene	4.9	U
95-63-6	1,2,4-Trimethylbenzene	2.2	J
135-98-8	sec-Butylbenzene	4.9	U
99-87-6	4-Isopropyltoluene	4.9	U
541-73-1	1,3-Dichlorobenzene	4.9	U
106-46-7	1,4-Dichlorobenzene	4.9	U
104-51-8	n-Butylbenzene	4.9	U
95-50-1	1,2-Dichlorobenzene	4.9	U
96-12-8	1,2-Dibromo-3-chloropropane	4.9	U
120-82-1	1,2,4-Trichlorobenzene	4.9	U
87-68-3	Hexachlorobutadiene	4.9	U
87-61-6	1,2,3-Trichlorobenzene	4.9	U
91-20-3	Naphthalene	4.9	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

16 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-16A

Sample wt/vol: 5.90 (g/mL) G Lab File ID: V6G2972.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 14 Date Analyzed: 11/25/2008

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/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	9.384	47	J
02		Unknown-02	10.430	44	J
03		Unknown-03	10.710	42	J
04		Unknown-04	10.844	62	J
05		Unknown-05	14.409	40	J
06	119-64-2	Naphthalene, 1,2,3,4-tetrahy	14.585	44	NJ
07		Unknown-06	14.822	37	J
08		Unknown-07	15.199	30	J
09	6682-71-9	1H-Indene, 2,3-dihydro-4,7-d	15.704	48	NJ
10		Unknown-08	16.069	33	J
11		Unknown-09	16.726	45	J
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

16 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-17A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V6G2973.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 12 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.6	U
74-87-3	Chloromethane	5.6	U
75-01-4	Vinyl chloride	5.6	U
74-83-9	Bromomethane	5.6	U
75-00-3	Chloroethane	5.6	U
75-69-4	Trichlorofluoromethane	5.6	U
75-35-4	1,1-Dichloroethene	5.6	U
67-64-1	Acetone	7.8	
74-88-4	Iodomethane	5.6	U
75-15-0	Carbon disulfide	5.6	U
75-09-2	Methylene chloride	5.6	U
156-60-5	trans-1,2-Dichloroethene	5.6	U
1634-04-4	Methyl tert-butyl ether	5.6	U
75-34-3	1,1-Dichloroethane	5.6	U
108-05-4	Vinyl acetate	5.6	U
78-93-3	2-Butanone	5.6	U
156-59-2	cis-1,2-Dichloroethene	5.6	U
594-20-7	2,2-Dichloropropane	5.6	U
74-97-5	Bromochloromethane	5.6	U
67-66-3	Chloroform	5.6	U
71-55-6	1,1,1-Trichloroethane	5.6	U
563-58-6	1,1-Dichloropropene	5.6	U
56-23-5	Carbon tetrachloride	5.6	U
107-06-2	1,2-Dichloroethane	5.6	U
71-43-2	Benzene	5.6	U
79-01-6	Trichloroethene	5.6	U
78-87-5	1,2-Dichloropropane	5.6	U
74-95-3	Dibromomethane	5.6	U
75-27-4	Bromodichloromethane	5.6	U
10061-01-5	cis-1,3-Dichloropropene	5.6	U
108-10-1	4-Methyl-2-pentanone	5.6	U
108-88-3	Toluene	5.6	U
10061-02-6	trans-1,3-Dichloropropene	5.6	U
79-00-5	1,1,2-Trichloroethane	5.6	U
142-28-9	1,3-Dichloropropane	5.6	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

16 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-17A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V6G2973.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 12 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	5.6	U
591-78-6	2-Hexanone	5.6	U
124-48-1	Dibromochloromethane	5.6	U
106-93-4	1,2-Dibromoethane	5.6	U
108-90-7	Chlorobenzene	5.6	U
630-20-6	1,1,1,2-Tetrachloroethane	5.6	U
100-41-4	Ethylbenzene	5.6	U
1330-20-7	m,p-Xylene	5.6	U
95-47-6	o-Xylene	5.6	U
1330-20-7	Xylene (Total)	5.6	U
100-42-5	Styrene	5.6	U
75-25-2	Bromoform	5.6	U
98-82-8	Isopropylbenzene	5.6	U
79-34-5	1,1,2,2-Tetrachloroethane	5.6	U
108-86-1	Bromobenzene	5.6	U
96-18-4	1,2,3-Trichloropropane	5.6	U
103-65-1	n-Propylbenzene	5.6	U
95-49-8	2-Chlorotoluene	5.6	U
108-67-8	1,3,5-Trimethylbenzene	5.6	U
106-43-4	4-Chlorotoluene	5.6	U
98-06-6	tert-Butylbenzene	5.6	U
95-63-6	1,2,4-Trimethylbenzene	5.6	U
135-98-8	sec-Butylbenzene	5.6	U
99-87-6	4-Isopropyltoluene	5.6	U
541-73-1	1,3-Dichlorobenzene	5.6	U
106-46-7	1,4-Dichlorobenzene	5.6	U
104-51-8	n-Butylbenzene	5.6	U
95-50-1	1,2-Dichlorobenzene	5.6	U
96-12-8	1,2-Dibromo-3-chloropropane	5.6	U
120-82-1	1,2,4-Trichlorobenzene	5.6	U
87-68-3	Hexachlorobutadiene	5.6	U
87-61-6	1,2,3-Trichlorobenzene	5.6	U
91-20-3	Naphthalene	5.6	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

16 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-17A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V6G2973.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 12 Date Analyzed: 11/25/2008

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/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	7667-60-9	Cyclohexane, 1,2,4-trimethyl	9.336	20	NJ
02		Unknown-01	9.384	31	J
03		Unknown-02	9.543	21	J
04		Unknown-03	10.035	18	J
05	3728-55-0	1-Ethyl-3-methylcyclohexane	10.084	21	NJ
06		Unknown-04	10.431	34	J
07		Unknown-05	10.711	31	J
08		Unknown-06	10.838	29	J
09		Unknown-07	11.088	20	J
10		Unknown-08	11.708	17	J
11		Unknown-09	16.478	22	J
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

16B 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-18A

Sample wt/vol: 4.50 (g/mL) G Lab File ID: V6G3081.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 18 Date Analyzed: 11/27/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.8	U
74-87-3	Chloromethane	6.8	U
75-01-4	Vinyl chloride	6.8	U
74-83-9	Bromomethane	6.8	U
75-00-3	Chloroethane	6.8	U
75-69-4	Trichlorofluoromethane	6.8	U
75-35-4	1,1-Dichloroethene	6.8	U
67-64-1	Acetone	78	
74-88-4	Iodomethane	6.8	U
75-15-0	Carbon disulfide	3.8	J
75-09-2	Methylene chloride	6.8	U
156-60-5	trans-1,2-Dichloroethene	6.8	U
1634-04-4	Methyl tert-butyl ether	6.8	U
75-34-3	1,1-Dichloroethane	6.8	U
108-05-4	Vinyl acetate	6.8	U
78-93-3	2-Butanone	6.8	U
156-59-2	cis-1,2-Dichloroethene	6.8	U
594-20-7	2,2-Dichloropropane	6.8	U
74-97-5	Bromochloromethane	6.8	U
67-66-3	Chloroform	6.8	U
71-55-6	1,1,1-Trichloroethane	6.8	U
563-58-6	1,1-Dichloropropene	6.8	U
56-23-5	Carbon tetrachloride	6.8	U
107-06-2	1,2-Dichloroethane	6.8	U
71-43-2	Benzene	6.8	U
79-01-6	Trichloroethene	6.8	U
78-87-5	1,2-Dichloropropane	6.8	U
74-95-3	Dibromomethane	6.8	U
75-27-4	Bromodichloromethane	6.8	U
10061-01-5	cis-1,3-Dichloropropene	6.8	U
108-10-1	4-Methyl-2-pentanone	6.8	U
108-88-3	Toluene	9.9	
10061-02-6	trans-1,3-Dichloropropene	6.8	U
79-00-5	1,1,2-Trichloroethane	6.8	U
142-28-9	1,3-Dichloropropane	6.8	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

16B 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-18A

Sample wt/vol: 4.50 (g/mL) G Lab File ID: V6G3081.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 18 Date Analyzed: 11/27/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	6.8	U
591-78-6	2-Hexanone	6.8	U
124-48-1	Dibromochloromethane	6.8	U
106-93-4	1,2-Dibromoethane	6.8	U
108-90-7	Chlorobenzene	6.8	U
630-20-6	1,1,1,2-Tetrachloroethane	6.8	U
100-41-4	Ethylbenzene	59	
1330-20-7	m,p-Xylene	310	
95-47-6	o-Xylene	6.8	U
1330-20-7	Xylene (Total)	310	
100-42-5	Styrene	6.8	U
75-25-2	Bromoform	6.8	U
98-82-8	Isopropylbenzene	110	
79-34-5	1,1,2,2-Tetrachloroethane	6.8	U
108-86-1	Bromobenzene	6.8	U
96-18-4	1,2,3-Trichloropropane	6.8	U
103-65-1	n-Propylbenzene	190	
95-49-8	2-Chlorotoluene	6.8	U
108-67-8	1,3,5-Trimethylbenzene	1100	E
106-43-4	4-Chlorotoluene	6.8	U
98-06-6	tert-Butylbenzene	90	
95-63-6	1,2,4-Trimethylbenzene	820	E
135-98-8	sec-Butylbenzene	71	
99-87-6	4-Isopropyltoluene	190	
541-73-1	1,3-Dichlorobenzene	360	E
106-46-7	1,4-Dichlorobenzene	370	E
104-51-8	n-Butylbenzene	170	
95-50-1	1,2-Dichlorobenzene	6.8	U
96-12-8	1,2-Dibromo-3-chloropropane	6.8	U
120-82-1	1,2,4-Trichlorobenzene	6.8	U
87-68-3	Hexachlorobutadiene	6.8	U
87-61-6	1,2,3-Trichlorobenzene	6.8	U
91-20-3	Naphthalene	6.3	J

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

16B 23.5-24.5

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-18A

Sample wt/vol: 4.50 (g/mL) G Lab File ID: V6G3081.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 18 Date Analyzed: 11/27/2008

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/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	9.061	2000	J
02	2216-34-4	Octane, 4-methyl-	9.395	360	NJ
03		Unknown-02	9.566	240	J
04		Unknown-03	10.052	360	J
05		Unknown-04	10.448	370	J
06		Unknown-05	10.570	280	J
07		Unknown-06	10.746	310	J
08		Unknown-07	10.868	450	J
09		Unknown-08	11.111	290	J
10		Unknown-09	11.415	400	J
11	611-14-3	Benzene, 1-ethyl-2-methyl-	11.628	430	NJ
12	541-73-1	Benzene, 1,3-dichloro-	12.504	290	NJ
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

16B 23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-18A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1K2160.D

Level: (TRACE/LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 18 Date Analyzed: 12/02/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	360	U
74-87-3	Chloromethane	360	U
75-01-4	Vinyl chloride	360	U
74-83-9	Bromomethane	360	U
75-00-3	Chloroethane	360	U
75-69-4	Trichlorofluoromethane	360	U
75-35-4	1,1-Dichloroethene	360	U
67-64-1	Acetone	360	U
74-88-4	Iodomethane	360	U
75-15-0	Carbon disulfide	360	U
75-09-2	Methylene chloride	360	U
156-60-5	trans-1,2-Dichloroethene	360	U
1634-04-4	Methyl tert-butyl ether	360	U
75-34-3	1,1-Dichloroethane	360	U
108-05-4	Vinyl acetate	360	U
78-93-3	2-Butanone	360	U
156-59-2	cis-1,2-Dichloroethene	360	U
594-20-7	2,2-Dichloropropane	360	U
74-97-5	Bromochloromethane	360	U
67-66-3	Chloroform	360	U
71-55-6	1,1,1-Trichloroethane	360	U
563-58-6	1,1-Dichloropropene	360	U
56-23-5	Carbon tetrachloride	360	U
107-06-2	1,2-Dichloroethane	360	U
71-43-2	Benzene	360	U
79-01-6	Trichloroethene	170	BJ
78-87-5	1,2-Dichloropropane	360	U
74-95-3	Dibromomethane	360	U
75-27-4	Bromodichloromethane	360	U
10061-01-5	cis-1,3-Dichloropropene	360	U
108-10-1	4-Methyl-2-pentanone	360	U
108-88-3	Toluene	360	U
10061-02-6	trans-1,3-Dichloropropene	360	U
79-00-5	1,1,2-Trichloroethane	360	U
142-28-9	1,3-Dichloropropane	360	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

16B 23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-18A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1K2160.D

Level: (TRACE/LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 18 Date Analyzed: 12/02/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	360	U
591-78-6	2-Hexanone	360	U
124-48-1	Dibromochloromethane	360	U
106-93-4	1,2-Dibromoethane	360	U
108-90-7	Chlorobenzene	360	U
630-20-6	1,1,1,2-Tetrachloroethane	360	U
100-41-4	Ethylbenzene	360	U
1330-20-7	m,p-Xylene	290	J
95-47-6	o-Xylene	360	U
1330-20-7	Xylene (Total)	290	J
100-42-5	Styrene	360	U
75-25-2	Bromoform	360	U
98-82-8	Isopropylbenzene	140	J
79-34-5	1,1,2,2-Tetrachloroethane	360	U
108-86-1	Bromobenzene	360	U
96-18-4	1,2,3-Trichloropropane	360	U
103-65-1	n-Propylbenzene	230	J
95-49-8	2-Chlorotoluene	360	U
108-67-8	1,3,5-Trimethylbenzene	4700	
106-43-4	4-Chlorotoluene	360	U
98-06-6	tert-Butylbenzene	250	J
95-63-6	1,2,4-Trimethylbenzene	3400	
135-98-8	sec-Butylbenzene	300	J
99-87-6	4-Isopropyltoluene	360	U
541-73-1	1,3-Dichlorobenzene	380	
106-46-7	1,4-Dichlorobenzene	570	
104-51-8	n-Butylbenzene	1900	
95-50-1	1,2-Dichlorobenzene	360	U
96-12-8	1,2-Dibromo-3-chloropropane	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
87-68-3	Hexachlorobutadiene	360	U
87-61-6	1,2,3-Trichlorobenzene	360	U
91-20-3	Naphthalene	390	

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

16B 23.5-24.5ME

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-18A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1K2160.D

Level: (TRACE or LOW/MED) MED Date Received: 11/20/2008

% Moisture: not dec. 18 Date Analyzed: 12/02/2008

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

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Purge Volume: 5.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	3073-66-3	Cyclohexane, 1,1,3-trimethyl	8.915	22000	NJ
02		Unknown-01	10.295	25000	J
03		Unknown-02	10.600	32000	J
04		Unknown-03	10.708	29000	J
05		Unknown-04	11.585	12000	J
06	2847-72-5	Decane, 4-methyl-	12.029	23000	NJ
07		Unknown-05	13.241	12000	J
08		Unknown-06	13.310	13000	J
09	29949-27-7	n-Amylcyclohexane	13.723	13000	NJ
10		Unknown-07	14.275	16000	J
11	17301-23-4	Undecane, 2,6-dimethyl-	14.453	20000	NJ
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

16B 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-19A

Sample wt/vol: 5.70 (g/mL) G Lab File ID: V6G2975.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.2	U
74-87-3	Chloromethane	5.2	U
75-01-4	Vinyl chloride	5.2	U
74-83-9	Bromomethane	5.2	U
75-00-3	Chloroethane	5.2	U
75-69-4	Trichlorofluoromethane	5.2	U
75-35-4	1,1-Dichloroethene	5.2	U
67-64-1	Acetone	2.9	J
74-88-4	Iodomethane	5.2	U
75-15-0	Carbon disulfide	5.2	U
75-09-2	Methylene chloride	5.2	U
156-60-5	trans-1,2-Dichloroethene	5.2	U
1634-04-4	Methyl tert-butyl ether	5.2	U
75-34-3	1,1-Dichloroethane	5.2	U
108-05-4	Vinyl acetate	5.2	U
78-93-3	2-Butanone	5.2	U
156-59-2	cis-1,2-Dichloroethene	5.2	U
594-20-7	2,2-Dichloropropane	5.2	U
74-97-5	Bromochloromethane	5.2	U
67-66-3	Chloroform	5.2	U
71-55-6	1,1,1-Trichloroethane	5.2	U
563-58-6	1,1-Dichloropropene	5.2	U
56-23-5	Carbon tetrachloride	5.2	U
107-06-2	1,2-Dichloroethane	5.2	U
71-43-2	Benzene	5.2	U
79-01-6	Trichloroethene	5.2	U
78-87-5	1,2-Dichloropropane	5.2	U
74-95-3	Dibromomethane	5.2	U
75-27-4	Bromodichloromethane	5.2	U
10061-01-5	cis-1,3-Dichloropropene	5.2	U
108-10-1	4-Methyl-2-pentanone	5.2	U
108-88-3	Toluene	5.2	U
10061-02-6	trans-1,3-Dichloropropene	5.2	U
79-00-5	1,1,2-Trichloroethane	5.2	U
142-28-9	1,3-Dichloropropane	5.2	U

SW846

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

16B 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-19A

Sample wt/vol: 5.70 (g/mL) G Lab File ID: V6G2975.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/25/2008

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

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

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
127-18-4	Tetrachloroethene	5.2	U
591-78-6	2-Hexanone	5.2	U
124-48-1	Dibromochloromethane	5.2	U
106-93-4	1,2-Dibromoethane	5.2	U
108-90-7	Chlorobenzene	5.2	U
630-20-6	1,1,1,2-Tetrachloroethane	5.2	U
100-41-4	Ethylbenzene	5.2	U
1330-20-7	m,p-Xylene	5.2	U
95-47-6	o-Xylene	5.2	U
1330-20-7	Xylene (Total)	5.2	U
100-42-5	Styrene	5.2	U
75-25-2	Bromoform	5.2	U
98-82-8	Isopropylbenzene	5.2	U
79-34-5	1,1,2,2-Tetrachloroethane	5.2	U
108-86-1	Bromobenzene	5.2	U
96-18-4	1,2,3-Trichloropropane	5.2	U
103-65-1	n-Propylbenzene	5.2	U
95-49-8	2-Chlorotoluene	5.2	U
108-67-8	1,3,5-Trimethylbenzene	3.6	J
106-43-4	4-Chlorotoluene	5.2	U
98-06-6	tert-Butylbenzene	5.2	U
95-63-6	1,2,4-Trimethylbenzene	2.9	J
135-98-8	sec-Butylbenzene	5.2	U
99-87-6	4-Isopropyltoluene	5.2	U
541-73-1	1,3-Dichlorobenzene	5.2	U
106-46-7	1,4-Dichlorobenzene	5.2	U
104-51-8	n-Butylbenzene	5.2	U
95-50-1	1,2-Dichlorobenzene	5.2	U
96-12-8	1,2-Dibromo-3-chloropropane	5.2	U
120-82-1	1,2,4-Trichlorobenzene	5.2	U
87-68-3	Hexachlorobutadiene	5.2	U
87-61-6	1,2,3-Trichlorobenzene	5.2	U
91-20-3	Naphthalene	5.2	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

16B 29-30

Lab Name: MITKEM LABORATORIES Contract:

Lab Code: MITKEM Case No.: Mod. Ref No.: SDG No.: MG2173

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: G2173-19A

Sample wt/vol: 5.70 (g/mL) G Lab File ID: V6G2975.D

Level: (TRACE or LOW/MED) LOW Date Received: 11/20/2008

% Moisture: not dec. 16 Date Analyzed: 11/25/2008

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/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	2216-30-0	Heptane, 2,5-dimethyl-	8.821	45	NJ
02	2216-34-4	Octane, 4-methyl-	9.381	26	NJ
03		Unknown-01	10.415	28	J
04		Unknown-02	13.725	25	J
05		Unknown-03	14.406	34	J
06	17301-23-4	Undecane, 2,6-dimethyl-	14.564	38	NJ
07	13632-94-5	Benzene, 1,4-diethyl-2-methy	14.820	22	NJ
08	2051-30-1	Octane, 2,6-dimethyl-	15.203	23	NJ
09	6682-71-9	1H-Indene, 2,3-dihydro-4,7-d	15.696	31	NJ
10		Unknown-04	16.627	26	J
11		Unknown-05	17.642	23	J
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

Appendix C

Microbial Insights Data Package
November 2008 Sampling Event

2340 Stock Creek Blvd.
Rockford TN 37853-3044
Phone: (865) 573-8188
Fax: (865) 573-8133
Email: info@microbe.com

DNA Analysis Report

Client: Paul Kareth
EarthTech AECOM
300 Broad Acres Drive
Bloomfield, NJ 07003

Phone: (973) 338-6680

Fax: (973) 338-1052

MI Identifier: 036FK **Date Rec:** 11/20/2008 **Report Date:** 12/12/2008

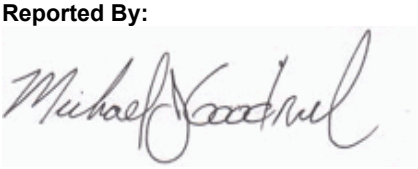
Client Project #: 95900 **Client Project Name:** SMS

Purchase Order #:

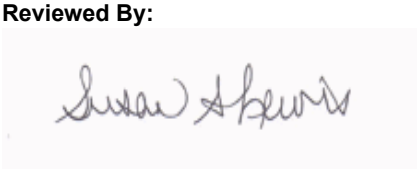
Analysis Requested: CENSUS, PLFA

Comments:

Reported By:



Reviewed By:



MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

Q Potential (DNA)

Client: **EarthTech AECOM**
Project: SMS

MI Project Number: **036FK**
Date Received: 11/20/2008

Sample Information

Client Sample ID:		**12 23.5-24.5**	**12B 23.5-24.5**	**16 23.5-24.5**	**16B 23.5-24.5**	**DW 23.5-24.5**
Sample Date:		11/18/2008	11/18/2008	11/18/2008	11/18/2008	11/19/2008
Units:		cells/g	cells/g	cells/g	cells/g	cells/g

Phylogenetic Group

Methane Oxidizing Bacteria	MOB	**3.51E+06**	**5.95E+06**	**9.56E+06**	**1.66E+07**	**5.51E+07**
Type I MOB	MOBI	**7.85E+05**	**9E+05**	**6.14E+05**	**7.09E+06**	**9.52E+06**
Type II MOB	MOBII	**2.72E+06**	**5.05E+06**	**8.95E+06**	**9.55E+06**	**4.55E+07**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

Q Potential (DNA)

Client: **EarthTech AECOM**
Project: SMS

MI Project Number: **036FK**
Date Received: 11/20/2008

Sample Information

Client Sample ID:	**DWB 23.5-24.5**
Sample Date:	11/19/2008
Units:	cells/g

Phylogenetic Group

Methane Oxidizing Bacteria	MOB	**1.27E+08**
Type I MOB	MOBI	**3.77E+07**
Type II MOB	MOBII	**8.83E+07**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

PLFA

Client: **EarthTech AECOM**
Project: SMS

MI Project Number: **036FK**
Date Received: 11/20/2008

Sample Information

Sample Name:	**12 23.5-24.5**	**12B 23.5-24.5**	**16 23.5-24.5**	**16B 23.5-24.5**	**DW 23.5-24.5**
Sample Date:	11/18/2008	11/18/2008	11/18/2008	11/18/2008	11/19/2008
Sample Matrix:	Soil	Soil	Soil	Soil	Soil
Biomass					
Total Biomass (cells/g)	**1.16E+08**	**1.19E+08**	**4.33E+07**	**1.61E+08**	**1.62E+08**
Community Structure (% total PLFA)					
Firmicutes (TerBrSats)	**13.95**	**14.72**	**12.13**	**12.55**	**13.98**
Proteobacteria (Monos)	**56.62**	**57.67**	**56.38**	**58.06**	**56.88**
Anaerobic metal reducers (BrMonos)	**1.89**	**1.68**	**2.01**	**1.96**	**2.19**
SRB/Actinomycetes (MidBrSats)	**2.55**	**2.74**	**3.65**	**2.24**	**2.85**
General (Nsats)	**24.24**	**22.35**	**24.76**	**25.01**	**22.20**
Eukaryotes (polyenoics)	**0.75**	**0.86**	**1.07**	**0.19**	**1.88**
Physiological Status (Proteobacteria only)					
Slowed Growth	**0.95**	**0.82**	**1.60**	**1.08**	**0.91**
Decreased Permeability	**0.19**	**0.16**	**0.31**	**0.17**	**0.14**

Legend:
NA = Not Analyzed NS = Not Sampled

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

PLFA

Client: **EarthTech AECOM**
Project: SMS

MI Project Number: **036FK**
Date Received: 11/20/2008

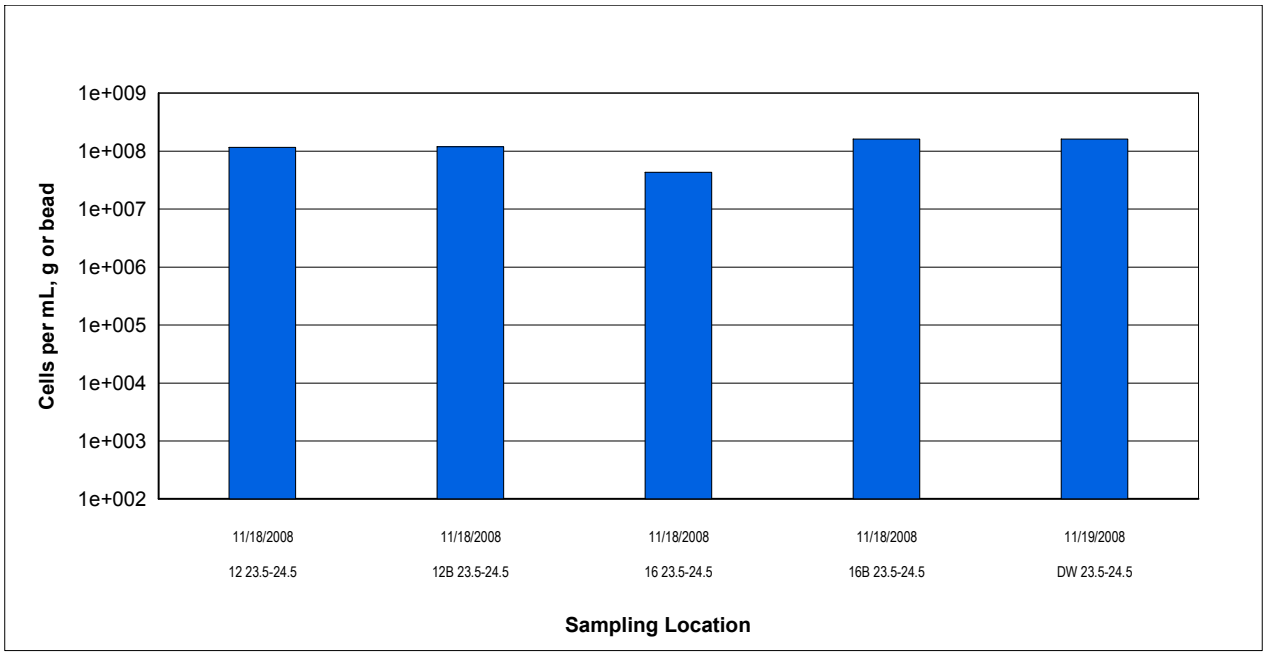


Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass (associated with higher organisms).

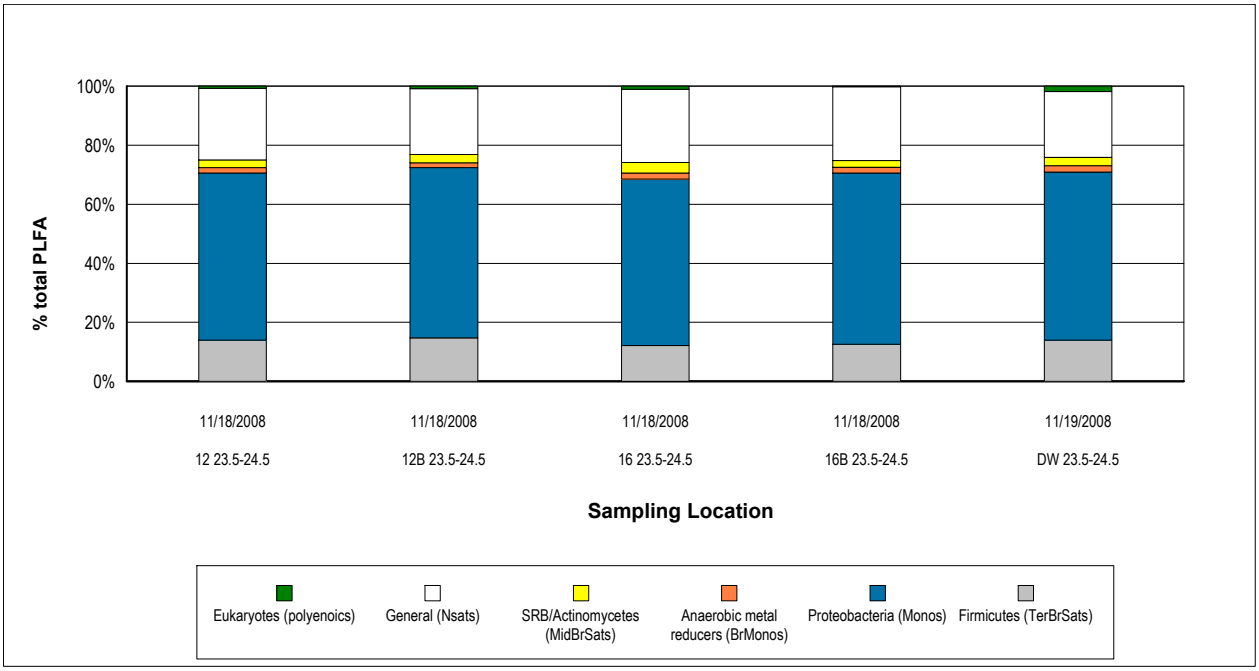


Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

PLFA

Client: **EarthTech AECOM**
Project: SMS

MI Project Number: **036FK**
Date Received: 11/20/2008

Sample Information

Sample Name:	**DWB 23.5-24.5**
Sample Date:	11/19/2008
Sample Matrix:	Soil

Biomass

Total Biomass (cells/g)	**1.63E+08**

Community Structure (% total PLFA)

Firmicutes (TerBrSats)	**13.80**
Proteobacteria (Monos)	**60.10**
Anaerobic metal reducers (BrMonos)	**2.06**
SRB/Actinomycetes (MidBrSats)	**2.65**
General (Nsats)	**20.03**
Eukaryotes (polyenoics)	**1.36**

Physiological Status (Proteobacteria only)

Slowed Growth	**0.89**
Decreased Permeability	**0.12**

Legend:
NA = Not Analyzed NS = Not Sampled

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
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PLFA

Client: **EarthTech AECOM**
Project: SMS

MI Project Number: **036FK**
Date Received: 11/20/2008

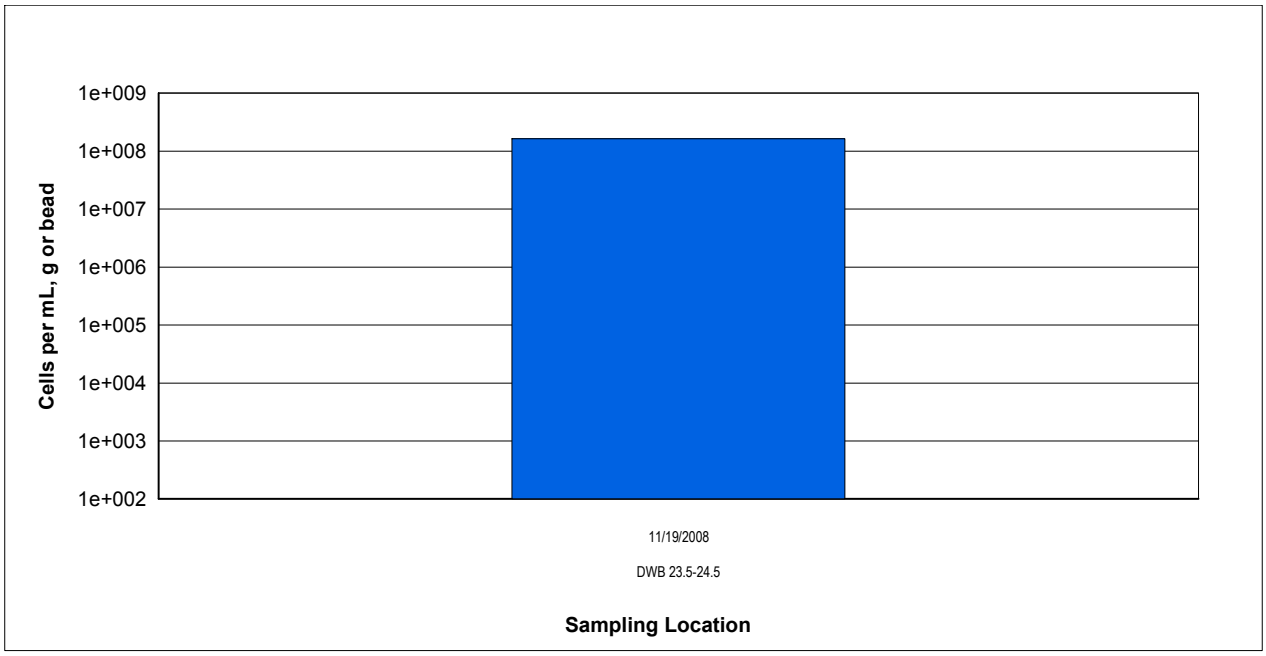

Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass (associated with higher organisms).

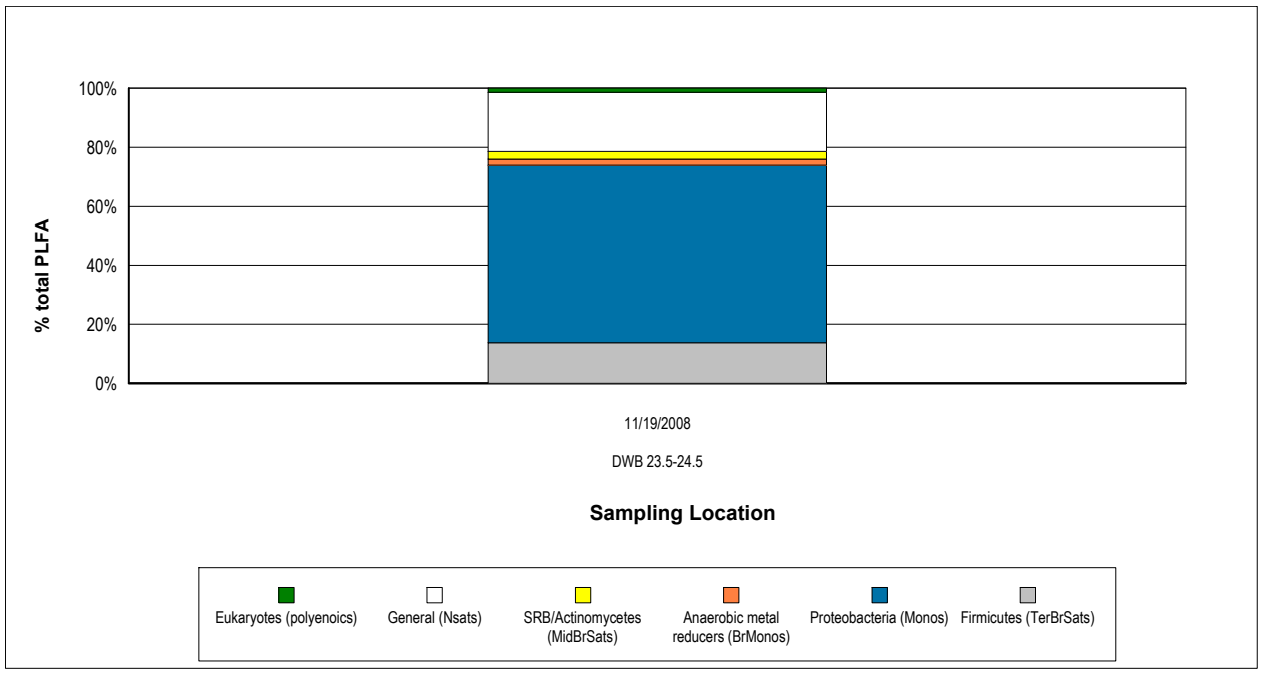

Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

REPORT TO:

Reports will be provided to the contact(s) listed below. Parties other than the contact(s) listed below will require prior approval.

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Project Name: SMS
Project No.: 95900

INVOICE TO:

For Invoices **paid by a third party** it is imperative that contact information & corresponding reference No. be provided.

Name:
Company:
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email:
Phone: ( )
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Purchase Order No.
Subcontract No.

microbialinsights
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Please Check One:

☐ More samples to follow
☒ No Additional Samples

Saturday Delivery

Please see sampling protocol for instructions

Report Type: ☐ Standard (default) ☐ Comprehensive (15% surcharge) ☐ Historical (30% surcharge)

Please contact us prior to submitting samples regarding questions about the analyses you are requesting at (865) 573-8188 (8:00 am to 4:00 pm M-F). After these hours please call (865) 300-8053.

Sample Information						Q-Targets: Prior to selecting targets mark either Q-Potential for DNA or Q-Expression for RNA																												
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	PLFA	VFA	M/E/E	DGGE+3ID	DGGE+5ID	Q-Potential (DNA)	Q-Expression (RNA)*	qDHC (Dehalococcoides)	qTCE R-Dase	qBAV1 VC R-Dase	qDHB (Dehalobacter)	qDSM (Desulfuromonas)	qDSB (Desulfitobacterium)	qEBAC (Total)	qDSR (SRBs only)	qSRB/IRB	qMGN (methanogens)	qMOB (methanotrophs)	qDNF (Denitrifying)	qAOB (ammonia oxidizing)	qPM1 (MTBE aerobic)	qTOD (Intial PAHs aerobic)	qCAT (Intermediate PAHs aerobic)	qBSS (Toluen/Xylene Anaerobic)	qNAH (Napthalene aerobic)	add. qPCR:	add. qPCR:	add. qPCR:	Other:	Other:	Other:
036FK1	12 23.5-24.5	11/18/08	923	Soil	X																	X												
2	12B 23.5-24.5	11/18/08	1120	Soil	X																	X												
3	16 23.5-24.5	11/18/08	1410	Soil	X																	X												
4	16B 23.5-24.5	11/18/08	1520	Soil	X																	X												
5	DW 23.5-24.5	11/19/08	810	Soil	X																	X												
6	DWB 23.5-24.5	11/19/08		Soil	X																	X												

Relinquished by: Kevin Seise Date: 11/19/08

Received by: Date 11/20/08

In order for analysis to be completed correctly, it is vital that chain of custody is filled out correctly & that all relative information is provided. Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable. * additional cost and sample preservation are associated with RNA samples.

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Phospholipid Fatty Acid Analysis

Interpretation Guidelines

Phospholipids fatty acids (PLFA) are a main component of the membrane (essentially the "skin") of microbes and provide a powerful tool for assessing microbial responses to changes in their environment. This type of analysis provides direct information for assessing and monitoring sites where bioremediation processes, including natural attenuation, are of interest. Analysis of the types and amount of PLFA provides a broad based understanding of the entire microbial community with information obtained in three key areas viable biomass, community structure and metabolic activity.

What is the detection limit for PLFA?

Our limit of detection for PLFA analysis is ~50 picomoles of total PLFA and our limit of quantification is ~150 picomoles of total PLFA. Samples which contain PLFA amounts at or below 50 pmol cannot be used to determine biomass, likewise samples with PLFA content below ~150 pmol are generally considered to contain too few fatty acids to discuss community composition.

How should I interpret the PLFA results?

Interpreting the results obtained from PLFA analysis can be somewhat difficult, so this document was designed to provide a technical guideline. For convenience, this guideline has been divided into the three key areas.

Viable Biomass

PLFA analysis is one of the most reliable and accurate methods available for the determination of viable microbial biomass. Phospholipids break down rapidly upon cell death (21, 23), so biomass calculations based on PLFA content do not contain 'fossil' lipids of dead cells.

How is biomass measured?

Viable biomass is determined from the total amount of PLFA detected in a given sample. Since, phospholipids are an essential part of intact cell membranes they provide an accurate measure of viable cells.

How is biomass calculated?

Biomass levels are reported as cells per gram, mL or bead, and are calculated using a conversion factor of 20,000 cells/pmole of PLFA. This conversation factor is based upon cells grown in laboratory media, and varies somewhat with the type of organism and environmental conditions.

What does the concentration of biomass mean?

The overall abundance of microbes within a given sample is often used as an indicator of the potential for bioremediation to occur, but understanding the levels of biomass within each sample can be cumbersome. The following are benchmarks that can be used to understand whether the biomass levels are low, moderate or high.

Low	Moderate	High
10^3 to 10^4 cells	10^5 to 10^6 cells	10^7 to 10^8 cells

How do I know if a change in biomass is significant?

One of the primary functions of using PLFA analysis at contaminated sites is to evaluate how a community responds following a given treatment, but how does one know if the changes observed between two events are significant? As a general rule, biomass levels which increase or decrease by at least an order of magnitude are considered to be significant. However, changes in biomass levels of less than an order of magnitude may still show a trend. It is important to remember that many factors can affect microbial growth, so factors other than the treatment could be influencing the changes observed between sampling events. Some of the factors to consider are: temperature, moisture, pH, etc. The following illustration depicts three types of changes that occurred over time and the conclusions that could be drawn.

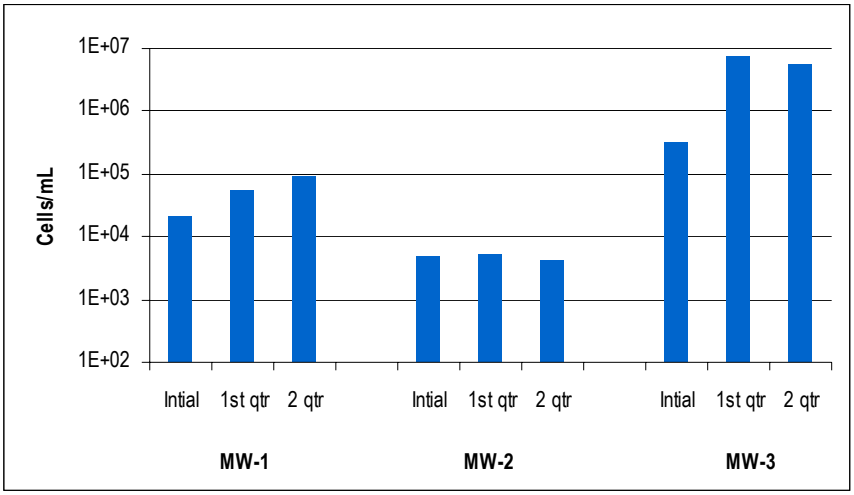

Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass (associated with higher organisms).

Conclusions from graph above:

- MW-1 showed a trend of biomass levels increasing steadily over time, although cell concentrations were ~10^4 cells/mL at each sampling event.
- MW-2 showed no notable trends or significant changes in biomass concentrations.
- MW-3 showed a significant increase in biomass levels between the initial and 1st quarter sampling events (from ~10^5 to ~10^6 cells/mL).

Community Structure:

The PLFA in a sample can be separated into particular types, and the resulting PLFA "profile" reflects the proportions of the categories of organisms present in the sample. Because groups of bacteria differ in their metabolic capabilities, determining which bacterial groups are present and their relative distributions within the community can provide information on what metabolic processes are occurring at that location. This in turn can also provide information on the subsurface conditions (i.e oxidation/reduction status, etc.). Table 1 describes the six major structural groups used and their potential relevance to site specific projects.

Table 1. Description of PLFA structural groups.

PLFA Structural Group	General classification	Potential Relevance to Bioremediation Studies
Monoenoic (Monos)	Abundant in Proteobacteria (Gram negative bacteria), typically fast growing, utilize many carbon sources, and adapt quickly to a variety of environments.	Proteobacteria is one of the largest groups of bacteria and represents a wide variety of both aerobes and anaerobes. The majority of Hydrocarbon utilizing bacteria fall within the Proteobacteria
Terminally Branched Saturated (TerBrSats)	Characteristic of Firmicutes (Low G+C Gram-positive bacteria), and also found in Bacteriodes, and some Gram-negative bacteria (especially anaerobes).	Firmicutes are indicative of presence of anaerobic fermenting bacteria (mainly *Clostridia/Bacteriodes*-like), which produce the H_2 necessary for reductive dechlorination
Branched Monoenoic (BrMonos)	Found in the cell membranes of micro-aerophiles and anaerobes, such as sulfate- or iron-reducing bacteria	In contaminated environments high proportions are often associated with anaerobic sulfate and iron reducing bacteria
Mid-Chain Branched Saturated (MidBrSats)	Common in sulfate reducing bacteria and also Actinobacteria (High G+C Gram-positive bacteria).	In contaminated environments high proportions are often associated with anaerobic sulfate and iron reducing bacteria
Normal Saturated (Nsats)	Found in all organisms.	High proportions often indicate less diverse populations.
Polyenoic	Found in eukaryotes such as fungi, protozoa, algae, higher plants, and animals.	Eukaryotic scavengers will often rise up and prey on contaminant utilizing bacteria

Following are answers to some of the common questions about community composition and some detailed descriptions of some typical shifts which can be observed between sampling events.

How is the community structure data presented?

Community structure data is presented as percentage (%) of the total amount of PLFA. In order to relate the complex mixture of PLFA to the organisms present, the ratio of a specifc PLFA group is determined (detailed in Table 1 above), and this corresponds to the proportion of the related bacterial classification within the overall community structure. Because normal saturated PLFA are found in both prokaryotes (bacteria) and eukaryotes (fungi, protozoa, diatoms etc), their distribution provides little insight into the types of microbes that are present at a sampling location. However, high proportions of normal saturates are often associated with less diverse microbial populations.

How can community structure data be used to manage my site?

It is important to understand that microbial communities are often a mixture of different types of bacteria (e.g. aerobes, sulfate reducers, methanogens, etc) with the abundance of each group behaving like a seesaw, i.e. as the population of one group increases, another is likely decreasing, mostly due to competition for available resources. The PLFA profile of a sample provides a "fingerprint" of the microbial community, showing relative proportions of the specific bacterial types at the time of sampling. This is a great tool for detecting shifts within the community over time and also to evaluate similarities/differences between sampling locations. It is important to note that PLFA analysis of community structure is analyzing the microbes directly, not just secondary breakdown products. So this provides evidence of how the entire microbial community is responding to the treatment.

How do I recognize community shifts and what they mean?

Shifts in the community structure are indications of changing conditions and their effect on the microbial community, and, by extension on the metabolic processes occurring at the sampling location. Some of the more commonly seen shifts within the community are illustrated and discussed below:

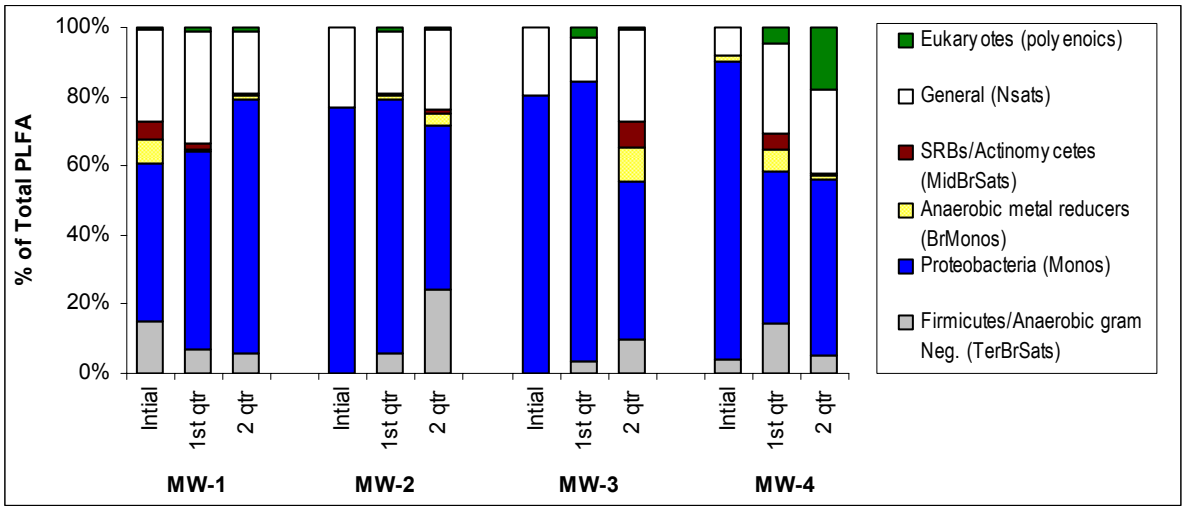

Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis. See Table 1 for detailed descriptions of structural groups.

- **Increased Proteobacteria**

Proportions of Proteobacteria are of interest because it is one of the largest groups of bacteria and represents a wide variety of both aerobe and anaerobes. The majority of hydrocarbons (including benzene and naphthalene) are metabolized by some member of Proteobacteria, mainly due to their ability to grow opportunistically, quickly taking advantage of available food (i.e. hydrocarbons), and adapting quickly to changes in the environment. The detection of increased proportions of Proteobacteria coupled with increased biomass suggests that the Proteobacteria are consuming something. In situations where it is important to determine the extent to which the Proteobacteria are utilizing anaerobic or aerobic pathways, it is possible to measure relative proportions of specific biomarkers that are associated with anaerobic or aerobic pathways thus separating the Proteobacteria into different groups, based on pathways used. Sample MW-1 from Figure 2 depicts a shift in community structure where the proportion of Proteobacteria has increased over time.

- **Increased Firmicutes/Anaerobic Gram negative bacteria**

Increased proportions of Firmicutes/Anaerobic Gram negative bacteria generally indicate that conditions are becoming more reductive (i.e. more anaerobic). Proportions of Firmicutes are of particular interest in sites contaminated with chlorinated hydrocarbons because Firmicutes include anaerobic fermenting bacteria (mainly *Clostridia/Bacteriodes*-like), which produce the H_2 necessary for reductive dechlorination.

Enhanced bioremediation of chlorinated solvents often employs the injection of fermentable substrates which, when utilized by fermenting bacteria, results in the release of H_2. Engineered shifts in the microbial community can be shown by observing increased proportions Firmicutes following an injection of fermentable substrate. Through long-term monitoring of the community structure it is possible to know when re-injection may be necessary or desirable. Sample MW-2 from Figure 2 depicts a shift in community structure where the proportion of Firmicutes has increased over time.

- **Increased anaerobic metal reducing bacteria (BrMonos) and SRB/Actinomycetes (MidBrSats)**

An increase in the proportions of metal and sulfate reducing bacterial groups, especially when combined with shifts in the other bacterial groups, can provide information helpful to monitoring bioremediation. Generally, an increase in metal and sulfate reducers points to more reduced (anaerobic) conditions at the sampled location. This is especially true if there is an increase in Firmicutes at the same time. Large increases in either metal and sulfate reducers, particularly if accompanied by a decrease in Firmicutes, may suggest that conditions are becoming increasingly reduced. In this situation the metal and sulfate reducers may be out-competing dechlorinators for available H_2, thereby limiting the potential for reductive dechlorination at that location. Sample MW-3 from Figure 2 depicts a shift in community structure where the proportion of metal reducing bacteria has increased over time.

- **Increased Eukaryotes**

Eukaryotes include organisms such as fungi, protozoa, and diatoms. At a contaminated location, an increase in eukaryotes, particularly if seen with a decrease in the contaminant utilizing bacteria, suggests that eukaryotic scavengers are preying upon what had been an abundance of bacteria which were consuming the contaminant. Sample MW-4 from Figure 2 depicts a shift in community structure where the proportion of eukaryotes has increased over time.

Physiological status of Proteobacteria

The membrane of a microbe adapts to the changing conditions of its environment, and these changes are reflected in the PLFA. Toxic compounds or environmental conditions may disrupt the membrane and some bacteria respond by making *trans* fatty acids instead of the usual *cis* fatty acids (7) in order to strengthen the cell membrane, making it less permeable. Many Proteobacteria respond to lack of available substrate or to highly toxic conditions by making cyclopropyl (7) or mid-chain branched fatty acids (20) which point to less energy expenditure and a slowed growth rate. The physiological status ratios for Decreased Permeability (trans/cis ratio) and for Slowed Growth (cy/cis ratio) are based on dividing the amount of the fatty acid induced by environmental conditions by the amount of its biosynthetic precursor.

What does slowed growth or decreased permeability mean?

Ratios for slowed growth and for decreased permeability of the cell membrane provide information on the "health" of the Gram negative community, that is, how this population is responding to the conditions present in the environment. It should be noted that one must be cautious when interpreting these measures from only one sampling event. The most effective way to use the physiological status indicators is in long term monitoring and comparing how these ratios increase/decrease over time.

A marked increase in either of these ratios suggests a change in environment which is less favorable to the Gram negative Proteobacteria population. The ratio for slowed growth is a relative measure, and does not directly correspond to log or stationary phases of growth, but is useful as a comparison of growth rates among sampling locations and also over time. An increase in this ratio (i.e. slower growth rate) suggests a change in conditions which is not as supportive of rapid, "healthy" growth of the Gram negative population, often due to reduced available substrate (food). A larger ratio for decreased permeability suggests that the environment has become more toxic to the Gram negative population, requiring energy expenditure to produce *trans* fatty acids in order to make the membrane more rigid.

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