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TECHNICAL MEMORANDUM RESULTS OF BENCH SCALE STUDIES AT SITE 17 NSWC INDIAN HEAD MD

12/12/2008

CH2MHILL

Results of Site 17 Bench-Scale Studies, NSF-IH, Indian Head, Maryland

TO: Indian Head Installation Restoration Team[1]

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Introduction

This memorandum describes the results of the bench-scale studies conducted for Site 17 (Disposed Metal Parts along Shoreline), Naval Support Facility, Indian Head (NSF-IH) in Indian Head, Maryland. The bench-scale studies focused on evaluating the effectiveness and implementability of select oxidation technologies for treating trichloroethylene (TCE) detected at dense non-aqueous phase liquid (DNAPL) concentrations in the shallow groundwater. TCE was historically detected at the direct-push technology (DPT) groundwater sampling location IS17DP27 at a concentration of 870 milligrams per liter (mg/L), which is equivalent to approximately 79 percent of its pure solubility limit.

Four *in situ* chemical oxidation (ISCO) technologies were evaluated in the bench-scale studies. This memorandum describes the findings of the bench-scale studies and recommends the most effective and appropriate technology for further consideration in the feasibility study (FS).

Rationale

The draft Site 17 groundwater FS (Section 5.5; CH2M HILL, 2006) identified uncertainties associated with the effectiveness of selected ISCO technologies for treating TCE detected at concentrations suggesting the local presence of pure-phase TCE. CH2M HILL conducted the bench-scale studies to evaluate the effectiveness of certain chemical oxidation technologies for treating TCE *in situ*. The approach to these bench-scale studies was approved by the Indian Head Installation Restoration Team (IHIRT) on November 29, 2006.

Objective

The primary objective of the bench-scale studies was to collect data that will be used to minimize the uncertainties that were identified for ISCO technologies in the draft FS. The

[1] Consists of representatives from the U.S. Environmental Protection Agency Region III, the Maryland Department of the Environment, Naval Facilities Engineering Command Washington, and the Naval Support Facility, Indian Head.

results of the bench-scale studies may be used to design a field pilot test of the technology at Site 17, if it is favorable in the FS evaluation. The bench-scale objectives were accomplished through the following: (1) collecting continuous Macro-Core™ sampling from the ground surface to the clay layer identified during the pre-FS investigation (CH2M HILL, 2002) for subsurface lithological information; and (2) collecting saturated soil and groundwater samples for use in the bench-scale studies.

Bench-Scale Studies

The specific objectives of the bench-scale study were to:

- Evaluate the effectiveness of select ISCO in treating DNAPL TCE
- Determine the site-specific demand of reagents
- Identify potential side effects of the select technologies that may not be compatible with the current site use

CH2M HILL and its subcontractor, Xpert Design & Diagnostics, LLC (XDD), of Stratham, New Hampshire, conducted the bench-scale studies in accordance with the final work plan (CH2M HILL, 2007a) and the subsequent modifications to this final work plan (CH2M HILL 2007b, 2007c, and 2007d).

Scope of Work

Activities conducted as part of the bench-scale studies include: (1) Phase I - Macro-Core™, saturated soil, and groundwater sampling; and (2) Phase II - bench-scale studies by XDD. The results of each activity are described below. A detailed description of each activity was presented in the final work plan and will not be repeated in this memorandum.

Phase I - Macro-Core™, Saturated Soil, and Groundwater Sampling

Field Activities

On December 4 and 5, 2006, soil borings were advanced using a DPT rig at locations IS17DP64 through IS17DP68 (Figure 1). Parratt-Wolff, Inc., of Hillsborough, North Carolina, provided the drilling services, with CH2M HILL providing oversight. The DPT locations were selected in the area around previously sampled DPT location IS17DP27, which had exhibited a maximum TCE concentration in groundwater of 870,000 µg/L during the remedial investigation (RI).

Saturated soil and groundwater samples were collected in accordance with the NSF-IH Master Plans (Tetra Tech NUS, 2004). A health and safety plan addendum was developed to reflect site-specific health and safety requirements for this task. In addition, munitions and explosives of concern (MEC) avoidance support was provided throughout the sampling activities, as dictated by the requirements of the explosives safety submission waiver approved by the Naval Ordnance Safety and Security Activity on January 25, 2005.

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To better estimate the mass of the oxidant to be used if an ISCO technology were selected for shallow groundwater remediation at Site 17, the thickness of the shallow aquifer is required. The saturated soil thickness and subsurface lithology at Site 17 were not fully characterized during previous investigations (CH2M HILL, 2006). Therefore, continuous 4-foot Macro-Core™ samples were collected at locations IS17DP64A and IS17DP65 to obtain information on the subsurface lithology as well as to direct the depths from which saturated soil and groundwater samples were collected. Location IS17DP65 was intended for lithology observation; however, this location exhibited poor recovery. As a result, lithology observation was also obtained from location IS17DP64A. Detailed boring logs for locations IS17DP64A and IS47DP65 are presented in the Appendix of Attachment A.

CH2M HILL collected approximately 68 pounds of saturated soil from the vertical interval of 4 to 20 feet below ground surface (bgs) from four DPT locations (IS17DP64B, located within a few inches of IS17DP64A, and IS17DP66 through IS17DP68). The saturated soil samples were collected using 2-inch inner diameter Macro-Core™ sampler lined with a clear acetate liner. Approximately 5 liters of groundwater were collected from location IS17DP65. The saturated soil samples (contained in capped 2-foot acetate liners) and groundwater samples (contained in 5-liter amber bottles) were packed in coolers and shipped to XDD under chain-of-custody procedures.

Each DPT borehole was abandoned with clean sand from the bottom of the hole to approximately 2 feet from the top of the borehole. The top 2 feet were filled with bentonite slurry to the ground surface. This method was designed to minimize the subsurface heterogeneity that may hinder groundwater flow, and subsequently cause non-uniform distribution of oxidant or reductant reagent, if any *in situ* injection technology were to be selected for the full-scale remediation. The abandonment method was similar to the one used for Site 47[2].

Interpretation of the Subsurface Lithology

An interpretation of the subsurface lithology was constructed using information from the following sources:

- Observations from Macro-Core™ samples collected during the Phase I bench-scale studies
- Monitoring well logs from wells IS17MW01 through IS17MW03 that were installed during the Site 17 RI in 2000
- Membrane interface probe (MIP)[3] logs collected during the Site 17 pre-FS in 2002
- MIP logs collected during the additional investigations in 2004 and 2005
- MIP logs collected during the upgradient investigation in 2005

A description of how the above information was used to construct the geologic cross sections is presented in Attachment A. In summary, the geologic cross sections suggest the

[2] Abandonment method for Site 47 was discussed with, and concurred by, IHIRT members on November 15, 2005.

[3] Data recorded as part of the MIP investigation included soil conductivity, probe advancement speed, and temperature, as well as the response of various detectors (PID, flame-ionization detector], and electron capture detector.

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presence of a clay unit that likely confines the vertical movement of the constituents of concern (COCs).

Phase II - Bench-Scale Studies

XDD conducted the bench-scale studies from December 2006 through September 2007. The components of the studies included:

- Baseline assessment
  - Soil screening/mass profiling
  - Soil and groundwater baseline analysis
  - Soil and groundwater base buffering capacity
- Preliminary persulfate tests
- Soil oxidant demand (SOD) and oxidant stability tests
- ISCO application simulation tests

Four ISCO technologies were evaluated: 1) alkaline-activated persulfate technology, 2) iron-activated persulfate technology, 3) unactivated persulfate technology, and 4) permanganate technology. Sodium persulfate was used in the first three technologies and potassium permanganate was used in the last technology.

A detailed description of the experimental design and the results of the bench-scale studies are presented in Attachment B of this memorandum. The results of each component and the highlights of the overall findings of the studies, with the focus on the objectives of the studies, are described below.

Baseline Assessment

Soil Screening/Contaminant Mass Profiling

Soil screening and mass profiling were conducted to assess relative soil composition and lithology, and TCE distribution in the shallow aquifer. In addition to assessing the soil composition via visual observation, a grain size analysis was performed using the American Society for Testing and Materials Method D422.

Upon receipt of the soil cores, XDD screened and divided the soil, based on its lithology, into four categories: sand, sandy clay, clay, and soil shallower than 8 feet bgs. The visual observation indicated the presence of high organic matter in soil shallower than 8 feet bgs; therefore, this interval was separated from the rest of the intervals in the soil screening. From the soil interval between 8 and 20 feet bgs, the distribution of soil type as a mass percent weight was approximately 71 percent silty clay (~16 kilograms), 11 percent sandy clay (~2.5 kilograms) and 18 percent sand (~4 kilograms). The grain size analysis was conducted by Thielsch Engineering of Cranston, RI,[4] on a composite sample. The result indicates that the soil is classified as silty clay. The detailed results of the soil screening and

[4] A subcontractor to XDD

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the grain size analysis are presented in Section 3.1 of Attachment B and in Appendix E of Attachment B, respectively.

Volatile organic compounds (VOCs) mass profiling with the focus on TCE was initially conducted on the saturated soil cores using a PID. The PID readings ranged from 100 to greater than 9,999 parts per million volume, with the maximum reading detected at three discrete intervals (8-10, 12-14, and 16-18 ft bgs) within the saturated soil core sample from IS17DP67. Mass profiles for each of the four soil cores are shown on Appendix C in Attachment B.

Based on the PID readings, 20 discrete saturated soil samples were collected from the cores and sent to an offsite laboratory (Resource Laboratories, LLC, of Portsmouth, NH) for VOCs analysis to confirm the VOCs' vertical concentration profiles obtained from the PID readings.

TCE concentrations ranged from 4 (IS17DP66) to 12,000 (IS17DP67) milligrams per kilogram (mg/kg) with most (14 of 20 samples) of the concentrations in the range of 44 and 350 mg/kg. The maximum TCE concentration of 12,000 mg/kg was detected at a depth interval of 12.25 feet bgs at IS17DP67. TCE concentrations from three samples taken between the interval of 4 and 10 feet bgs, where high organic matters were observed, were not detected or were below 350 mg/kg, respectively. Therefore, the COCs are not likely distributed within the high organic matter interval. As a result, this interval was excluded from the bench-scale studies.

Baseline Soil and Groundwater Analysis

Soil and groundwater were analyzed for VOCs and metals to establish a baseline before conducting the studies. The baseline data were also used to determine the amount of VOC to be added to the samples (known as spiking) to achieve the target concentrations.

The baseline results indicated the average concentrations of tetrachloroethylene (PCE), TCE, and cis-1,2-dichloroethylene (cis-1,2-DCE) in soil were 0.0075 mg/kg, 1.65 mg/kg, and 0.014 mg/kg, respectively. In groundwater, the average concentrations of PCE, TCE, and cis-1,2-DCE were non-detect (detection limit of 10 milligrams per liter [mg/L]), 405 mg/L, and 58 mg/L, respectively. Metal analysis indicated the presence of elevated zinc concentrations in both soil and groundwater. The average concentration of total zinc in soil was 25.5 mg/kg. The average concentrations of total and dissolved zinc in groundwater were 31.5 micrograms per liter (µg/L) and 22 µg/L, respectively. The concentrations of other detected metals (chromium, copper, lead, nickel, and zinc) were below 9.2 mg/kg in soils and mostly below detection limit of 0.2 to 5 µg/L in groundwater.

The detailed results of the baseline soil and groundwater analysis are presented in Section 3.2 of Attachment B.

Soil and Groundwater Base Buffering Capacity

The base buffering capacity test was conducted to estimate the mass of sodium hydroxide (base) to raise the subsurface pH to greater than 10.5. The test is mostly applicable for the alkaline-activated persulfate technology. The result indicated a high buffering capacity of 3.7 grams sodium hydroxide per kilogram of soil. At this demand of sodium hydroxide, alkaline-activated persulfate technology is not cost-competitive compared to the iron-chelated activated persulfate technology.

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Preliminary Persulfate Tests

The preliminary tests were conducted for 14 days on three forms of persulfate: unactivated, iron-activated, and alkaline-activated. During the tests, a composite soil sample was spiked to 2,000 mg/kg to mimic the equilibrium soil concentration, based on the historical maximum TCE detection in groundwater of 870 mg/L. The TCE soil concentration was reduced by approximately 81.7 percent in unactivated persulfate, 74.3 percent in iron-activated persulfate, and 64 percent in alkaline-activated persulfate after 14 days of reaction time. Based on the TCE reduction and the high base buffering capacity, alkaline-activated persulfate technology was eliminated from further testing.

SOD and Oxidant Stability Tests

The SOD and oxidant stability tests were performed on the following oxidants:

- Iron-activated persulfate at two concentration strengths: 50 g/L and 200 g/L
- Unactivated persulfate at two concentration strengths: 50 g/L and 200 g/L
- Potassium permanganate at two concentration strengths: 5 g/L and 20 g/L. The 20 g/L concentration is in the upper limit of potassium permanganate concentration for practical field application. The theoretical solubility is ~ 60 g/L, but potassium permanganate starts to dissolve very slowly at 35 – 40 g/L)

SOD tests were performed on both sand and clay samples to measure the concentrations of oxidant for activated and unactivated persulfate, and permanganate. The SOD was measured at Day 30 unless oxidant was rapidly consumed, and the oxidant longevity (how much oxidant remained) was measured at Day 60. The SOD tests were performed separately for clay and sand soil. For both soil types, the results showed that the SOD of iron-activated persulfate was generally two to three times higher than the SOD for unactivated persulfate. Table 3 of Attachment B presents the SOD values for both sand and clay soil types. In terms of longevity, at Day 60, approximately 70 to 76 percent of unactivated persulfate mass remained in the reactors, and 47 to 56 percent of iron-activated persulfate remained.

The SOD testing for permanganate indicated that permanganate was nearly exhausted at Day 1 and Day 14 for the low and high concentration strengths, respectively. As a result, the SOD value is inconclusive but likely greater than 15 grams per kilogram of soil, which is indicative of a high SOD value. Based on the short longevity and high SOD, potassium permanganate as an oxidant was eliminated from further testing.

ISCO Application Simulation Tests

The ISCO application simulation tests were performed on iron-activated and unactivated persulfate technologies. The tests were designed to mimic two application or delivery methods of oxidant: injection and mixing. Low-concentration persulfate is typically used in the injection delivery method because multiple injection events are usually required for effective treatment. For the injection simulation test, 40 to 70 g/L sodium persulfate was applied three times every 2 weeks to the test reactors to simulate a multiple injection delivery (three events) scenario. For the mixing simulation test, a high concentration of sodium persulfate, 170 g/L, was applied once to the test reactors to simulate a one-time

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mixing delivery scenario. The testing duration for both scenarios was 45 days. The potential for metal solubilization or mobilization was also evaluated. During the 45-day duration, the reduction in TCE concentration in soil in each scenario was measured twice: at Day 13, which represents results after the first injection for the injection scenario or time step 1 for the mixing scenario, and at Day 45, which represents results after the third injection for the injection scenario and time step 2 for the mixing scenario. The reduction in TCE concentration in groundwater was only measured once at Day 45.

At Day 13 for both scenarios, reductions of TCE concentrations in soil in the unactivated persulfate reactors were greater (23 percent) than those observed in the iron-activated persulfate reactors (7 percent). At Day 45, however, reductions in soil in the iron-activated persulfate reactors were greater than those observed in the unactivated persulfate reactors. At Day 45, the reductions in soil ranged from 81 to 83 percent and from 51 to 68 percent for iron-activated and unactivated persulfate, respectively. In groundwater, the reduction was greater than 94 percent in all reactors.

Another measure of oxidant efficiency is expressed as degradation ratio. Degradation ratio measures the mass of oxidant used relative to the mass of contaminant(s) treated—in this case, TCE. In the batch reactor system, this ratio takes into account the mass of persulfate that was required for the SOD, consumed during the auto-decomposition reactions, and consumed by reactions that occurred after most of the TCE had been treated. The calculated degradation ratios for iron-activated and unactivated persulfate are very similar and range between 5 and 7 milligrams of oxidant consumed per milligram of TCE degraded for both injection and mixing scenarios.

Undesirable Side Effects

Two potential undesirable side effects of ISCO implementation were identified during the design process of the bench-scale studies: 1) solubilization of metals into the groundwater, thus making the metals more available for mobilization, and 2) accumulation or generation of regulated or undesirable byproducts.

Solubilization of Metal

Metal solubilization was evaluated by measuring the total and dissolved metals in groundwater before and after the addition of persulfate during the ISCO application simulation tests. The after measurements were taken at Day 7 to simulate the worst-case condition for solubilizing metals from the soil.

In general, both total and dissolved metals concentrations increased after oxidant was added in both iron-activated and unactivated persulfate reactors; however, higher increases were consistently observed in the iron-activated persulfate reactors than in the unactivated persulfate reactors. Concentrations of both total and dissolved metals (primarily antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, and zinc) after oxidant addition in the iron-activated persulfate reactors were one to three orders of magnitude higher than the baseline concentrations. Concentrations of both total and dissolved metals (primarily beryllium, chromium, copper, lead, nickel, and zinc) after oxidant addition in the unactivated persulfate reactors were one to two orders of magnitude higher than the concentrations in the control reactors.

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The longevity of metal solubilization, whether temporary or permanent, was not investigated in the bench-scale studies. The long-term impacts from metal solubilization will be assessed during the field implementation of the technology, during either the pilot study or full-scale application.

Accumulation of Regulated or Undesirable By-products

Both unactivated and iron-activated persulfate as oxidants were demonstrated to be capable of treating TCE and its subsequent breakdown products, such as cis-1,2-DCE and vinyl chloride During the preliminary and injection simulation tests, 1,1,2,2-tetrachloroethane (1,1,2,2-TeCA) was detected. This compound is more halogenated than TCE because it has single-bonded carbon chains and more chloride arms and is an uncommon degradation product of TCE degradation.

During the preliminary persulfate tests, at Day 14, 1,1,2,2-TeCA was detected at concentrations of 35 mg/kg, 25 mg/kg, and 4.2 mg/kg in the unactivated persulfate reactors, the iron-activated persulfate reactors, and the alkaline-activated persulfate reactors, respectively. These concentrations indicate a general trend of less generation of 1,1,2,2-TeCA for the more-aggressive persulfate reactions (such as in alkaline activation).

Because 1,1,2,2-TeCA is not typically observed as a degradation product of TCE treatment, three theories are hypothesized to explain the detection of 1,1,2,2-TeCA:

- **Theory 1:** 1,1,2,2-TeCA was part of the original release; therefore, it was in the soil matrix. Because the TCE concentration was very high, the concentration of 1,1,2,2-TeCA was masked by TCE. 1,1,2,2-TeCA was not detected in the mass profiling results with the detection limits ranging between 0.1 and 80 mg/kg, the composite unspiked baseline soil with a detection limit of 5.9 µg/kg, or the baseline groundwater with a detection limit of 25 mg/L. Preliminary review of the RI data indicated that 1,1,2,2-TeCA concentrations in groundwater were not detected; however, the detection limit was 5,000 µg/L because of the very high concentration of TCE. No saturated soil data were analyzed as part of the RI and pre-FS investigation. Therefore, based on the review of the available data, Theory 1 could still be a possibility.

- **Theory 2:** 1,1,2,2-TeCA was introduced during soil spiking in the laboratory during the bench-scale studies because 1,1,2,2-TeCA is typically used in the manufacturing process of TCE; therefore, it can be present as an impurity. Additional tests confirmed that 1,1,2,2-TeCA was not a laboratory contaminant or trace impurity in the TCE that was used for spiking. Therefore, Theory 2 was eliminated.

- **Theory 3:** 1,1,2,2-TeCA is a site-specific product from the reaction between persulfate and TCE (halogenation). Halogenation of TCE to form 1,1,2,2-TeCA during treatment with persulfate may stand; however the reaction mechanisms and kinetics are not clearly understood[5]. Detection of 1,1,2,2-TeCA as a byproduct of TCE treatment using sodium persulfate as an oxidant has rarely been reported[6] (CH2M HILL, 2007e; Waldemer et al., 2007). Chloromethane accumulation, however, has been observed and reported as a byproduct of TCE treatment using sodium persulfate (CH2M HILL, 2007e).

[5] Generation of 1,1,2,2-TeCA from TCE in the presence of HCl was observed and suggested by Kaberdin and Potkin (1994).

[6] Redox Tech, LLC reported the 1,1,2,2-TeCA detection as a side effect of TCE treatment at a site, but it is unconfirmed.

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The detection of 1,1,2,2-TeCA and these theories were presented to and discussed with IHIRT during the conference call on May 17, 2007. The bench-scale studies, as designed, were not capable on assessing why 1,1,2,2-TeCA was generated. IHIRT concluded that the modification was not warranted because the benefit of understanding the mechanisms and kinetics of TCE halogenation is considered marginal and does not affect the practical implementation of the technology. Furthermore, it is unknown whether 1,1,2,2-TeCA's presence will sustain or be temporary in nature in the bench-scale study setting. Based on this condition, IHIRT agreed that 1,1,2,2-TeCA was to be closely monitored during the ISCO application simulation tests.

For the soil, at Day 45, 110 mg/kg and 62 mg/kg of 1,1,2,2-TeCA were detected in the iron-activated and unactivated persulfate reactors, respectively, under the injection simulation scenario. At the same day for the mixing simulation scenario, 110 mg/kg and 130 mg/kg of 1,1,2,2-TeCA were detected in the iron-activated and unactivated persulfate reactors, respectively. In groundwater, 28 mg/L and 43 mg/L of 1,1,2,2-TeCA were detected in the iron-activated and unactivated persulfate reactors, respectively, under the injection simulation scenario. For the mixing simulation scenario, 1,1,2,2-TeCA detections were at 32 mg/L and 39 mg/L for the iron-activated and unactivated persulfate reactors, respectively.

The persistence of 1,1,2,2-TeCA in the subsurface could be determined during a field implementation of the technology (should ISCO be field-tested) during a pilot study. Additional bench tests could be conducted to evaluate whether 1,1,2,2-TeCA could be treated by an ISCO technology.

Overall Findings

The overall findings of the bench-scale studies are summarized below.

- The saturated soil at Site 17 consists mostly of silty clay; TCE is distributed primarily within the vertical interval of approximately 10 to 18 feet bgs.
- Using potassium permanganate as an oxidant is ineffective for treating TCE at Site 17 because the high SOD, limited solubility, and clay lithology would make contacting a sufficient mass of oxidant with the contaminant difficult.
- Using alkaline-activated persulfate as an oxidant was eliminated from consideration for treating TCE at Site 17 because of the high soil buffering capacity and comparable performance with the other persulfate activation methods.
- Both unactivated and iron-activated persulfate are comparably applicable for treating TCE at Site 17. The comparison between each oxidant is presented below.

Unactivated Persulfate	Iron-activated Persulfate
Less TCE reduction (51 – 68 percent) but comparable degradation ratio	Greater TCE reduction (81 – 82 percent) but comparable degradation ratio
Greater longevity (70 – 76 percent still remained after 60 days)	Less longevity (47 – 56 percent remained after 60 days)
Higher detection of 1,1,2,2-TeCA in soil and groundwater	Lower detection of 1,1,2,2-TeCA in soil and groundwater

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Unactivated Persulfate	Iron-activated Persulfate
Lower potential for solubilizing metals	Higher potential for solubilizing metals

- Oxidant delivery via injection and soil mixing shall be considered for the field implementation of both unactivated and iron-activated persulfate technologies.
- A pilot study is recommended before implementing any of the technologies, to obtain the design parameters of the full-scale technology implementation. As part of the pilot study using ISCO (if determined to be favorable in the FS), further monitoring of 1,1,2,2-TeCA and total and dissolved metals in groundwater would be required to assess the nature of the longevity of 1,1,2,2-TeCa and metal solubilization.

ISCO Options for Groundwater

In finalizing the Site 17 groundwater FS report, several ISCO options using unactivated and iron-activated persulfate as oxidants will be considered:

- ISCO using unactivated persulfate delivered via one-time mixing into the 9,400-square-foot source area.
- ISCO using iron-activated persulfate delivered via one-time mixing into the 9,400-square-foot source area.
- ISCO using unactivated persulfate via a combination of one-time mixing and multiple injection events (assume three events). The area where mixing is to be applied will be selected based on the cost of logistics. This could consist of the DNAPL residual area and some location within the source area.
- ISCO using iron-activated persulfate via a combination of one-time mixing and multiple injection events. Same approach as bullet #3.
- ISCO using iron-activated persulfate via multiple injection events within the source area.
- ISCO using unactivated persulfate via multiple injection events within the source area.
- ISCO using iron-activated persulfate during a one-time mixing application in selected areas, to take advantage of its greater oxidation performance and lower generation of 1,1,2,2-TeCA, and multiple injection events of unactivated persulfate in selected areas to take advantage of its superior observed longevity.

Evaluation and comparison of the rough order-of-magnitude (ROM) costs of the seven ISCO options are documented in a technical memorandum that was submitted to IHIRT on January 25, 2008 (CH2M HILL, 2008). Subsequently, the ROM costs comparison and evaluation was presented and discussed during the IHIRT meeting on February 21, 2008. During the meeting, it was determined that the modified Option 7, which is one time mixing of iron-activated persulfate into the area where TCE is greater than 1,000 µg/L is considered as the most cost-efficient option. The modified ISCO Option 7 will be developed into a remedial alternative to replace Alternative 3, Source Zone Treatment Using ISCO, Monitored Natural Attenuation, and Institutional Controls, as reported in the draft version

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of the FS report (CH2M HILL, 2006). The most cost-efficient remedial alternative between ISCO and *in situ* chemical reduction technologies will be considered for a pilot study.

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Attachments

Attachment A – Interpretation of Site 17 Subsurface Lithology
Attachment B – Results of the XDD Bench-Scale Studies

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Attachment A
Interpretation of Site 17 Subsurface Lithology

Interpretation of Site 17 Geology, NSF-IH, Indian Head, Maryland

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PREPARED BY: Christopher Houck/WDC
John Mason/PHL

DATE: March 26, 2008

Introduction

This technical memorandum presents an interpretation of the subsurface lithology at Site 17, Disposed Metal Parts Along Shoreline, Naval Support Facility, Indian Head (NSF-IH) in Indian Head, Maryland. The subsurface lithology interpretation was prepared in support of the evaluation and design of remedial technologies for the chlorinated volatile organic compounds[1] contamination in the shallow groundwater, using data from the following sources:

- Boring logs from monitoring wells installed during the Remedial Investigation in 2000 (CH2M HILL, 2004)
- Membrane interface probes (MIPs) advanced during the Site 17 pre-Feasibility Study in 2002 (CH2M HILL, 2002)
- MIPs advanced during the Site 17 additional investigations in 2004 and 2005 (CH2M HILL, 2006)
- MIPs advanced during the Site 17 upgradient investigation in 2005 (CH2M HILL, 2006)
- Macro-Core™ boring logs obtained during the Site 17 bench-scale sampling in 2006 presented in the Appendix of this Attachment

The use of these sources was necessary to interpret the subsurface lithology at Site 17. Visual observations of the soil were made during advancement of soil borings IS17MW01, IS17MW02, and IS17MW03, and during direct-push technology (DPT) Macro-Core™ sampling at locations IS17DP64A and IS17DP65. The soil boring logs of DPT locations IS17DP64A and IS17DP65 are presented in the appendix to this attachment. Inferred information about the subsurface is based MIP data collected during various investigation activities.

Methodology

During MIP advancement, a data logger electronically records information from the probe attached to the DPT drilling rods. At Site 17, the data recorded include soil conductivity, probe advancement speed, and temperature, as well as the response of various detectors (photo-ionization detector [PID], flame-ionization detector [FID], and electron capture detector [ECD]). The data from the soil conductivity and advancement speed are used to

[1] Primarily trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE), and vinyl chloride (VC)

infer soil types, with the fine-grained, dense material having higher conductivity and slower advancement speeds than coarse-grained, loose material. In essence, low conductivity values represent sands and gravels, and high conductivity values represent silts and clays. Similarly, relatively slow advancement speeds correlate to dense material, and relatively fast advancement speeds correlate to loose material. Temperature data are used to infer the depth to the first-encountered groundwater (indicated by a temperature change). The PID, FID, and ECD readings are generally used to assess the presence of volatile organic compounds (VOCs) in the subsurface. The data from the detectors are used to infer depth and concentration of VOC contamination.

Because of limited information from direct soil observation, MIP data were used to supplement soil boring data in interpreting the subsurface lithology. The MIP data were correlated to soil boring data, as a ground truthing procedure, before they were used. Because MIP location IS17DP34 is adjacent to soil boring location IS17DP64A, the data from these two data points were compared (Figure A-1). The MIP log shows an overall increase in soil conductivity and a decrease in advancement speed with depth, which would suggest coarse-grained loose material at the top and fine-grained dense material at depth. Fine-grained soil (sandy silt and silt) was encountered at depths below about 9 feet below ground surface (bgs) to the bottom of the boring. The conductivity result from the MIP profile also indicates that a fine-grained soil was encountered below about 9 feet bgs to the bottom of the profile. The soil boring log confirmed the observation of the MIP log, which is a decrease in grain size with depth (i.e., silty sand and gravel near the ground surface and silts and clays below a depth of about 9 feet bgs). These observations suggest a positive correlation between the overall soil type on the soil boring logs and the inferred soil type from the MIP logs. Specific contacts between various soil types (such as a contact between sand and silt) are difficult to identify with the MIP data, although some inferences can be drawn. For example, a contact between a unit of silty sand and relatively finer unit of sandy silt is indicated on the soil boring log for IS17DP64A at the same depth where the advancement speed slows (i.e., going through more dense material) on the IS17DP34 MIP log. At the same depth on the MIP log, a spike in ECD readings is noted that correlates with the elevated PID readings on the soil boring log, which suggests that the downward migration potential of VOCs in groundwater is being impeded by the finer-grained material (i.e., more silt, less sand) with depth.

Geologic Correlations

To illustrate the lateral and vertical distributions of geologic conditions at the site, two cross sections were prepared along the A-A′ and B-B′ lines shown on Figure A-2. Figures A-3 and A-4 depict the subsurface conditions along cross sections A-A′ and B-B′, respectively. Cross section A-A′ is oriented southwest to northeast, parallel to Mattawoman Creek; it presents information from both boring logs and MIP data. Cross section B-B′ is oriented northwest to southeast, perpendicular to Mattawoman Creek; it presents information from MIP data. Figure A-3 shows that the near-surface material (ground surface to depth of about 9 feet bgs) in the center of the cross-section is a highly variable mixture of sands, silts, and clays with pieces of wood. On the southwest and northeast portions of the cross-section, the subsurface lithology consists of clay from the ground surface to a depth of about 8 feet, with silty sand/sandy silt occurring under the clay, as noted in monitoring well IS17MW01 and IS17MW02 boring logs. The MIP and soil boring data in the middle of the cross-section

suggest more finer-grained materials with increasing depth. The silt layer noted in soil boring IS17DP64A occurs at a depth of about 6 feet below mean sea level(MSL), as shown on Figure A-3. The presence of silt with clay at this depth is confirmed from Shelby-tube samples collected during the pre-Feasibility Study investigation in 2002. The Shelby-tube samples were collected from MIP locations MIP1 (depth 9-11 feet bgs) and MIP7[2] (depth 13-15 feet bgs) and sent to a geotechnical laboratory for hydraulic conductivity testing. The samples were collected from these depth intervals because the EC logs indicated the presence of a confining unit. The hydraulic conductivity value was 6.5×10^{-4} feet/day, which is in the range reported by Domenico and Schwartz (1990) of clay.

Cross-section B-B' depicts the subsurface geological conditions in a direction that is sub-parallel to groundwater flow and perpendicular to Mattawoman Creek. The specific geologic materials in the shallow subsurface cannot be unambiguously differentiated on MIP logs, and there is a limited amount of subsurface information from the upgradient area of Site 17. MIP log characteristics, such as conductivity and penetration speed, from the upgradient area were used to infer geological conditions. Based on these correlations, the soil from the ground surface to about 7 to 9 feet below MSL is considered to be a mixture of silty sand and sandy silt. MIP profiles from upgradient locations IS17DP54, IS17DP61, and IS17DP63 indicate an increase in conductivity at depths of about 25 to 30 feet bgs, suggesting that the silt present beneath the eastern portion of the site continues to the west and underlies the silty sand/sandy silt (Figure A-4).

In general, the MIP profiles show constant conductivity and penetration speed through the shallow portion of the subsurface, followed by a gradual increase in conductivity and a decrease in penetration speed with depth. This pattern is interpreted to represent coarser material (silty sand/sandy silt) underlain by a finer-grained material (silt and clay).

Supplemental Analysis of Field Results

MIP and field PID readings were evaluated to further characterize the subsurface lithology at Site 17. The primary contaminant of concern for Site 17 is trichloroethylene (TCE; specific gravity = 1.46), which is denser than water (specific gravity = 1.0) and is detected with a standard 10.7 eV PID (TCE ionization potential = 9.45 eV). TCE is a chemical that is shown on the MIP profiles as ECD data. Because TCE is dense, the maximum TCE concentration is expected to be detected close to the top of the finer-grained layer (silt and clay) because it would act as a confining unit.

The evaluation of the PID and ECD data appears to further substantiate the presence of a clay layer beneath Site 17. Elevated ECD readings appear to correlate with increasing conductivity values in 12 of the MIP logs from points located within the TCE plume. In addition, PID results from five MIP logs (IS17DP28, IS17DP34, IS17DP35, IS17DP61 and MIP2) also correlate well with increasing conductivity values at depth. Four of the MIP borings that contained elevated PID readings are located within the TCE plume. PID results from IS17DP64A and IS17DP65 indicate that the concentration of volatile constituents tends to be lower within the clay layer compared to shallower soil units. This trend was also observed in a few of the MIP borings that penetrated the clay layer. The observed decrease in PID and/or ECD values appears to correspond with an increase in soil conductivity.

[2] Location of MIP7 is approximately 250 feet northeast of well IS17MW02.

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CH2M HILL. 2006. Draft *Site 17 Groundwater Feasibility Study, Naval Support Facility, Indian Head, Indian Head, Maryland.*

Domenico and Schwartz. 1990. *Physical and Chemical Hydrogeology*. First Edition. John Wiley and Sons.

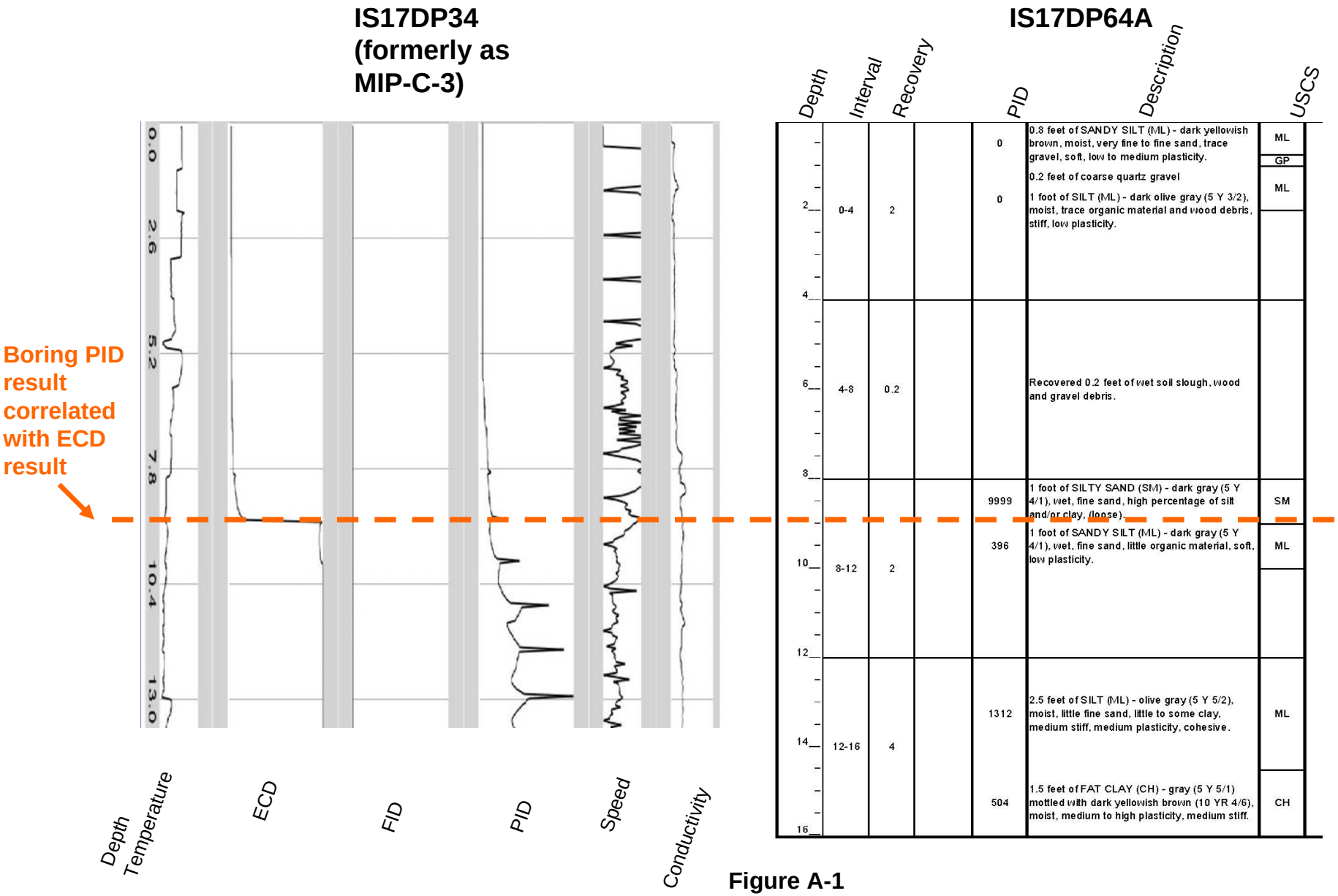
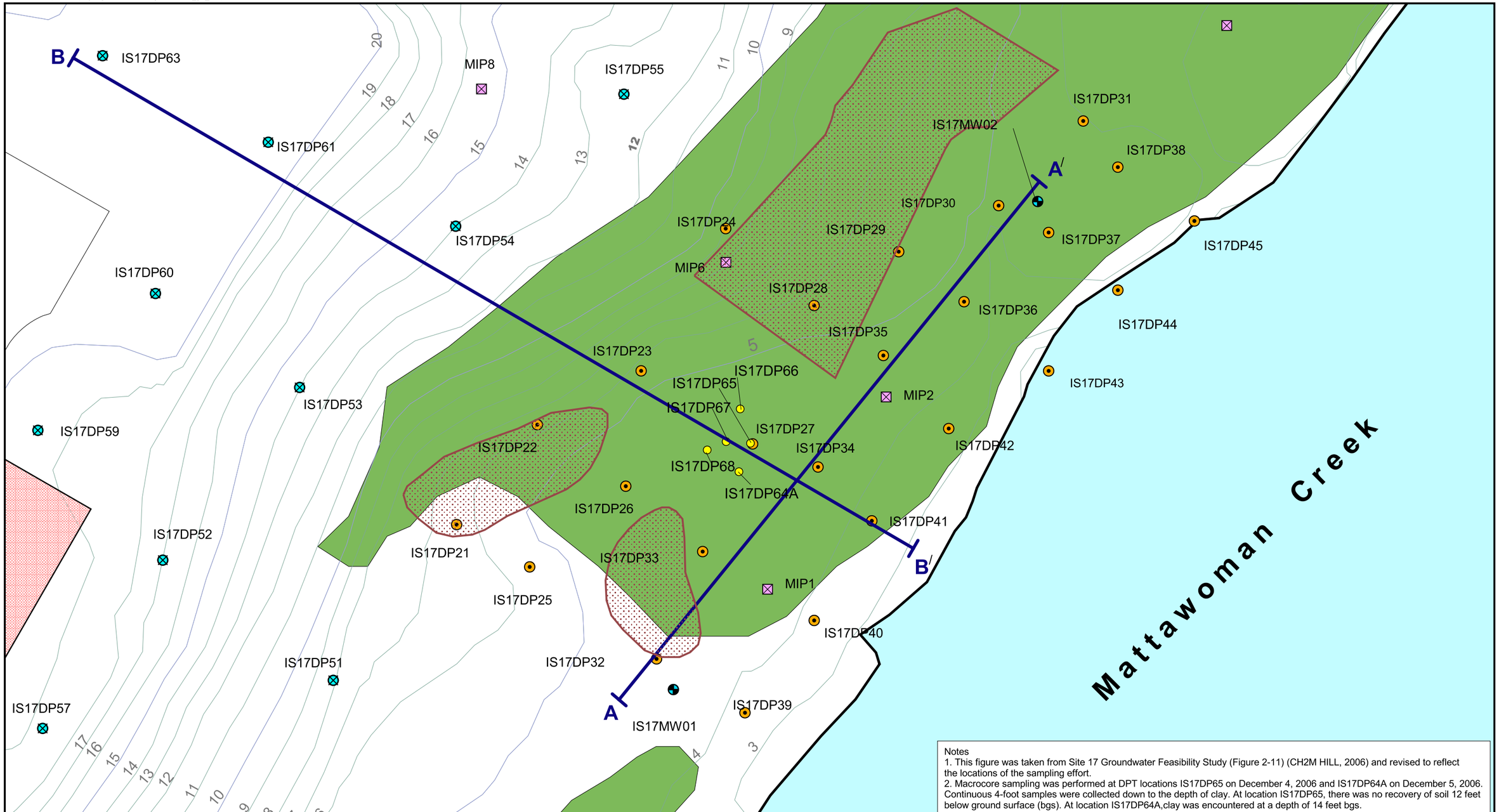


Figure A-1
Correlation of MIP Data and Soil Data
Interpretation of Site 17 Geology
NSF-IH, Indian Head, Maryland

File Path: V:\\aphrodite\proj\18gis\IndianHead\figures\site17_gw_fs.apr



Notes
1. This figure was taken from Site 17 Groundwater Feasibility Study (Figure 2-11) (CH2M HILL, 2006) and revised to reflect the locations of the sampling effort.
2. Macrocore sampling was performed at DPT locations IS17DP65 on December 4, 2006 and IS17DP64A on December 5, 2006. Continuous 4-foot samples were collected down to the depth of clay. At location IS17DP65, there was no recovery of soil 12 feet below ground surface (bgs). At location IS17DP64A,clay was encountered at a depth of 14 feet bgs.

LEGEND

- Monitoring Wells
- July 2002 Membrane Interface Probe/Direct Push Technique Locations
- December 2004 MIP/DPT and March 2005 DPT Locations
- August 2005 MIP/DPT Locations
- December 2006 DPT Locations
- Buildings
- Demolished Buildings
- Wooded Area
- 2-Foot of clean fill from the 2006 Non-Time Critical Removal Action (FSS, 2006)
- Road
- Topographic Elevation Contours (1 foot Intervals)
- Base Boundary
- Cross Section Location

N

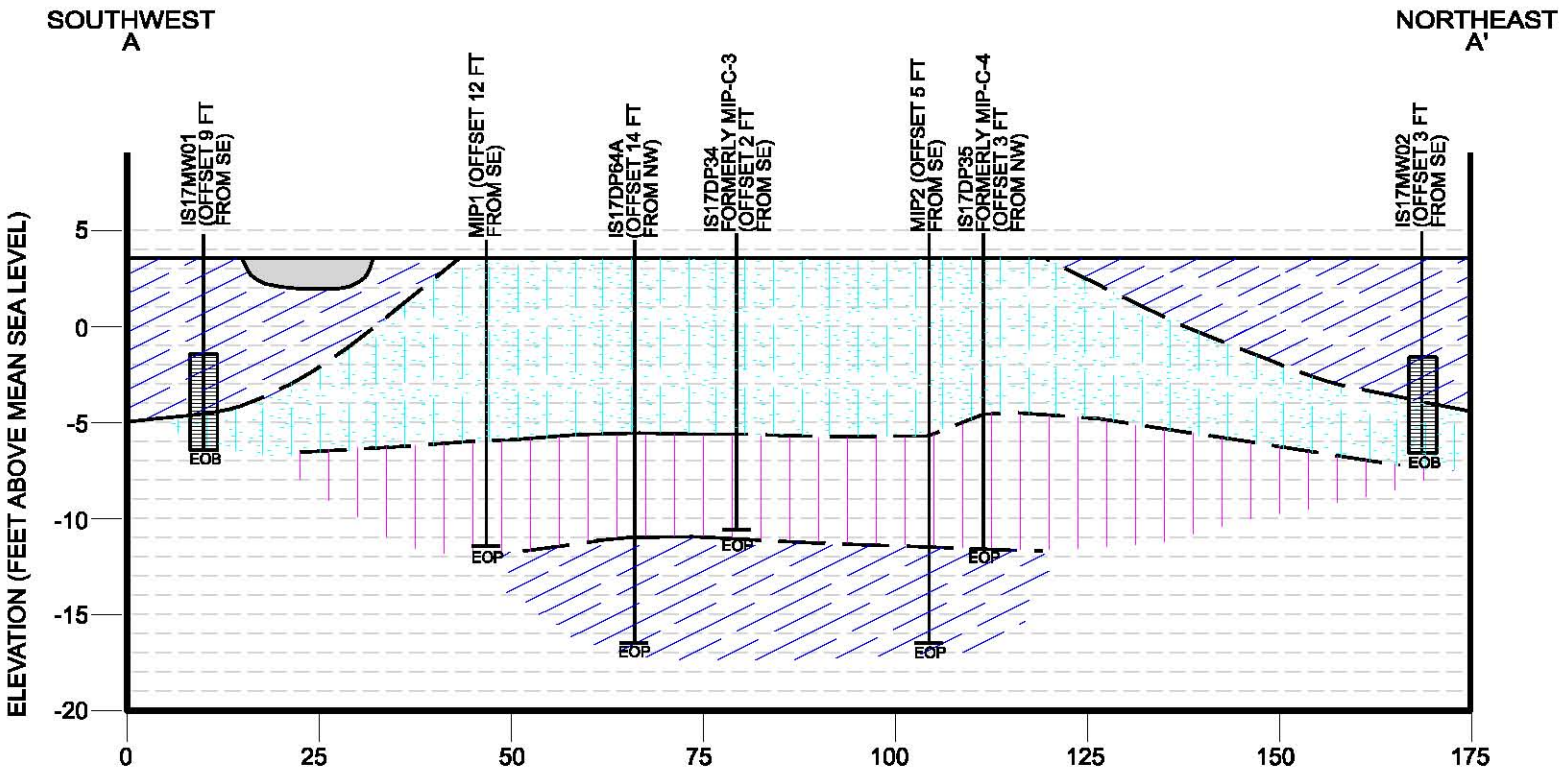
0 12.5 25 Feet

1" = 25'

Figure A-2
Locations of Geologic Cross Sections
NSF-IH, Indian Head, Maryland

CH2MHILL

f01_314446.dgn (NDM | WDC)



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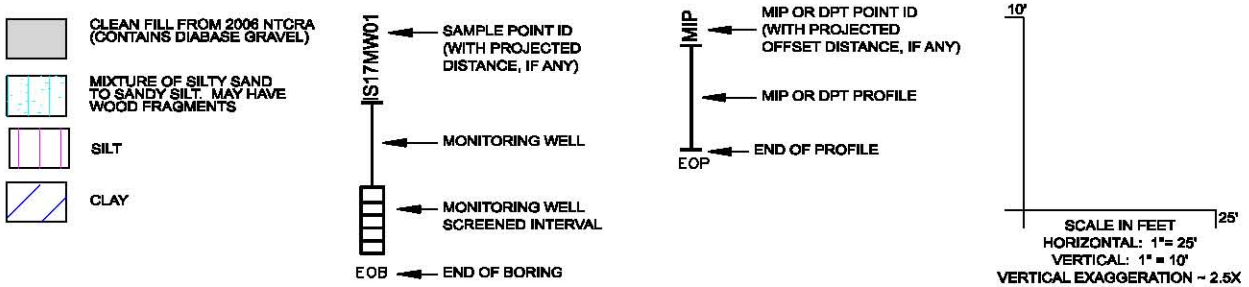


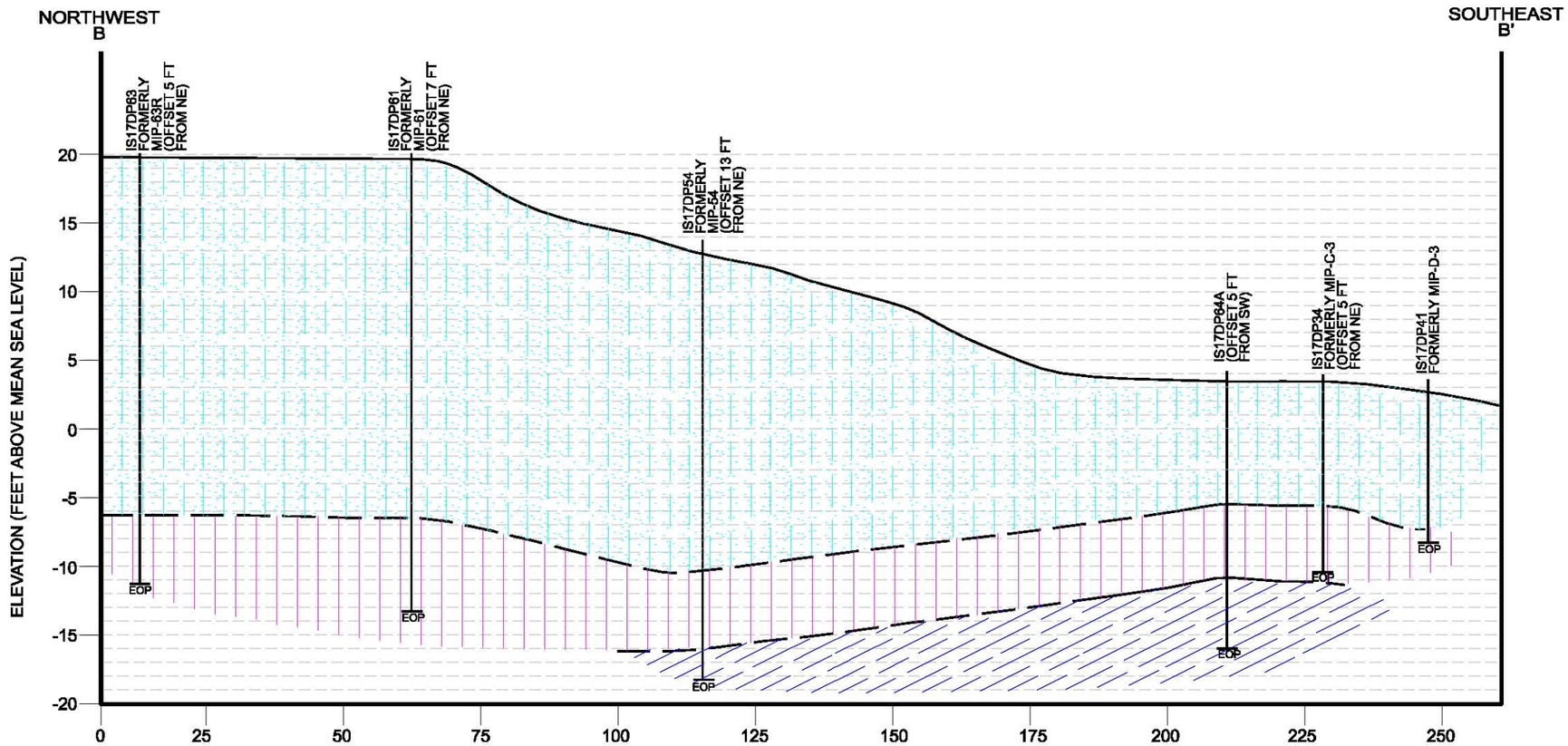
NOTES:

1. MONITORING WELLS WERE SURVEYED BY BALDWIN AND GREGG OF NORFOLK, VA.
2. DIRECT PUSH TECHNIQUE (DPT) AND MEMBRANE INTERFACE PROBE (MIP) LOCATIONS WERE SURVEYED WITH A GLOBAL POSITIONING SYSTEM (GPS) UNIT BY CH2M HILL AT THE TIME THE WORK WAS DONE.
3. DESCRIPTION OF THE LITHOLOGY IS OBTAINED FROM SOIL BORING AND MONITORING WELL LOGS AND INFERRED BASED ON MIP PROFILES.
4. SEE APPENDICES A AND B IN THE FINAL REMEDIAL INVESTIGATION REPORT (CH2M HILL , 2004) FOR SOIL BORING AND MONITORING WELL LOGS.
5. SEE APPENDICES B AND C IN THE DRAFT FEASIBILITY STUDY REPORT (CH2M HILL, 2006) FOR THE MIP PROFILES.
6. LOCATIONS OF THE UNIT BOUNDARIES SHOWN ON THE CROSS SECTION ARE ESTIMATED AND ARE BASED ON BORING LOGS AND MIP PROFILES.
7. NTCRA - NON TIME CRITICAL REMOVAL ACTION (FSS, 2006 REPORT).

Figure A-3
Geologic Cross-Section A - A'
Interpretation of Site 17 Geology
NSF-IH, Indian Head, Maryland

CH2MHILL

f02_314446.dgn (NDM | WDC)



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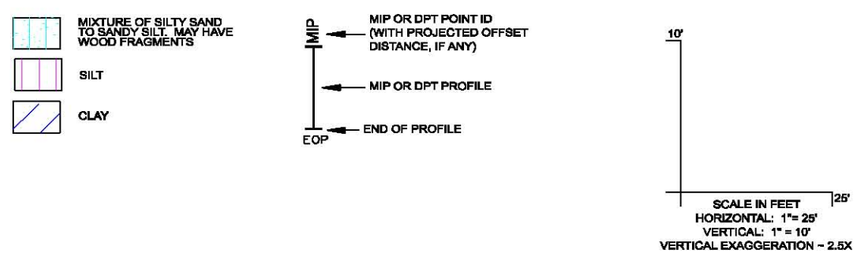

NOTES:

1. MONITORING WELLS WERE SURVEYED BY BALDWIN AND GREGG OF NORFOLK, VA.
2. DIRECT PUSH TECHNIQUE (DPT) AND MEMBRANE INTERFACE PROBE (MIP) LOCATIONS WERE SURVEYED WITH A GLOBAL POSITIONING SYSTEM (GPS) UNIT BY CH2M HILL AT THE TIME THE WORK WAS DONE.
3. DESCRIPTION OF THE LITHOLOGY IS OBTAINED FROM SOIL BORING AND MONITORING WELL LOGS AND INFERRED BASED ON MIP PROFILES.
4. SEE APPENDICES A AND B IN THE FINAL REMEDIAL INVESTIGATION REPORT (CH2M HILL , 2004) FOR SOIL BORING AND MONITORING WELL LOGS.
5. SEE APPENDICES B AND C IN THE DRAFT FEASIBILITY STUDY REPORT (CH2M HILL, 2006) FOR THE MIP PROFILES.
6. LOCATIONS OF THE UNIT BOUNDARIES SHOWN ON THE CROSS SECTION ARE ESTIMATED AND ARE BASED ON BORING LOGS AND MIP PROFILES.

Figure A-4
Geologic Cross-Section B - B'
Interpretation of Site 17 Geology
NSF-IH, Indian Head, Maryland

CH2MHILL

Appendix
IS17DP64A and IS17DP65 Boring Logs

CH2MHILL	PROJECT NUMBER 314440	BORING NUMBER IH17DP64

SOIL BORING LOG

PROJECT: Site 17 LOCATION: Indian Head, Maryland

ELEVATION : DRILLING CONTRACTOR: Parratt-Wolf, Inc.

DRILLING METHOD AND EQUIPMENT USED: Tractor Mounted Direct-Push Rig

WATER LEVELS : START: 12/05/2006 END: 12/05/2006 LOGGER: C. Houck

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (IN)	BLOW COUNT (blows/6 in)	PID (ppm)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	USCS	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. DRILLING ACTIONS/DRILLER COMMENTS
2, 4	0-4	2		0 0	0.8 feet of SANDY SILT (ML) - dark yellowish brown, moist, very fine to fine sand, trace gravel, soft, low to medium plasticity. 0.2 feet of coarse quartz gravel 1 foot of SILT (ML) - dark olive gray (5 Y 3/2), moist, trace organic material and wood debris, stiff, low plasticity.	ML GP ML	
6, 8	4-8	0.2			Recovered 0.2 feet of wet soil slough, wood and gravel debris.		
10, 12	8-12	2		9999 396	1 foot of SILTY SAND (SM) - dark gray (5 Y 4/1), wet, fine sand, high percentage of silt and/or clay, (loose). 1 foot of SANDY SILT (ML) - dark gray (5 Y 4/1), wet, fine sand, little organic material, soft, low plasticity.	SM ML	
14, 16	12-16	4		1312 504	2.5 feet of SILT (ML) - olive gray (5 Y 5/2), moist, little fine sand, little to some clay, medium stiff, medium plasticity, cohesive. 1.5 feet of FAT CLAY (CH) - gray (5 Y 5/1) mottled with dark yellowish brown (10 YR 4/6), moist, medium to high plasticity, medium stiff.	ML CH	

CH2MHILL	PROJECT NUMBER 314440	BORING NUMBER IH17DP64

SOIL BORING LOG

PROJECT: Site 17 LOCATION: Indian Head, Maryland

ELEVATION : DRILLING CONTRACTOR: Parratt-Wolf, Inc.

DRILLING METHOD AND EQUIPMENT USED: Tractor Mounted Direct-Push Rig

WATER LEVELS : START: 12/05/2006 END: 12/05/2006 LOGGER: C. Houck

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (IN)	BLOW COUNT (blows/6 in)	PID (ppm)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	USCS	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. DRILLING ACTIONS/DRILLER COMMENTS
18	16-20	2		156 34.1	2 feet of FAT CLAY (CH) - gray (5 Y 5/1) mottled with dark yellowish brown (10 YR 4/6), moist, medium to high plasticity, stiff.	**CH**	
20							

End of Boring

CH2MHILL	PROJECT NUMBER 314440	BORING NUMBER IH17DP65

SOIL BORING LOG

PROJECT: Site 17 LOCATION: Indian Head, Maryland

ELEVATION : DRILLING CONTRACTOR: Parratt-Wolf, Inc.

DRILLING METHOD AND EQUIPMENT USED: Tractor Mounted Direct-Push Rig

WATER LEVELS : START: 12/04/2006 END: 12/04/2006 LOGGER: C. Houck

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (IN)	BLOW COUNT (blows/6 in)	PID (ppm)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	USCS	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. DRILLING ACTIONS/DRILLER COMMENTS
2 4	0-4	2		0 0	1 foot of SANDY SILT (ML) - dark yellowish brown (10 YR 4/4), moist, very fine to fine sand, trace clay, low plasticity, soft, (fill). 0.2 feet of cobbles and coarse gravel. 0.8 feet of SILT (ML) - dark grayish brown (2.5 Y 4/2) mottled with yellowish brown (10 YR 5/6), moist, little organic material, low plasticity, slightly cohesive.	ML GP ML	
6 8	4-8	2.5		78.7 1381	2.5 feet of POORLY-GRADED SAND with SILT (SP-SM) - gray (5 Y 4/1), moist to wet at 7.5 feet, very fine to fine sand, 40% silt, stratified with silt/clay layers that are soft, cohesive and have low plasticity.	SP-SM	
10 12	8-12	2		1002	2 feet of POORLY-GRADED SAND with SILT (SP-SM) - gray (5 Y 5/1) mottled with olive (5 Y 5/3), wet, very fine to fine sand, trace medium sand wood fragments, (dense).	SP-SM	
14 16	12-16	0			No recovery. Pushed 12-16 foot interval three times with two different core catchers.		

CH2MHILL	PROJECT NUMBER 314440	BORING NUMBER IH17DP65

SOIL BORING LOG

PROJECT: Site 17 LOCATION: Indian Head, Maryland

ELEVATION : DRILLING CONTRACTOR: Parratt-Wolf, Inc.

DRILLING METHOD AND EQUIPMENT USED: Tractor Mounted Direct-Push Rig

WATER LEVELS : START: 12/04/2006 END: 12/04/2006 LOGGER: C. Houck

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (IN)	BLOW COUNT (blows/6 in)	PID (ppm)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	USCS	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. DRILLING ACTIONS/DRILLER COMMENTS
18 – 20	16-20	0			No recovery.		
22 – 24	20-24	1		802	1 foot of FAT CLAY (CH) - grayish brown (2.5 Y 5/2) mottled with light olive brown (2.5 Y 5/6), moist, soft, high plasticity.	**CH**	

End of Boring

Attachment B
Results of the XDD Bench-Scale Studies

DNAPL Bench-Scale Technology Evaluation Studies

SITE 17, NAVAL SUPPORT FACILITY, INDIAN HEAD

INDIAN HEAD, MARYLAND

Prepared for

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March 2008

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Appendix C Mass Profiling Notes/Supplemental Information
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Appendix E Grain Size Analysis Laboratory Report

1.0 INTRODUCTION

XDD, LLC (XDD) was retained by CH2M HILL, Inc. (CH2M HILL) to conduct a bench-scale evaluation to assess the effectiveness of in-situ chemical oxidation (ISCO) technologies on subsurface contamination at Site 17 of the Naval Support Facility, Indian Head (NSF-IH) in Indian Head, Maryland (Site 17). CH2M HILL performed this work for the United States Navy (Navy) under Contract N62470-02-D-3052 Task Order 0053. The bench-scale studies were performed in accordance with the technical memorandums titled "*Work Plan for Conducting Bench-Scale Studies at Site 17, NSF-IH, Indian Head, Maryland*" (herein referred to as the Final Work Plan), submitted to the Indian Head Installation Restoration Team IHIRT on January 2, 2007, and "*Modification to the Approach of the Bench-Scale Study at Site 17, NSF-IH, Indian Head, Maryland*", dated February 26, 2007.

1.1 BACKGROUND INFORMATION

NSF-IH occupies a 3,500-acre peninsula between the Potomac River and Mattawoman Creek, and is located in the town of Indian Head, Maryland, about 30 miles south of Washington, DC. Indian Head was first used by the Navy in 1890 for the testing of naval guns. It has since evolved into a state of the art facility specializing in naval munitions and includes the National Center for Energetics.

The presence of a presumably small and isolated area of dense non-aqueous phase liquid (DNAPL) was indicated by a trichloroethene (TCE) concentration of 870 milligrams per liter (mg/L) from one direct push technology (DPT) sample, IS17-DP27, collected within the center of the South plume at Site 17. The value represents 80% of the pure-phase solubility of TCE (1,100 mg/L) suggesting the presence of DNAPL in close proximity to the groundwater sample[1].

Soil underlying the site consists of fill material in the upper 10 to 12 feet of the subsurface. The fill is characterized by greenish clay with silt containing wood fragments. The fill is underlain by clay and sandy clay that is interbedded with small-scale layers of fine to medium sand.

The contamination at Site 17 to be addressed in this bench-scale evaluation is in the surficial aquifer (8 to 20 feet below ground surface [bgs]). Groundwater has been

[1] Source for aqueous solubility: EPA. 2004. *In Situ Thermal Treatment of Chlorinated Solvents – Fundamentals and Field Applications*. EPA 542-R-04-010.

encountered from a range of 2 to 5 feet bgs. The primary contaminant of concern (COC) in this area is TCE and contamination is thought to be sorbed onto soils, dissolved into the groundwater, and present as DNAPL.

1.2 BENCH-SCALE EVALUATION OBJECTIVES

The general objectives for the bench-scale tests as stated in the Final Work Plan are to:

- Determine the relative distribution of COC mass (associated with depth and soil type in the saturated zone)
- Determine the effectiveness of the selected ISCO technologies in treating TCE residual DNAPL;
- Estimate the site-specific demand of reagents; and
- Identify potential side effects of the selected technologies, such as incompatibility with the current site use, mobilization of other regulated contaminants, and creation of undesired by-products.

2.0 BENCH-SCALE EVALUATION APPROACH

The bench-scale study was conducted at XDD's in-house Treatability Laboratory in Stratham, New Hampshire and evaluated the following ISCO technologies for the treatment of TCE contamination at Site 17:

- Alkaline-activated persulfate;
- Iron-activated persulfate;
- Unactivated persulfate; and
- Permanganate.

CH2M HILL supplied XDD with groundwater and saturated soil from the target treatment area (near IS17DP27) and from intervals that represented different lithologies of the shallow aquifer. Groundwater and soil samples were received on December 6, 2006. Five liters (L) of groundwater were received from IS17DP65GW. Approximately 30 kilograms (Kg) of soil were received from borings IS17DP64B, IS17DP66, IS17DP67 and IS17DP68.

Upon receipt of the Site 17 soil and groundwater by XDD, a baseline assessment and preliminary tests, including the soil screening/mass profiling, activation testing (for persulfate only) and SOD measurements were performed (Section 3.0). The results of this baseline assessment were used to finalize the specific test approach to simulate the application of ISCO to Site 17 soils (Section 4.0): the activation testing results were used to which two of the three persulfate mechanisms would be carried forward with potassium

permanganate to the SOD test; and the SOD results were used to determine which two of the three remaining ISCO technologies would be carried forward for the injection simulation testing.

Most of the analytical tests were conducted by Premier Laboratory in Dayville, Connecticut using the United States Environmental Protection Agency (USEPA) Method 8260B for volatile organic compounds (VOCs), and Methods 6020 and SW-846 7470A/7471 for metals (dissolved and total). The analyses for the mass profiling tests were conducted by Resource Laboratories in Portsmouth, New Hampshire using USEPA Method 8260B for VOCs.

Other specifics regarding procedures and setup for the bench-scale study are provided below.

- Due to the relatively high volatility of TCE, each reactor was spiked individually. Following the addition of TCE, the reactors were prepared using three cycles of heating (to approximately 110 degrees Fahrenheit [^{o}F]), cooling to room temperature and cooling (to approximately 40 ^{o}F), with gentle shaking of each reactor (between each temperature step) to help deposit the VOCs uniformly throughout the soil. Each step in each cycle (i.e., heating, first cooling, second cooling) required approximately one hour for a total of three hours per cycle. The overall spiking and preparation of the reactors was conducted over a 24-hour period, with the first 2 cycles occurring in the first day (the reactors were held at 40 ^{o}F overnight) and the final cycle completed during the following day.

- The tests were typically conducted at approximately 65 degrees Fahrenheit (^{o}F) in 40-milliliter (mL) borosilicate-glass batch reactors. Exceptions to these conditions included the metals leaching test: larger reactor containers were required to accommodate approximately 400 grams of soil.

- The total pore volume for 40 grams of soil was estimated to be approximately 10.2 mL. In general, two to three pore volumes were added to the reactors, depending on the specific test. The actual volume added to the reactor also depended on the mass of soil required for each test (i.e., the SOD test required approximately 20 grams of soil, while the preliminary persulfate test required approximately 60 grams of soil).

- Soil mass estimates provided herein refer to the mass as "wet" soil with approximately 14% moisture content.

- To decrease the effects of volatilization of TCE during the tests that included VOC analysis (e.g., injection simulation tests), the reactors were prepared so that headspace was minimized. Therefore, the volume of aqueous solution added to the reactors for these tests was equivalent to several pore volumes. The reagent concentrations were normalized to be equivalent to one pore volume so that the mass of oxidant and reagents applied to the soil mass would be comparable with the ratios that would be targeted for field implementation.

- The results of the treated reactors were compared to those from the controls associated with the same timeframe/system conditions.

- For tests where VOCs were not measured (e.g., base buffering capacity, oxidant stability, etc.), two to three pore volumes (with reagent concentrations normalized to one pore volume) were used to allow enough aqueous volume in the reactor for necessary measurements.

A description of the baseline assessment and preliminary tests and associated results are presented in Section 3.0. The injection simulation testing and associated results are discussed in Section 4.0, and recommendations regarding ISCO in a pilot/full-scale application are presented in Section 5.0.

The evaluation structure for the primary tests conducted for each of the technologies is outlined in Tables 1A and 1B, where Table 1A is a summary of the baseline/preliminary testing and Table 1B reflects the test structure for the two ISCO technologies carried forward to the injection simulation test. The tables (Tables 1 through 6) and figures (Figures 1 through 5) presented in the main part of the report are general summaries of the full data set. The full data set is compiled and presented on larger tables in Appendix A for reference. Additionally, the VOCs and metals analysis laboratory reports are included in Appendix B, and additional information from the mass profiling results are presented in Appendix C. Appendix D shows the photographs of select reactors and processes used during the bench-scale studies. The grain size analysis laboratory report is included in Appendix E.

3.0 BASELINE ASSESSMENT AND PRELIMINARY TESTS

The baseline assessment and preliminary tests included soil screening/contaminant mass distribution profiling, baseline laboratory analyses of soil and groundwater, SOD and oxidant stability testing, buffer capacity testing (for persulfate only) and preliminary activation testing.

3.1 SOIL SCREENING / MASS PROFILING

The soil screening/contaminant mass distribution profiling was performed to a gain better understanding of the relative TCE distribution in soil due to depth, lithology, and the location of potential DNAPL residual. The soil was classified by soil type using visual observation, and screened for VOCs using a photoionization detector (PID). Based on the screening results, soil sampling locations were selected to represent the concentration profile of each core.

A total of 20 samples were collected from the soil cores for VOC analysis. Sample locations were based on a combination of factors including the PID results; location of soil interface between clay, sand and sandy clay; and concentration gradient. Table 2 summarizes the soil type and rationale for each sample submitted for laboratory analysis and also provides the analytical results for TCE. Tabulation of the full mass profiling laboratory data set and the laboratory report are provided as Table A-1 in Appendix A and Appendix B, respectively. A summary of the lithology and PID readings for each core is provided in Appendix C. Photographs of the cores are provided in Appendix D. The general observations from the mass profiling activities are provided below.

- The cores were received as follows:
  - IS17DP64B (4 to 16 feet bgs);
  - IS17DP66 (4 to 12 feet bgs);
  - IS17DP67 (4 to 20 feet bgs); and
  - IS17DP68 (4 to 20 feet bgs).
- All soil above 8 feet bgs had no PID detections except IS17DP64B (highest detection = 275 parts per million vapor [ppmv]). The 4- to 8-foot soil interval was split out separately from the rest of the cores and was not utilized in the bench-scale testing because of the little-to-no PID detections (it was determined to not be part of the target interval). Since this soil interval also contained a high level of organic matter and peat, including this soil would have potentially lead to high SOD values that

would not be representative of the actual target intervals where COC levels were highest.

- Based on the soil screening and lithologic observations, the soils were separated into four categories:
  - loose sand,
  - loose, sandy clay,
  - dense, stiff, silty clay, and
  - soil shallower than 8 feet bgs.
- The distribution (by wet weight) of the soil in the interval between 8 and 20 feet bgs was different than expected based on previous information provided on the soil lithology at Site 17 (i.e., the relative proportion of sand intervals that would represent relatively permeable injection zones was much lower): approximately 71% silty clay (~16 Kg), 11% sandy clay (~2.5 Kg) and 18% sand (~4 Kg).
- IS17DP67 had the highest PID detections - greater than 9,999 ppmv at depths of 8 to 10 feet bgs, 12 to 14 feet bgs and 16 to 18 feet bgs.
- TCE concentrations ranged between 4 and 12,000 milligrams per kilogram (mg/Kg), with most of the concentrations occurring between 44 and 350 mg/Kg. Only one sample was greater than 350 mg/Kg (12,000 mg/Kg at 12.25 feet bgs in IS17SP67).
- The highest TCE concentrations were observed primarily in the clay material.
- Based on the discrete layering observed in the cores, it is anticipated that groundwater primarily flows in the coarser (i.e., sand) zones at the site.

The results of the mass profiling were discussed with CH2M HILL[2] before proceeding with the remaining tests. Based on the mass profiling results, XDD recommended minor changes to the bench-scale testing approach, discussed in the following subsections (Sections 3.4 and 3.5) and summarized in the final memorandum by CH2M HILL titled "*Modification to the Approach of the Bench-Scale Study at Site 17, NSF-IH, Indian Head, Maryland*", dated February 26, 2007. The primary change from the Final Work Plan was to composite the Site 17 soil and groundwater for utilization in the bench-scale testing (with the exception of the SOD tests, which were conducted separately on the sand and clay) as opposed to conducting the tests separately on the clay and sand soil types[3].

[2] A conference call with CH2M HILL and XDD was conducted on February 16, 2007 to discuss the results.
[3] The Final Work Plan specified that the tests would be conducted on sand and clay material separately to evaluate technology effectiveness in the discrete soil types. Since the majority of the soil was clay,

3.2 BASELINE ANALYSES

Baseline analysis was performed on unspiked, composited samples once the mass distribution profiling was completed. Soil and groundwater samples were sent to the laboratory for analysis of grain size (soil only), VOCs and metals.

The grain size analysis was conducted on one sample[4], using both hydrometer and sieve methods, and is presented in Appendix E. The Unified Soil Classification System (USCS) classification for the Site 17 soil is silty clay with sand (CL-ML), which is in general agreement with the mixture of silty clay, sandy clay and sand observed during the mass profiling.

Results of the unspiked baseline VOCs and metals analyses are summarized on Tables A-2 and A-3 of Appendix A, respectively. TCE and cis-1,2-dichloroethene (cisDCE) were detected in the soil (averaging 1.65 and 0.014 mg/Kg for TCE and cisDCE, respectively) and groundwater (averaging 405 and 58 mg/L for TCE and cisDCE, respectively) samples. Tetrachloroethene (PCE) was detected in soil at an average concentration of 0.0075 mg/Kg, but was not detected in groundwater (detection limit for PCE was 10 mg/L due to the high detections of TCE and cisDCE). The baseline results confirmed that the reactors for the preliminary persulfate and injection simulation tests would require TCE spiking so that the initial TCE concentration in the reactors would be similar to the concentrations anticipated in the DNAPL target area (based on groundwater concentrations at IS17-DP27).

Although the concentration of dissolved and total metals in the baseline groundwater was relatively low (i.e., most were below the detection limits of 0.2 to 5 micrograms per liter [µg/L]; zinc was the highest with an average concentration of 31.5 µg/L and 22 µg/L for dissolved and total, respectively), baseline soil concentrations were relatively high for several metals (average concentration given in mg/Kg):

- Chromium = 7.3;
- Copper = 8.7;
- Lead = 7.05;
- Nickel = 9.2; and
- Zinc = 25.5.

with relatively little sand, and because the higher VOC concentrations were detected in the clay, conducting the test on the separate soils was no longer considered required or representative.

[4] The grain size sample was resubmitted in January 2008 for re-analysis. These results are presented in Appendix E.

The effect of ISCO treatment on the mobilization of metals was evaluated and is discussed in Section 4.2.

3.3 BASE BUFFERING CAPACITY

The objective of the base buffering test is to determine the mass of alkaline reagent (e.g., sodium hydroxide [NaOH]) that is required to raise the subsurface conditions to the target pH (typically greater than pH 10.5) for the application of alkaline-activated persulfate. The alkaline buffering capacity is determined by the presence of weak organic acids and, potentially, the mineralogy of the soil. The base buffering capacity test was conducted by adding a NaOH solution of increasing concentration (approximately 2 pore volumes, or 10.2 mL, using de-ionized water, for 20 grams of soil), normalized to 1 pore volume, to separate reactors containing 20 grams of soil. Measurements of pH were conducted in the aqueous phase of each reactor at two time points: Day 1 and Day 7.

Results from the base buffering capacity test (Figure 1) for the Day 1 and Day 7 measurements are not significantly different, indicating that the base buffering reactions occur within the first day of contact. The data also indicate that Site 17 soils have a relatively high buffering capacity, requiring a NaOH base strength of approximately 3.7 grams base per kilogram of soil to elevate the pH of the soil to greater than pH 10.5. XDD has observed buffering requirements between 1 and 8 grams base per kilogram of soil. In addition to helping to determine technical feasibility of alkaline-activated persulfate, the base buffering capacity is used to evaluate the potential costs associated with applying this technology. As the buffering capacity increases so will the cost for treatment. The extra cost associated with a higher buffering capacity may eliminate alkaline-activation as a cost-effective option when compared to other remediation technologies.

3.4 PRELIMINARY PERSULFATE TESTING

Oxidation reactions using sodium persulfate can occur through several mechanisms, including activated and unactivated processes. Based on XDD's previous experience and the soil composition observed during the mass profiling activities, XDD proposed the evaluation of three mechanisms:

- Alkaline-activated persulfate;
- Iron-activated persulfate; and
- Unactivated persulfate (added based on mass profiling results).

The Final Work Plan specified that the target spiked concentration during the preliminary testing would be 20 to 50% over the maximum observed during the mass profiling. Since the maximum concentration from the mass profiling test was very high (12,000 mg/Kg), the target spiked concentration for the preliminary testing was determined to be 2,000 mg/Kg (i.e., a rough equivalent soil concentration to the maximum observed in groundwater at the site: 870 mg/L).

To compare the effectiveness of these three mechanisms to degrade TCE, a preliminary test was conducted in which a persulfate solution (approximately 70 grams per liter [g/L], or roughly 5.6% by weight, using sodium persulfate) was applied to soil. The reactor systems included a control (which was not dosed with persulfate) for each of the conditions tested, and were allowed to equilibrate for 14 days before the soil was analyzed for VOCs.

Using the control results for comparison (Figure 2 and Table A-4 in Appendix A), the data from the treated reactors show a VOC concentration reduction of approximately 82% (compared to the associated control reactor) for the unactivated persulfate treatment. The percentage reductions of VOC concentration for iron-activated and alkaline-activated persulfate treatment were 74% and 64% respectively.

Based on the TCE reduction results and the relatively high buffering capacity of the site soils (required for the application of alkaline-activated persulfate), the iron-activated and unactivated persulfate types were selected to advance to the SOD testing.

Detection of 1,1,2,2-Tetrachloroethane (1,1,2,2-TeCA) was observed in the preliminary persulfate testing. 1,1,2,2-TeCA was detected only in reactors that were treated with persulfate (all activation methods). Although it is suspected that the occurrence of 1,1,2,2-TeCA may be a function of the persulfate reaction with site soils, two other theories were evaluated:

- 1,1,2,2-TeCA was present in site soils, but was masked by other compounds like TCE. However, the mass profiling and baseline soil samples analyzed as part of this bench-scale evaluation did not show any detections of this compound (even though TCE was relatively low in some of the samples too). In addition, the preliminary persulfate test utilized soil spiked with laboratory-grade TCE. No other compounds were added to the soil.

- 1,1,2,2-TeCA was an impurity of the TCE spiking reagent used for the reactors. XDD submitted a sample of the TCE reagent to the laboratory for analysis, which showed no impurities.

Upon review and discussion with CH2M HILL[5], no further preliminary testing was conducted, but this compound would be further assessed in the longer-term injection simulation testing.

3.5 SOIL OXIDANT DEMAND

Since the SOD exerts a competitive demand on the oxidant, the SOD must typically be satisfied to ensure complete oxidation of the target compounds. The SOD testing was performed on both sand and clay soils to determine the range of oxidant demand for each of the following systems:

- Iron-activated persulfate;
- Unactivated persulfate; and
- Permanganate.

Owing to site conditions (i.e., tight clay soil), the contact time was extended from 14 days to up to 90 days maximum (or until the SOD stabilized, whichever occurred first) so that the longer-term persistence of the oxidant could be evaluated.

The SOD was measured by placing 15.3 mL (or approximately 3 pore volumes) of persulfate solution into reactors containing 20 grams of soil (unspiked). Persulfate solutions of 50 and 200 g/L and permanganate solutions of 5 and 20 g/L were utilized for this test. The control reactors did not contain soil. SOD was measured in the reactors at Day 1, 7, 14 and 30. Oxidant concentrations were measured using iodometric titration, and SOD was calculated as the amount of oxidant consumed (grams) per soil mass (Kg) in the reactor.

3.5.1 Persulfate Results

Results from persulfate SOD tests (Table 3) indicated a linear relationship: SOD increased with increasing persulfate concentration, from 21 to 75 grams oxidant per Kg sand (22 to 69 grams oxidant per Kg clay) at persulfate concentrations from 50 to 200 g/L for iron-activated persulfate systems, respectively. Similarly, in the unactivated persulfate reactors, SOD increased with increasing persulfate concentration, from 11 to 28 grams oxidant per Kg sand (14 to 32 grams per Kg clay).

[5] A conference call with CH2M HILL and XDD was conducted on May 17, 2007 to discuss the results.

Based on the results in both sand and clay, the SOD for iron-activated persulfate is generally two to three times the SOD observed for the unactivated persulfate systems. The higher SOD in the iron-activated systems is not unusual as the activator reagents often create a condition that enables partial auto decomposition of the persulfate. Increases in SOD with increasing persulfate concentration are typical and likely due to concentration-based kinetics. The magnitude of SOD observed in this test is considered moderately high and will be utilized in conjunction with the other test results to evaluate the overall effectiveness of ISCO at Site 17.

3.5.2 Permanganate Results

The SOD measured for sand and clay in the permanganate SOD testing (Table 4) were similar. Although the permanganate concentrations tested (5 and 20 g/L) represent a safe and typical range of practical injection concentrations for a field-scale implementation, the SOD of Site 17 soils essentially diminished the available permanganate within 7 days (within 1 day in the 5 g/L reactors).

Due to the relatively fast decline of permanganate in the 5 g/L and 20 g/L reactors an SOD value for Site 17 soils using this oxidant was inconclusive. With the information provided by CH2M HILL on previous permanganate SOD measurements at Site 17 (SOD measured at 48 g/Kg in peat material), XDD anticipates that the true permanganate SOD for the impacted soils is between 15 g/Kg and 48 g/Kg. This technology was not carried forward in the remainder of the bench-scale study since application of this oxidant would not be a cost-effective option at the site.

3.6 OXIDANT STABILITY TESTING

Persulfate and permanganate stability was measured using similar reactors as in the SOD testing. The control reactors did not contain soil. The reactors were allowed to equilibrate over a 30- to 60-day test period, and oxidant concentrations were measured at 0, 1, 7, 14, 30 and 60 (persulfate only) days.

Persulfate decomposition in the presence of soil compared to the associated control (no soil) is illustrated on Figures 3A and 3B for iron-activated and unactivated persulfate reactors, respectively. Persulfate concentration in contact with soil decreased as much as 36% (compared to virtually no change in the controls) over the first day of contact but then slowed over the remaining 59 days. After 60 days of contact, 47 to 56% of the persulfate still remained in the iron-activated persulfate reactors and 70 to 76% in the unactivated

persulfate reactors. This data indicates that persulfate (with either activation) is compatible and relatively stable for treatment of Site 17 soils.

Permanganate decomposition in the presents of Site 17 soils (Figure 3C) was significant within the first day of contact: more than 50 to 90% of the oxidant was diminished. As discussed in Section 3.5.2, the permanganate mass requirements and its relatively short life span (i.e., because of the large amount of clay in the soil, a longer life span is necessary for this site) make permanganate an unlikely option of the cost-efficient treatment of COCs at Site 17.

4.0 ISCO APPLICATION SIMULATIONS

Based on the results of the baseline assessment and preliminary testing, alkaline-activated persulfate was eliminated as an option for treatment due to the high buffering capacity, and permanganate was eliminated due to the relatively high SOD requirements of the soil and low stability. Therefore, the two options that were further evaluated in the application simulations testing were iron-activated persulfate and unactivated persulfate.

As discussed in Section 3.1, the higher TCE concentrations were located in clay/sandy clay, the predominant soil type at the site. Therefore, to effectively treat Site 17 with ISCO, two implementation options are potentially available:

- the oxidant must be able to persist long enough to treat COCs that diffuse into groundwater from the clay zones; or
- direct contact with the TCE located within the clay must be achieved.

The first would be achieved through multiple ISCO applications using discrete direct push technology (DPT) points to inject a relatively low concentration of oxidant into the more permeable zones. The latter would be achieved through simultaneous soil mixing and oxidant application using a relatively high concentration of oxidant to meet most of the oxidant demand throughout the target area. Therefore, the injection simulation approach was modified to reflect the two likely implementation options.[6]

Additionally, the potential for temporary mobilization of metals from site soil as a result of ISCO application was evaluated. A summary of the testing and discussion of the results are presented in the following subsections.

[6] A conference call was conducted with CH2M HILL and XDD on May 29, 2007 to discuss the results and determine the format of the injection simulation test.

4.1 INJECTION SIMULATION

The injection simulation was conducted to evaluate oxidant effectiveness with two simulated ISCO implementation techniques:

- LOW: relatively low oxidant concentration over multiple applications to target COCs diffusing into the sandy intervals from the less permeable zones.

- HIGH: a single higher oxidant concentration applied into the clay using soil mixing equipment to achieve direct contact.

Reactors were prepared for both scenarios and for both iron-activated and unactivated persulfate conditions. The "low" oxidant application assumes regular treatments over time using a stable oxidant and was simulated in the bench-scale test by dosing the reactors three times at two-week intervals with an injection concentration of approximately 40 to 70 g/L persulfate. The "high" oxidant application assumes a single soil mixing treatment at a persulfate concentration (approximately 170 g/L) that can persist over several months at least.

Each test condition was prepared in triplicate: two of the reactors for each condition were designated for laboratory analysis and the third for in-house measurements of pH, ORP, and residual oxidant at intermediate time points. Reactors were submitted for laboratory analysis of VOCs in soil on Day 13 (Application 1 for "low" and Time 1 for "high) and on Day 45 (Application 3 for "low" and Time 2 for "high"), as shown on Tables 1B. Groundwater was also analyzed for VOCs on the Day 45 reactors. The control reactors contained no persulfate and were shared between the two persulfate activation conditions.

The following observations are based on the injection simulation results (Figures 4 and 5 and Table A-5 in Appendix A):

- Degradation of TCE in the unactivated persulfate reactors was significantly greater than that of the iron-activated reactors at Day 13; however, by Day 45, degradation in the iron-activated persulfate reactors was greater than in the unactivated persulfate reactors.

- By Day 45, there was not a significant difference in TCE degradation between the "low" and the "high" simulated scenarios. Therefore, both implementation options should be evaluated for their cost-effectiveness for a field-scale application.

- Due to inherent variability in soil spiking methods and soil analytical methods, the Day 45 control results exhibited the largest range in variability (TCE concentrations ranged between 1,300 and 6,100 mg/Kg, with an average of 3,700 mg/Kg). Although the treated reactors are typically compared to their associated control, because this control was appreciably higher than the other baseline and control samples, the treated results from Day 45 were also compared to the control results from Day 13. Based on this comparison, the iron-activated persulfate treatment achieved TCE degradation of 83% and 81% in the "low" and "high" simulations, respectively. The unactivated persulfate treatment achieved 51 to 68% TCE degradation in the "low" and "high" simulations, respectively.

- The groundwater data collected as part of the iron-activated persulfate and unactivated persulfate injection simulation test confirmed that the VOC mass was reduced in both soil and groundwater, with decreases in groundwater TCE concentrations of at least 94%.

- Similar to that observed during the preliminary persulfate test, 1,1,2,2-TeCA was detected in the treated reactors for all conditions ("low", "high", iron-activation and unactivated). Due to the vigorous reactions that can take place with persulfate in the presence of soil (and associated inorganics/mineralogy), it is not unusual to observe the temporary formation of COC degradation by-products. XDD's experience with other by-product compounds[7] is that their presence is indeed temporary and that to address these by-products, adequate oxidant mass must be allotted to ensure that oxidant is available for the degradation of them as well. Based on the structure of 1,1,2,2-TeCA relative to TCE, XDD anticipates that the degradation kinetics for 1,1,2,2-TeCA is expected to be one to two orders of magnitude slower than that of TCE, but degradable by persulfate nonetheless. Although the chemistry in this particular case is not clearly understood, based on review of available literature, the occurrence of 1,1,2,2-TeCA is likely the function of hydrohalegenation[8] in the presence of the persulfate reactions with TCE and soil mineralogy.

- The mass balance of VOCs (including the four main compounds that were detected, cis,1,2-DCE, 1,1,2,2-TeCA, PCE and TCE), as shown on Figure 5, indicates that

[7] By-products (and their treatment) were observed at the Eastland Woolen Mill Superfund Site in Corinna, Maine.
[8] Kaberdin and Potkin 1994. *Trichloroethylene in Organic Synthesis*, Russian Chemical Reviews, 63(8) 641-659.

despite the formation of some 1,1,2,2-TeCA, the majority of the TCE mass was destroyed with the oxidant treatment.

Measurements of pH and oxidation reduction potential (Appendix A, Table A-6) confirmed that favorable geochemical conditions were maintained throughout the test duration. Additionally, less than 40% of the applied persulfate was utilized (including SOD and target demand) by Day 45 (Table 5), suggesting that the longevity of the persulfate for both activation mechanisms would be adequate to continue reacting with the target mass and that additional reaction would likely have taken place had additional contact time between the oxidant and VOCs been allowed. This residual persulfate is accounted for when developing the degradation ratio.

A comparison of the degradation ratios (i.e., the mass of oxidant utilized relative to the mass of VOCs degraded) developed during the injection simulation tests (Table 5) indicates that ratios for iron-activation and unactivated persulfate are very similar and range between 5 and 7 milligrams (mg) oxidant utilized per mg VOCs degraded. There was not a significant difference, if any, in the degradation ratios for the "low" and the "high" simulations. The observed ratios include the persulfate required for the SOD, persulfate consumed during the auto-decomposition, and any reactions that occurred after the majority of VOCs had been treated. Persulfate required for the SOD and auto-decomposition are expected to be independent of the VOC mass.

4.2 METALS MOBILIZATION

The assessment of potential metals mobilization was accomplished through analyses of groundwater samples for dissolved and total metals prior to and after the addition of persulfate (both iron-activated and unactivated persulfate forms were tested). The goal was to allow sufficient contact time (for this test eight days elapsed) of the oxidant with the soil to represent a worst-case scenario for the mobilization of metals from soils due to temporarily altered geochemical conditions.

The test was conducted by adding the equivalent of 1 pore volume (102 mL) of ~130 g/L iron-activated persulfate and unactivated persulfate solution to reactors containing 400 grams of composited soil. The controls consisted of soil and distilled water only. This test was run with triplicate reactors: duplicate reactors for laboratory analysis and a single reactor for in-house measurements of pH, ORP, and residual oxidant. After eight days of reaction time, the aqueous portion of each reactor was decanted and filtered into a

laboratory container. The volume of each sample was increased, using distilled water, to provide sufficient volume (approximately 120 mL) for the laboratory analysis (Note that prior to initiation of the test, the baseline data, Table A-3, was evaluated to determine the minimum amount of soil necessary for use in the testing to ensure laboratory results would be above reporting limits once the sample was diluted).

As a result of the altered geochemical environment, most metals (Table 6) increased one to two orders of magnitude in concentration relative to the baseline and controls during both iron-activated and unactivated persulfate tests; the higher increases were consistently observed in the iron-activated reactors. Based on natural geochemistry reactions, metals concentrations are expected to return to near baseline conditions once the geochemical conditions return to normal following the field application.[9]

5.0 RECOMMENDATIONS

Results of the bench-scale evaluation support the use of either iron-activated or unactivated persulfate as effective treatment options for the COCs present at Site 17, and XDD recommends that ISCO be advanced to the field-scale as the target area remediation technology. Feasibility Study costing estimates are required to determine which of the two activation mechanisms is most appropriate for this site. Additionally, proper implementation of the ISCO technology (or any treatment technology) would require consideration of the soil types and COC mass distribution in order to achieve remediation success at the site. Based on distribution of COCs in the tight clay soils, two potential implementation options (discussed in Section 4.0) include:

- Injection of a relatively low oxidant concentration over multiple applications to target COCs diffusing into the sandy intervals from the less permeable zones; and
- Application of a single higher oxidant concentration into the clay using soil mixing equipment to achieve direct contact.

Based on the results of this evaluation, XDD recommends field evaluation of either implementation approach. Given the relatively high COC mass suspected in the target area and the relatively low TCE target cleanup goal of 250 μg/L, either implementation method may require follow up applications, based on longer-term monitoring of the target area following the initial application.

[9] Crimi, M.L. and R.L. Siegrist, Geochemical effects on metals following permanganate oxidation of DNAPLs, *Ground Water*, July/August 2003, vol 41, no. 4, pg. 458.

Diffusion-Based Remediation

- Sodium Persulfate Concentration: XDD recommends a multiple application strategy involving persulfate injection concentrations of approximately 70 g/L. The length of time between applications would be dependent on the persistence of the persulfate, which would be determined by the utilization of persulfate for target and non-target demand in addition to dilution due to groundwater flow at the site.
- Injection Well Configuration: Oxidant should be applied through DPT points so that specific intervals could be easily targeted. Depending on the thickness of the sand layers encountered, the radius of influence could be expected to range from 5 to 10 feet.

Direct Contact-Based Remediation

- Sodium Persulfate Concentration: XDD recommends a persulfate application concentration of approximately 160 g/L for a soil mixing implementation approach.
- Soil Mixing Tooling: XDD recommends the use of Lang Tool Company's in-situ soil blender (or similar) to apply the oxidant to the target area. This tool attaches to an excavator and can be easily maneuvered at a site to address different areas and/or depths. The non-target soil could be removed from the top and stockpiled until the mixing was complete. Oxidant solution is applied to the soil through the tool device. If needed, the soil mixing could be applied to a portion of the target area, with injection through DPT points in the rest of the area. Additionally, once the soil is mixed, if follow up applications are required for hot spot treatment/focus, DPT points could be used to inject into the previously mixed areas.

Combination of Diffusion- and Direct Contact-Based Remediation

- This approach would include the direct contact-based implementation for the most contaminated area combined with the diffusion-based implementation on the outer edges of the target area.

TABLES

Table 1A
Baseline Assessment and Preliminary Tests
Site 17, Indian Head, Maryland

Mass Distribution Profiling	Samples	Sample Type	Analysis
Assume four 10-to 15-foot cores (boreholes); up to five samples per core => 20 samples			
	20	soil	VOCs (8260B)

Baseline Analysis		Samples	Sample Type	Analysis
Grain Size	Composite	1	soil	Grain Size (ASTM D422)
VOCs (unspiked, composited)	Composite	2	soil	VOCs (8260B)
	Groundwater	2	water	VOCs (8260B)
Metals (composited)	Composite	2	soil	Total Metals (SW-846 6020/7471)
	Groundwater	2	water	Total Metals (SW-846 6020/7470A)
	Groundwater	2	water	Dissolved Metals (SW-846 6020/7470A)

Preliminary Persulfate Activation Test		Reactors	Sample Type	Analysis
Baseline (spiked)		1	soil	VOCs (8260B)
Alkaline-Activation	Application 1	1	soil	VOCs (8260B)
	Control	1	soil	VOCs (8260B)
Iron-Activation	Application 1	1	soil	VOCs (8260B)
	Control	1	soil	VOCs (8260B)
Unactivated	Application 1	1	soil	VOCs (8260B)
	Control	1	soil	VOCs (8260B)

Notes:
VOCs = volatile organic compounds
ASTM = American Society for the Testing and Materials
A single application of reagent solutions was applied to reactors to evaluate the relative effectiveness of the activation methods.
Reactors were analyzed after 14 days of contact.

Table 1B
Iron-Activated Persulfate Evaluation Structure
Site 17, Indian Head, Maryland

Injection Simulation		Reactors	Sample Type	Analysis
Baseline (Spiked)		2	soil	VOCs (8260B)
Control	Application 1/ Time Point 1	2	soil	VOCs (8260B)
	Application 3/ Time Point 2	2 1	soil water	VOCs (8260B) VOCs (8260B)
High Oxidant Concentration[1]	Time Point 1 (Day 13)	2	soil	VOCs (8260B)
	Time Point 2 (Day 45)	2 1	soil water	VOCs (8260B) VOCs (8260B)
Low Oxidant Concentration[2]	Application 1	2	soil	VOCs (8260B)
	Application 3	2 1	soil water	VOCs (8260B) VOCs (8260B)

Metals Mobilization	Reactors	Sample Type	Analysis
Control	2	water	Total/Dissolved Metals (SW-846 6020/7470A/7471)
High Oxidant Concentration[3]	2	water	Total/Dissolved Metals (SW-846 6020/7470A/7471)

Notes:
[1] High oxidant loading concentrations were implemented to emulate a single application mixing strategy. Oxidant was applied at time = 0, and reactors were analyzed at two timepoints.
[2] Low oxidant loading concentrations were implemented to simulate a multiple injection strategy. Three oxidant applications were simulated, and reactrs were analyzed following the first and third applications.
[3] High was selected to create most extreme case scenario.
VOCs = volatile organic compounds
Application 1 = First application of reagent solutions (analyzed after 13 days of contact); a second oxidant application was added on Day 14.

Table 1C
Unactivated Persulfate Evaluation Structure
Site 17, Indian Head, Maryland

Injection Simulation		Reactors	Sample Type	Analysis
Baseline (spiked)		2	soil	VOCs (8260B)
Control	Application 1/ Time Point 1	2	soil	VOCs (8260B)
	Application 3/ Time Point 2	2 1	soil water	VOCs (8260B) VOCs (8260B)
High Oxidant Concentration[1]	Time Point 1 (Day 13)	2	soil	VOCs (8260B)
	Time Point 2 (Day 45)	2 1	soil water	VOCs (8260B) VOCs (8260B)
Low Oxidant Concentration[2]	Application 1	2	soil	VOCs (8260B)
	Application 3	2 1	soil water	VOCs (8260B) VOCs (8260B)

Metals Mobilization	Reactors	Sample Type	Analysis
Control	2	water	Total/Dissolved Metals (SW-846 6020/7470A/7471)
High Oxidant Concentration[3]	2	water	Total/Dissolved Metals (SW-846 6020/7470A/7471)

Notes:
[1] High oxidant loading concentrations were implemented to emulate a single application mixing strategy. Oxidant was applied at time = 0, and reactors were analyzed at two timepoints.
[2] Low oxidant loading concentrations were implemented to simulate a multiple injection strategy. Three oxidant applications were simulated, and reactrs were analyzed following the first and third applications.
[3] High was selected to create most extreme case scenario.
VOCs = volatile organic compounds
Application 1 = First application of reagent solutions (analyzed after 13 days of contact); a second oxidant application was added on Day 14.
Application 3 = Third application of reagent solutions added after 28 days of contact (analyzed after 45 days of contact)

Table 2
Mass Profiling Results Summary
Site 17, Indian Head, Maryland

Boring Name and Depth (ft bgs)	TCE Concentration (mg/Kg)	Notes
IS17DP64-10.75	7	SAND at soil interface; elevated PID reading
IS17DP64-11.00	170	CLAY just below soil interface
IS17DP64-13.75	200	SANDY CLAY – mini concentration profile across three soil types
IS17DP64-14.1	110	SAND – mini concentration profile across three soil types
IS17DP64-15	220	CLAY – mini concentration profile across three soil types
IS17DP64-16	18	CLAY – mini concentration profile across three soil types
IS17DP66-8.8	5	SANDY CLAY – mid interval
IS17DP66-10.5	6	CLAY – concentration in clay with sand strings
IS17DP66-11.5	4	CLAY – concentration in clay lens within SAND layer
IS17DP67-8.25	350	SAND – elevated PID reading
IS17DP67-10.25	65	CLAY – interface with elevated PID reading in sand above
IS17DP67-11.75	44	SAND – interface with clay
IS17DP67-12.25	12,000	CLAY – elevated PID reading at interface with sand
IS17DP67-14.5	140	CLAY – elevated PID reading
IS17DP67-17.5	160	CLAY – elevated PID reading
IS17DP68-11	6	SANDY CLAY – confirm PID reading (0 ppmv)
IS17DP68-14.5	86	CLAY – mini concentration profile at mid interval
IS17DP68-15.5	110	CLAY – mini concentration profile
IS17DP68-15.75	110	CLAY – mini concentration profile at interface with sandy clay
IS17DP68-19.5	20	CLAY – elevated PID readings at the base of the core

Notes:
All references to IS17DP64 laboratory sample ID is for the soil boring IS17DP64B.
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
TCE = trichloroethene
PID = photoionization detector
ppmv = parts per million vapor

Table 3
Persulfate Soil Oxidant Demand Test Results
Site 17, Indian Head, Maryland

Reactors	Time (days)	Soil Oxidant Demand (grams of oxdiant per Kilogram of soil)			
		Sand		Clay	
		Iron-Activated	Unactivated	Iron-Activated	Unactivated
50 g/L	1	3	6	8	8
	7	14	8	24	15
	14	15	6	18	10
	30	21	11	22	14
200 g/L	1	42	22	51	42
	7	53	20	65	34
	14	71	23	69	37
	30	75	28	69	32

Notes:
g/L = grams per liter
Reagent solution concentrations are based on 1 pore volume (5.1 milliliters) and 20 grams of soil.

Table 4
Permanganate Soil Oxidant Demand Test Results
Site 17, Indian Head, Maryland

Reactors	Time (days)	Soil Oxidant Demand (g oxdiant/Kg soil)	
		Sand	Clay
5 g/L	1	>4.0	>3.8
	7	>4.4	>4.4
	14	>3.8	>3.7
	30	>4.2	>4.2
20 g/L	1	8	7
	7	14	12
	14	15	13
	30	14	13

Notes:
g/L = grams per liter
Reagent solution concentrations are based on 1 pore volume (5.1 milliliters) and 20 grams of soil.

Table 5
Persulfate Degradation Ratios
Site 17, Indian Head, Maryland

Technology	Applied Persulfate Concentration (g/L)	Approximate Mass of Persulfate Added (mg)	Mass of Persulfate Utilized (mg)	Mass of Persulfate Utilized (%)	Mass of VOCs[1] Degraded (mg)	Degradation Ratio[2] (mg Persulfate / mg VOCs)
Iron-Activated Persulfate	~40 - 70	2,300	826	36	134	**6**
	~170	2,180	812	37	132	**6**
Unactivated Persulfate	~40 - 70	2,280	531	23	97	**5**
	~170	2,270	756	33	116	**7**

Notes:
mg = milligrams
VOCs = volatile organic compounds - calculated using trichloroethene only
[1] Mass of VOC degraded based on 52 grams soil
[2] Degradation ratio = (Mass of Persulfate Utilized) / (Mass of VOCs Degraded)
1 pore volume = 13.2 milliliters
Calculations are based on measurements following 45 days of contact.

Table 6
Metals Mobilization Test - Dissolved and Total Metals in Water
Site 17, Indian Head, Maryland

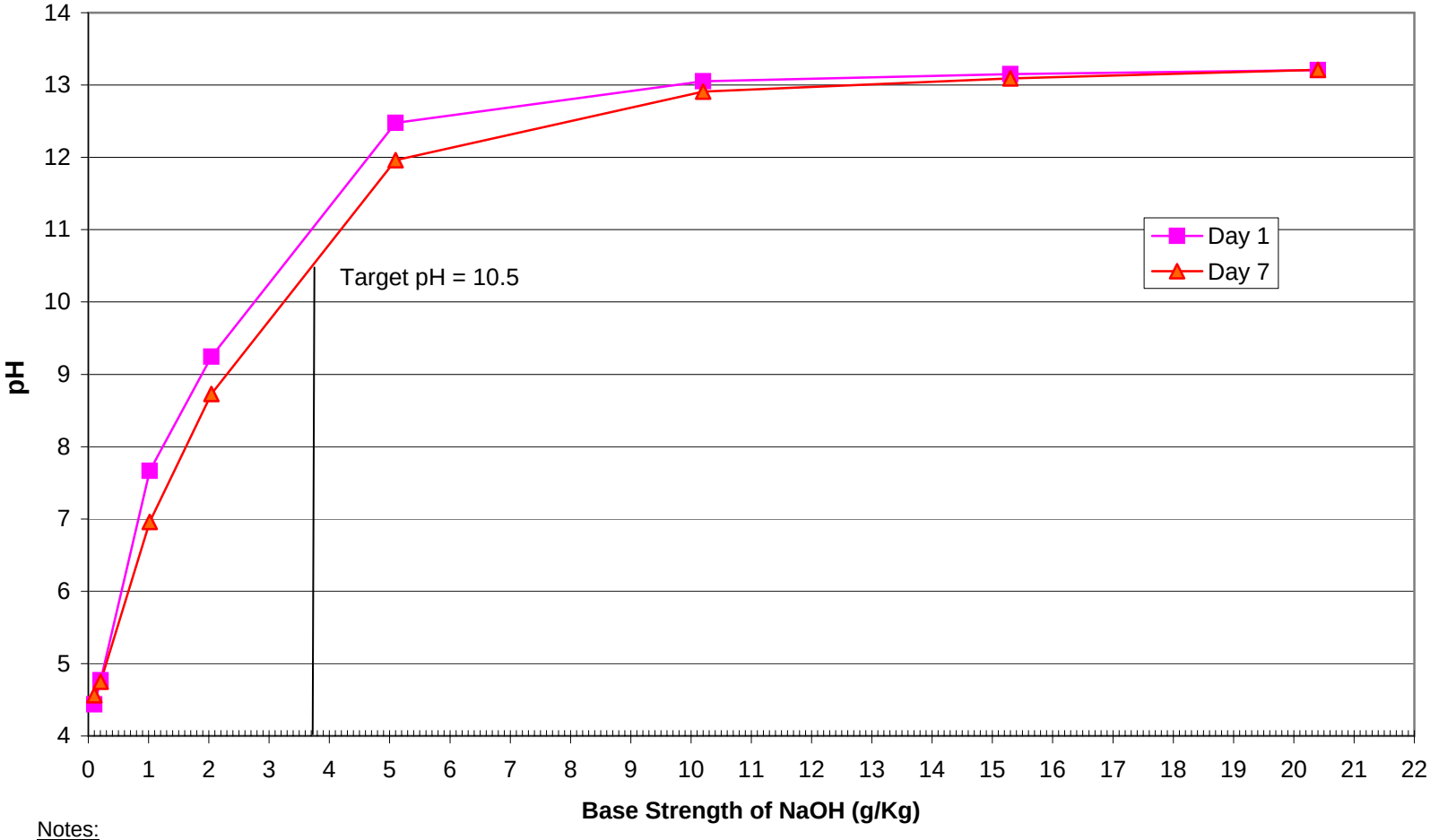
Dissolved Metals (µg/L)	Control			Iron-Activated Persulfate				Unactivated Persulfate			
	Control 1	Control 2	Average	FP-1	FP-2	Average	% Change[1]	UP-1	UP-2	Average	% Change[1]
Antimony	1.0 U	1.0 U	1.0 U	38	37	38	3,650	4.0 U	4.0 U	4.0 U	N/C
Arsenic	5.0 U	5.0 U	5.0 U	230	230	230	4,500	20 U	20 U	20 U	N/C
Beryllium	32	30	31	230	270	250	706	170	150	160	416
Cadmium	11	12	11.5	64	79	72	522	38	33	36	209
Chromium	3.8	3.4	3.6	1,800	2,100	1,950	54,067	200	170	185	5,039
Copper	100	110	105	3,100	3,300	3,200	2,948	1,200	1000	1,100	948
Lead	12	10	11	1,400	1,400	1,400	12,627	270	230	250	2,173
Mercury	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	N/C	0.54	0.38	0.46	130
Nickel	570	570	570	2,800	3,200	3,000	426	1,600	1,400	1,500	163
Selenium	5.0 U	5.0 U	5.0 U	40 U	40 U	40 U	N/C	20 U	20 U	20 U	N/C
Silver	1.0 U	1.0 U	1.0 U	8 U	8 U	8.0 U	N/C	4 U	4 U	4 U	N/C
Thallium	1.0 U	1.0 U	1.0 U	8 U	8 U	8.0 U	N/C	4 U	4 U	4 U	N/C
Zinc	730	750	740	7,300	8,200	7,750	947	2,100	1,900	2,000	170

Total Metals (µg/L)	Control			Iron-Activated Persulfate				Unactivated Persulfate			
	Control 1	Control 2	Average	FP-1	FP-2	Average	% Change[1]	UP-1	UP-2	Average	% Change[1]
Antimony	2.0	1.0	1.5	39	33	36	2,300	4.0 U	4.0 U	4.0 U	N/C[2]
Arsenic	5.0 U	5.0 U	5.0 U	210	190	200	3,900	20 U	20 U	20 U	N/C
Beryllium	35	29	32	240	230	235	634	170	150	160	400
Cadmium	11	9.8	10	64	67	66	530	36	31	34	222
Chromium	4.7	4.5	4.6	1,800	1,800	1,800	39,030	190	160	175	3,704
Copper	110	90	100	3,000	2,900	2,950	2,850	1,000	860	930	830
Lead	12	9.0	11	1,300	1,200	1,250	11,805	220	180	200	1,805
Mercury	0.20 U	0.20 U	0.20 U	0.51	0.29	0.40	100	0.38	0.29	0.34	68
Nickel	570	510	540	2,800	2,800	2,800	419	1,500	1,300	1,400	159
Selenium	5.0 U	5.0 U	5.0 U	40 U	40 U	40 U	N/C	20 U	20 U	20 U	N/C
Silver	1.0 U	1.0 U	1.0 U	8.0 U	8.0 U	8.0 U	N/C	4.0 U	4 U	4.0 U	N/C
Thallium	1.0 U	1.0 U	1.0 U	8.0 U	8.0 U	8.0 U	N/C	4.0 U	4 U	4.0 U	N/C
Zinc	660	600	630	7,000	7,000	7,000	1,011	1,900	1,700	1,800	186

Notes:
µg/L = micrograms per liter
U = compound was not detected at the indicated concentration
N/C = not calculated because both results were below detection limits.
[1] Percentage increase (+) or decrease (-) in average concentration compared to control
[2] The change in concentration is represented as N/C because the detection limit of the treated sample was greater than the detection of arsenic in the control.
The controls contained soil and distilled water.
Reactors were analyzed after 8 days of contact.
Reagent solution concentrations are based on 1 pore volume (102 milliliters) in 400 grams of soil.
Baseline metals data for soil and groundwater is presented in Table A-3 in Appendix A.

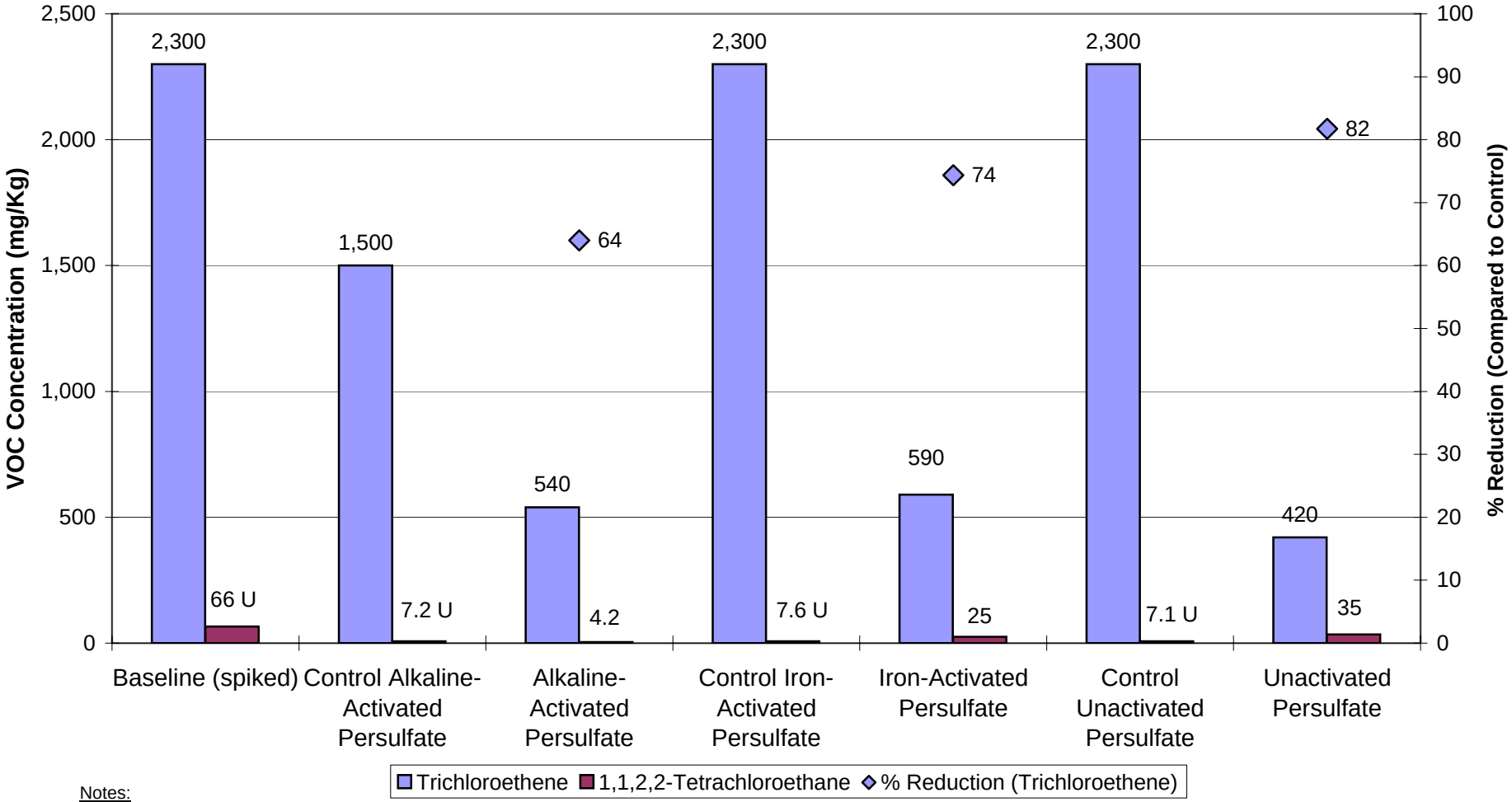
FIGURES

Figure 1
Alkaline-Activated Persulfate Base Buffering Capacity Test
Site 17, Indian Head, Maryland



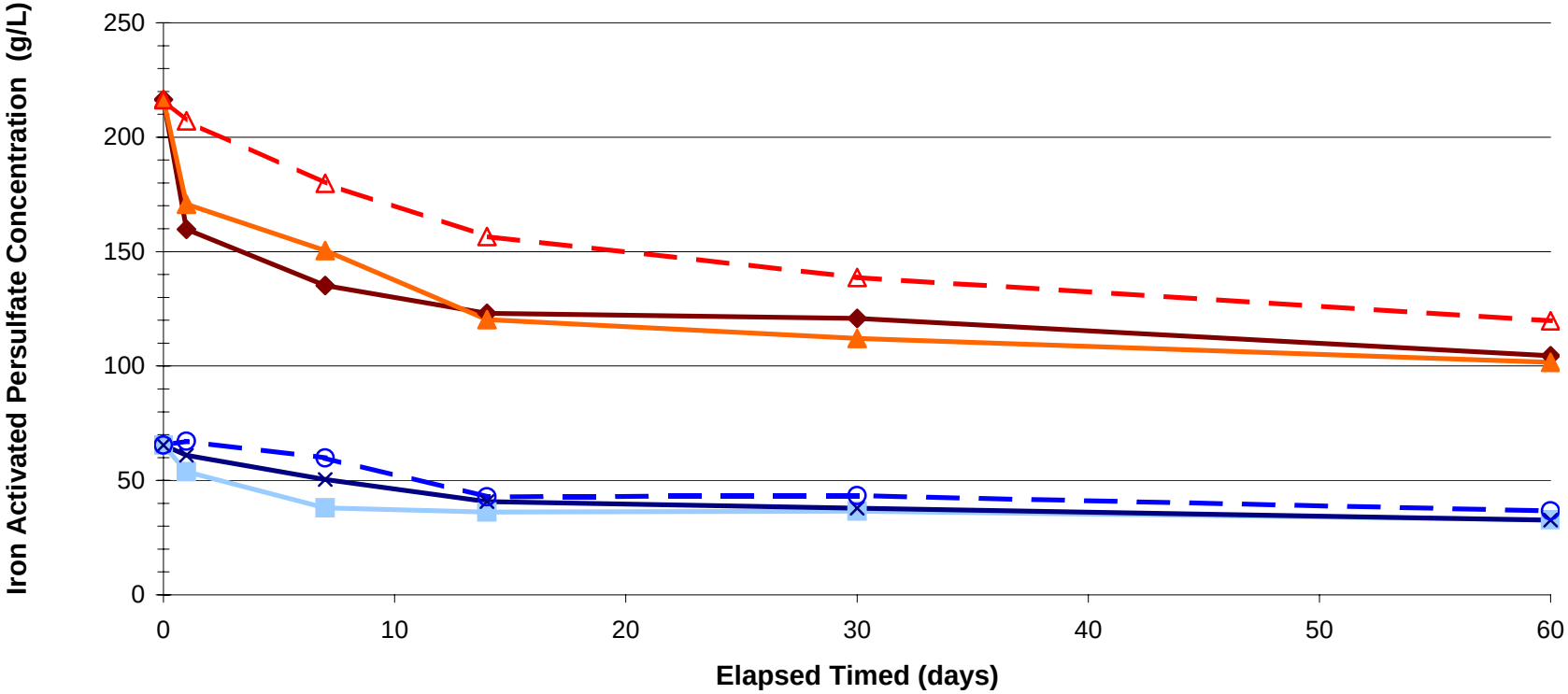
Notes:
NaOH = sodium hydroxide
g/Kg = grams NaOH per kilogram soil
Reagent solution concentrations are based on 1 pore volume (5.1 milliliters) and 20 grams of soil.

Figure 2
Preliminary Persulfate Test Results
Site 17, Indian Head, Maryland



Notes:
mg/Kg = milligrams per Kilogram
U = not detected at the indicated concentration
Controls contained soil, water and activator reagents only.
Reagent solution concentrations (~70 g/L) are based on one pore volume (15.3 milliliters) in 60 grams of soil.
Reactors were analyzed after 14 days of contact time.
Refer to Table A-4 for complete data set.

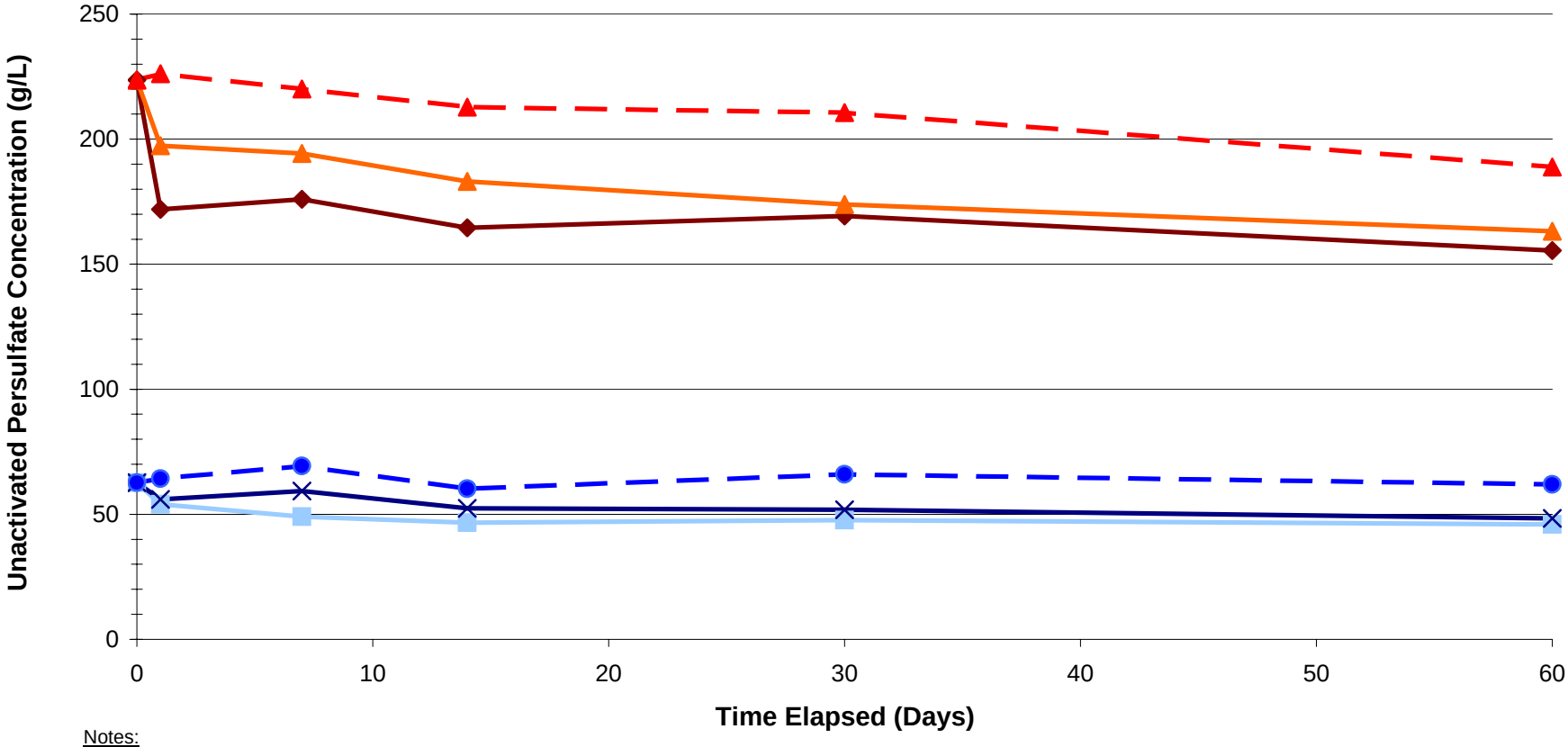
Figure 3A
Iron-Activated Persulfate Stability Test
Site 17, Indian Head, Maryland



Notes:
g/L = grams per liter
The control reactors contained no soil.
Reagent solution concentrations are based on one pore volume (5.1 milliliters) and 20 grams of soil.

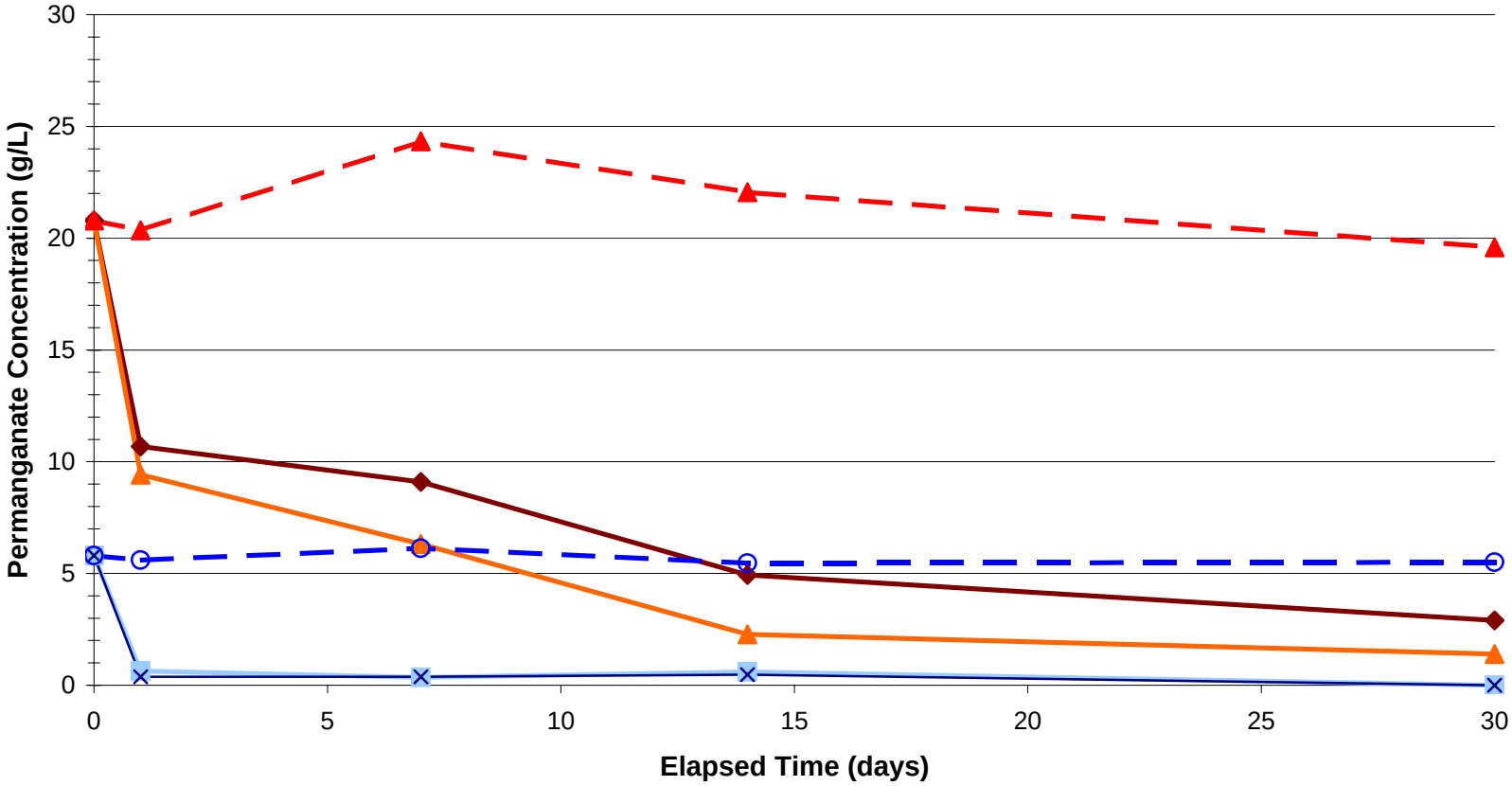
High Conc. Clay	Low Conc. Clay
High Conc. Sand	Low Conc. Sand
High Conc. Control	Low Conc. Control

Figure 3B
Unactivated Persulfate Stability Test
Site 17, Indian Head, Maryland



Notes:
g/L = grams per liter
The control reactors contained no soil.
Reagent solution concentrations are based on one pore volume (5.1 milliliters) and 20 grams of soil.

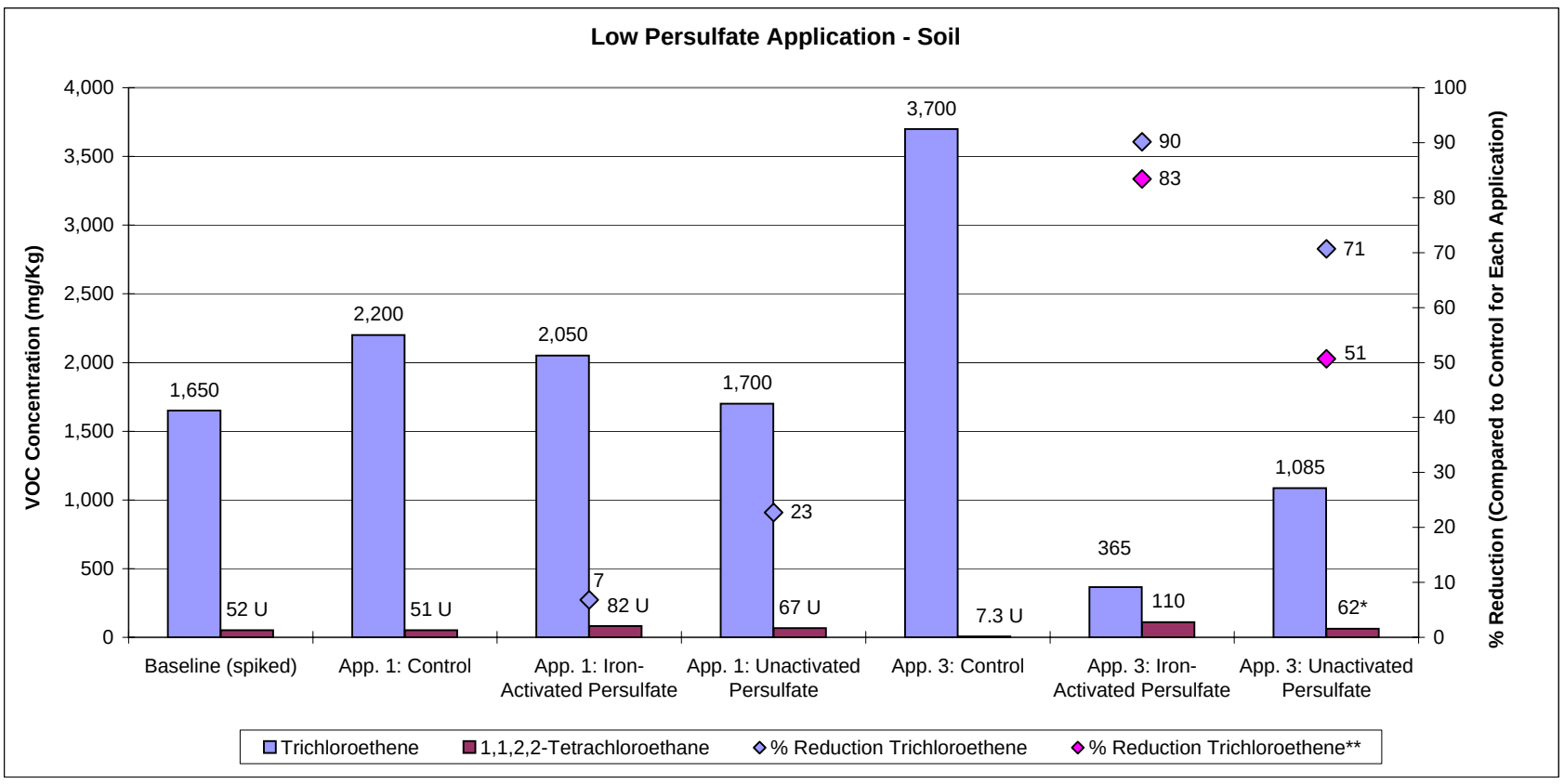
Figure 3C
Permanganate Stability Test
Site 17, Indian Head, Maryland

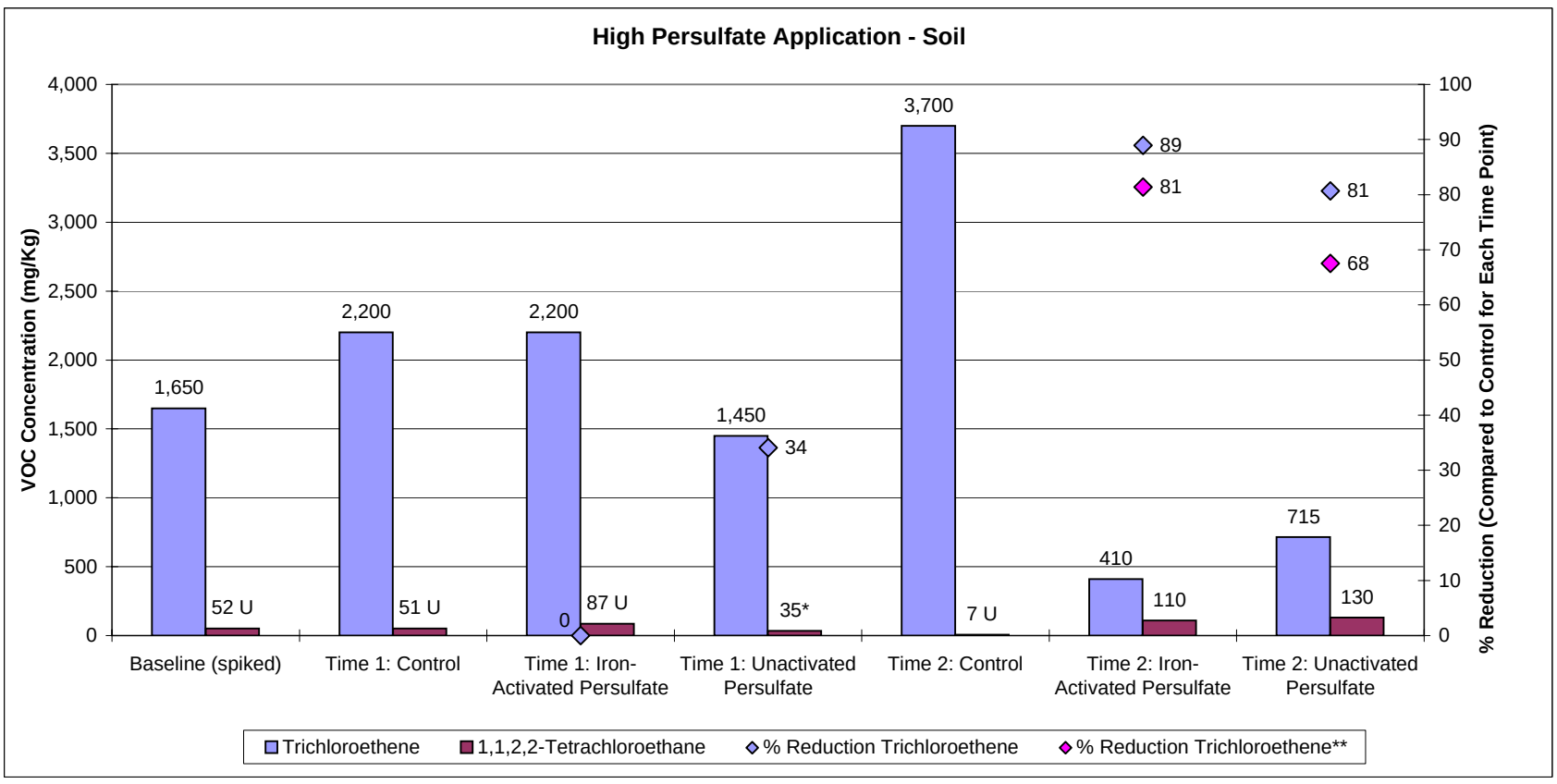


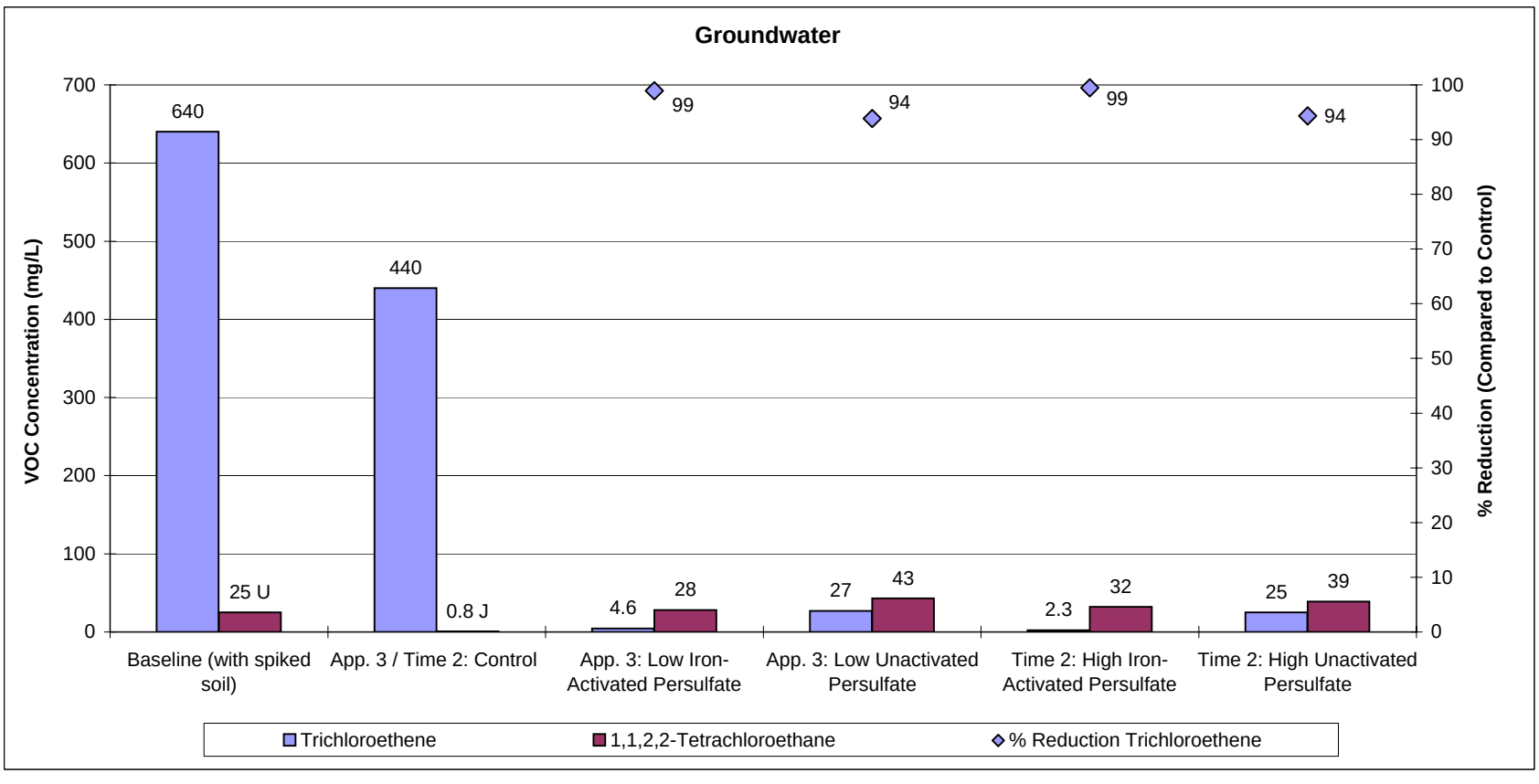
Notes:
g/L = grams per liter
The control reactors contain no soil.
Reagent solution concentrations are based on one pore volume (5.1 milliliters) and 20 grams of soil.

High Conc. Clay	Low Conc. Clay
High Conc. Sand	Low Conc. Sand
High Conc. Control	Low Conc. Control

Figure 4
Persulfate Injection Simulation Test: VOC Results Summary
Site 17, Indian Head, Maryland

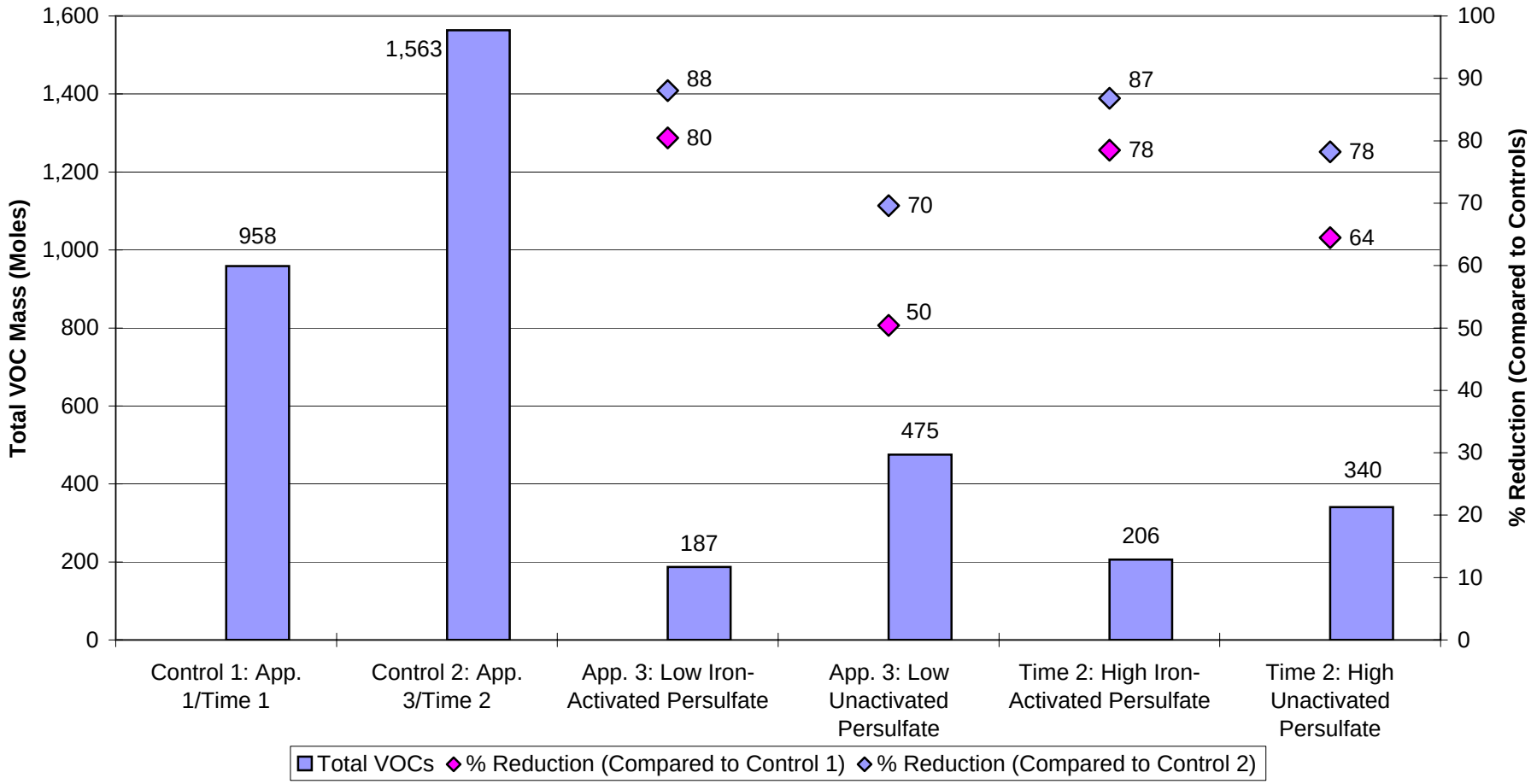






Notes:
mg/Kg = milligrams per kilogram; mg/L = milligrams per liter; g/L = grams per liter; J = estimated concentration; U = not detected at the indicated concentration
* = indicates average includes dissimilar laboratory qualifiers (i.e., if one value requires a U qualifer and the other value does not, then the average is qualified with a *)
** = Due to the high variability in the App. 3/Time 2 Control samples (i.e., TCE ranged from 1,300 to 6,100 mg/L), comparison of treated reactors to the App. 1/Time 1 Control is considered most representative.
The control reactors contained soil and water only.
Low = ~40-70 g/L persulfate for each of a total of three applications to simulate three injection events.
App. 1 = first application of reagent solutions (analyzed after 13 days of contact); App. 3 = third application of reagent solutions (analyzed after 45 days of contact).
High = one application at ~170 g/L persulfate to simulate an in-situ mixing strategy.
Time 1 = analyzed after 13 days of contact, Time 2 = analyzed after 45 days of contact.
Reagent solution concentrations are based on 1 pore volume (13.2 milliliters) and 52 grams of soil.
Average concentrations are shown; refer to Table A-5 for the complete data set.

Figure 5
Persulfate Injection Simulation Test: Mass Balance
Site 17, Indian Head, Maryland



Notes:
Calculations are based on results of the persulfate injection simulation test (Table A-5 and Figure 4).
Values shown are calculated from the average of each duplicate set using trichloroethene (TCE), tetrachloroethene, cis-1,2-dichloroethene and 1,1,2,2-tetrachloroethane data.
Due to high variability in the Control 2 samples (i.e., TCE ranged from 1,300 to 6,100 mg/L), comparison of treated reactors to Control 1 is considered most representative.

APPENDIX A

Supporting Data Tables

Table A-1
Soil Mass Profiling Analytical Data
Site 17, Indian Head, Maryland

Compound	Soil Boring Location and Sample Depths (ft bgs)																			
	IS17DP64B						IS17DP66			IS17DP67						IS17DP68				
	11	10.75	13.75	14.1	15	16	8.8	10.5	11.5	8.25	10.25	11.75	12.25	14.5	17.5	11	14.5	15.5	15.75	19.5
cis-1,2-Dichloroethene	**13**	**2.5**	**10**	**6.4**	**5.1**	**0.4**	**4.3**	**3.1**	**0.9**	**13**	**2.2**	**1.0**	83 U	**8.0**	**6.5**	**1.1**	**5.5**	**4.0**	**3.7**	**0.7**
trans-1,2-Dichloroethene	0.9 U	0.1 U	1.8 U	**0.7**	1 U	0.2 U	1 U	0.1 U	0.1 U	0.9 U	**0.5**	0.4 U	83 U	0.5 U	0.5 U	1 U	0.5 U	**1.2**	0.9 U	**0.2**
Trichloroethene (TCE)	**170**	**6.5**	**200**	**110**	**220**	**18**	**4.6**	**6.2**	**4.0**	**350**	**65**	**44**	**12,000**	**140**	**160**	**5.7**	**86**	**110**	**110**	**20**

Notes:
All soil concentrations are reported as milligrams per kilogram (mg/Kg)
ft bgs = feet below ground surface
U = not detected at the indicated concentration

Table A-2
Baseline VOC Analytical Data
Site 17, Indian Head, Maryland

Compound	Soil (mg/Kg)			Water (mg/L)		
	Baseline 1	Baseline 2	Average	Baseline 1	Baseline 2	Average
cis-1,2-Dichloroethene	0.014	0.013	0.014	58	58	58
Tetrachloroethene	0.0079	0.0071	0.0075	10 U	10 U	10 U
Trichloroethene	2.1	1.2	1.65	400	410	405

Notes:
mg/Kg = milligrams per kilogram
mg/L = milligrams per Liter
U = not detected at the indicated concentration
Samples were collected from unspiked, composited soil.

Table A-3
Baseline Metals in Soil and Groundwater
Site 17, Indian Head, Maryland

Metal	Soil (mg/Kg)			Dissolved Metals in Groundwater (µg/L)			Total Metals in Groundwater (µg/L)		
	Baseline 1	Baseline 2	Average	Baseline 1	Baseline 2	Average	Baseline 1	Baseline 2	Average
Antimony	0.078	0.06 U	0.069*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Arsenic	1.6	1.5	1.55	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Beryllium	0.56	0.82	0.69	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	0.059 U	0.075	0.067*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chromium	6.9	7.7	7.3	1.0 U	1.1	1.05*	1.0 U	1.0 U	1.0 U
Copper	8.6	8.8	8.7	9.5	8.3	8.9	22	19	21
Lead	6.7	7.4	7.1	1.0 U	1.0 U	1.0 U	1.2	1.0 U	1.1*
Mercury	0.024 U	0.024 U	0.024 U	0.20 U	0.20 U	0.20 U	0.20	0.20 U	0.20*
Nickel	8.4	10	9.2	2.7	3.6	3.2	4.9	3.9	4.4
Selenium	0.29 U	0.3 U	0.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	0.065	0.06 U	0.063*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Thallium	0.067	0.06 U	0.064*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Zinc	23	28	25.5	26	37	31.5	22	22	22

Notes:
mg/Kg = milligrams per kilogram
µg/L = micrograms per Liter
U = compound was analyzed for but not detected at the indicated concentration
* = indicates average includes dissimilar laboratory qualifiers (i.e., if one value requires a U qualifer and the other value does not, then the average is qualified with a *)
Baseline soil samples were collected from unspiked, composited soil.

Table A-4
Preliminary Persulfate Test Analytical Data
Site 17, Indian Head, Maryland

Compound	Spiked Baseline Soil (mg/Kg)	Alkaline-Activated Persulfate Soil (mg/Kg)		Iron-Activated Persulfate Soil (mg/Kg)		Unactivated Persulfate Soil (mg/Kg)	
		Control	Treated	Control	Treated	Control	Treated
cis-1,2-Dichloroethene	66 U	71 U	35 U	72 U	35 U	76 U	14 U
1,1,2,2-Tetrachloroethane	66 U	7.1 U	4	7.2 U	25	7.6 U	35
Tetrachloroethene	66 U	71 U	35 U	72 U	35 U	76 U	14 U
Trichloroethene	2,300	1,500	540	2,300	590	2,300	420

Notes:
mg/Kg = milligrams per kilogram
U = not detected at the indicated concentration
Controls contained soil, water, and activator reagents only.
Reagent solution concentrations (~70 g/L) are based on 1 pore volume (15.3 milliliters) and 60 grams of soil.
Reactors were analyzed after 14 days of contact.

Table A-5
Persulfate Injection Simulation Test Analytical Data
Site 17, Indian Head, Maryland

Compound	BASELINE (spiked)				CONTROL						
	Soil (mg/Kg)			Water (mg/L)	Soil (mg/Kg)						Water (mg/L)
	Baseline	Baseline Dupe	Average		App. 1/Time 1	App. 1/Time 1 Dupe	Average	App. 3/Time 2	App. 3/Time 2 Dupe	Average	App. 3/Time 2
cis-1,2-Dichloroethene	69 U	34 U	52 U	30	70 U	32 U	51 U	23	19	21	15
1,1,2,2-Tetrachloroethane	69 U	34 U	52 U	25 U	70 U	32 U	51 U	14 U	0.68 U	7.3 U	0.78 J
Tetrachloroethene	69 U	34 U	52 U	25 U	70 U	32 U	51 U	14 U	0.68 U	7.3 U	10 U
Trichloroethene	1,600	1,700	1,650	640	2,500	1,900	2,200	1,300	6,100	3,700	440

Compound	LOW IRON-ACTIVATED PERSULFATE							LOW UNACTIVATED PERSULFATE						
	Soil (mg/Kg)						Water (mg/L)	Soil (mg/Kg)						Water (mg/L)
	App. 1	App. 1 Dupe	App. 3	App. 3 Dupe	Average App. 1	Average App. 3	App. 3	App. 1	App. 1 Dupe	App. 3	App. 3 Dupe	Average App. 1	Average App. 3	App. 3
cis-1,2-Dichloroethene	33 U	130 U	7 U	14 U	82 U	11 U	0.4 U	34 U	100 U	14 U	23	67 U	19 *	2 U
1,1,2,2-Tetrachloroethane	33 U	130 U	100	120	82 U	110	28	34 U	100 U	110	14 U	67 U	62 *	43
Tetrachloroethene	33 U	130 U	7 U	14	82 U	11 *	0.4 U	34 U	100 U	16	14 U	67 U	15 *	2 U
Trichloroethene	1,300	2,800	160	570	2,050	365	4.6	1,400	2,000	270	1,900	1,700	1,085	27

Compound	HIGH IRON-ACTIVATED PERSULFATE							HIGH UNACTIVATED PERSULFATE						
	Soil (mg/Kg)						Water (mg/L)	Soil (mg/Kg)						Water (mg/L)
	Time 1	Time 1 Dupe	Time 2	Time 2 Dupe	Average Time 1	Average Time 2	Time 2	Time 1	Time 1 Dupe	Time 2	Time 2 Dupe	Average Time 1	Average Time 2	Time 2
cis-1,2-Dichloroethene	33 U	140 U	13 U	14 U	87 U	14 U	2 U	33 U	33 U	14 U	14 U	33 U	14 U	2 U
1,1,2,2-Tetrachloroethane	33 U	140 U	120	100	87 U	110	32	36	33 U	120	140	35 *	130	39
Tetrachloroethene	33 U	140 U	17	12 J	87 U	15 *	2 U	33 U	33 U	20	22	33 U	21	2 U
Trichloroethene	1,600	2,800	480	340	2,200	410	2.3	1,700	1,200	710	720	1,450	715	25

Notes:
mg/Kg = milligrams per kilogram
mg/L = milligrams per liter
J = estimated concentration below the laboratory's normal reporting limit
U = not detected at the indicated concentration
* = indicates dissimilar laboratory qualifiers (i.e., If one qualifier is J and the other is U, then it is represented by *); values were averaged
Controls contained soil and water reagents only.
Low = ~40-70 grams per liter (g/L) persulfate for each of a total of three applications to simulate three injection events.
App. 1 = first application of reagent solutions (analyzed after 13 days of contact), App. 3 = third application of reagent solutions (analyzed after 45 days of contact).
High = one application at ~170 g/L persulfate to simulate an in-situ mixing strategy.
Time 1 = analyzed after 13 days of contact, Time 2 = analyzed after 45 days of contact.
Reagent solution concentrations are based on 1 pore volume (13.2 mL) and 52 grams of soil.
In addition to the compounds listed in the table, the following compounds were detected: acetone was detected in the iron-activated Low App. 3 and High Time 2 aqueous samples at 35 and 48 mg/L, respectively; trans-1,2-dichloroethene was detected in the Control Dupe soil sample at 0.16 J mg/Kg; 1,1,1-trichloroethane was detected in the Control Dupe soil sample at 0.63 J mg/Kg; 1,1,2-trichloroethane was detected in the unactivated persulfate Low App. 3 and High Time 2 aqueous samples at 0.2 J and 0.14 J mg/L, respectively.

Table A-6
Persulfate Injection Simulation Test
pH and Oxidation Reduction Potential Data
Site 17, Indian Head, Maryland

pH

Date	Time Elapsed (Days)	Control	Iron-Activated		Unactivated	
			Low	High	Low	High
6/29/2007	28	3.8	1.9	1.9	2.1	2.0
7/16/2007	45	3.6	1.6	1.7	1.8	1.7

Oxidation Reduction Potential (mV)

Date	Time Elapsed (Days)	Control	Iron-Activated		Unactivated	
			Low	High	Low	High
6/29/2007	28	432	698	666	644	670
7/16/2007	45	309	690	662	677	694

Notes:
ORP = oxidation reduction potential
mV = millivolt
Controls contained soil, water, and non-oxidant reagents only.
Low = ~40-70 grams per liter persulfate for each of a total of three applications to simulate three injection events.
High = one application at ~170 g/L persulfate to simulate an in-situ mixing strategy.

APPENDIX B

Laboratory Reports

Mass Profiling Laboratory Report

Laboratory Report

Annette Lee
Xpert Design & Diagnostics, LLC
22 Marin Way
Unit 3
Stratham, NH 03885

PO Number: None
LabID: 11648
Date Received: 1/9/07

Project: MD

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Resource Laboratories, LLC Quality Assurance Plan. The Standard Operating Procedures (SOP) are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Resource Laboratories, LLC maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Resource Laboratories, LLC

Susan Sylvester
Principal, General Manager

1-17-07
Date

Total number of pages _____

Resource Laboratories, LLC Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

124 Heritage Avenue #10 Portsmouth NH 03801
Voice: 603-436-2001 Fax: 603-430-2100
www.reslabs.com

Project ID: MD
Lab ID: 11648

Lab Number: 11648-001
Sample ID: IH17-68-15.5
Matrix: Solid Percent Dry: 79 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 15:33

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
chloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
vinyl chloride	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
bromomethane	< 2.3	2.3	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
chloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
trichlorofluoromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
diethyl ether	< 4.7	4.7	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
acetone	< 23	23	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,1-dichloroethene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
methylene chloride	< 2.3	2.3	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
carbon disulfide	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
trans-1,2-dichloroethene	**1.2**	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,1-dichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
2-butanone (MEK)	< 4.7	4.7	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
2,2-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
cis-1,2-dichloroethene	**4.0**	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
chloroform	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
bromochloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
tetrahydrofuran (THF)	< 4.7	4.7	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,1,1-trichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,1-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
carbon tetrachloride	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,2-dichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
benzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
trichloroethene	**110**	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,2-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
bromodichloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
dibromomethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 4.7	4.7	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
cis-1,3-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
toluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
trans-1,3-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
2-hexanone	< 4.7	4.7	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,1,2-trichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,3-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
tetrachloroethene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
dibromochloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
chlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
ethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
m&p-xylenes	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-001
Sample ID: IH17-68-15.5
Matrix: Solid Percent Dry: 79 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 15:33

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
styrene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
bromoform	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
isopropylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,2,3-trichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
n-propylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
bromobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,3,5-trimethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
2-chlorotoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
4-chlorotoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
tert-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,2,4-trimethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
sec-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,3-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
4-isopropyltoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,4-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,2-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
n-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,2,4-trichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
hexachlorobutadiene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
naphthalene	< 2.3	2.3	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
1,2,3-trichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	101	78-114	%	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
toluene-D8 SUR	96	88-110	%	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
4-bromofluorobenzene SUR	102	86-115	%	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B
a,a,a-trifluorotoluene SUR	115	70-130	%	10	LMM	1/10/07	1/12/07	1:17	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-002
Sample ID: IH17-68-15.75
Matrix: Solid Percent Dry: 77.8 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 15:38

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
chloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
vinyl chloride	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
bromomethane	< 2.3	2.3	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
chloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
trichlorofluoromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
diethyl ether	< 4.6	4.6	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
acetone	< 23	23	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,1-dichloroethene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
methylene chloride	< 2.3	2.3	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
carbon disulfide	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
trans-1,2-dichloroethene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,1-dichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
2-butanone (MEK)	< 4.6	4.6	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
2,2-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
cis-1,2-dichloroethene	**3.7**	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
chloroform	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
bromochloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
tetrahydrofuran (THF)	< 4.6	4.6	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,1,1-trichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,1-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
carbon tetrachloride	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,2-dichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
benzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
trichloroethene	**110**	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,2-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
bromodichloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
dibromomethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 4.6	4.6	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
cis-1,3-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
toluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
trans-1,3-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
2-hexanone	< 4.6	4.6	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,1,2-trichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,3-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
tetrachloroethene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
dibromochloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
chlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
ethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
m&p-xylenes	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-002
Sample ID: IH17-68-15.75
Matrix: Solid Percent Dry: 77.8 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 15:38

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
styrene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
bromoform	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
isopropylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,2,3-trichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
n-propylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
bromobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,3,5-trimethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
2-chlorotoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
4-chlorotoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
tert-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,2,4-trimethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
sec-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,3-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
4-isopropyltoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,4-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,2-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
n-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,2,4-trichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
hexachlorobutadiene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
naphthalene	< 2.3	2.3	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
1,2,3-trichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	100	78-114	%	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
toluene-D8 SUR	96	88-110	%	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
4-bromofluorobenzene SUR	104	86-115	%	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B
a,a,a-trifluorotoluene SUR	128	70-130	%	10	LMM	1/10/07	1/11/07	18:37	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-003
Sample ID: IH17-66-10.5
Matrix: Solid Percent Dry: 80.4 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
bromomethane	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
diethyl ether	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
acetone	< 2	2	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
methylene chloride	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
2-butanone (MEK)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
cis-1,2-dichloroethene	**3.1**	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
trichloroethene	**6.2**	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-003
Sample ID: IH17-66-10.5
Matrix: Solid Percent Dry: 80.4 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:50

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
naphthalene	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	99	78-114	%	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
toluene-D8 SUR	96	88-110	%	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
4-bromofluorobenzene SUR	102	86-115	%	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B
a,a,a-trifluorotoluene SUR	143 *	70-130	%	1	LMM	1/10/07	1/12/07	0:10	SW5035A8260B

The high recovery of TFT is indicative of methanol loss prior to receipt at the lab. This may indicate a bias in the results.

Methanol extraction may have been incomplete due to the high soil to methanol ratio and the difficulty in dispersing the clay in the methanol field preservative.

Project ID: MD
Lab ID: 11648

Lab Number: 11648-004
Sample ID: IH17-68-19.5
Matrix: Solid Percent Dry: 79.5 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 15:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
chloromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
vinyl chloride	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
bromomethane	< 0.5	0.5	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
chloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
trichlorofluoromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
diethyl ether	< 1.0	1	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
acetone	< 5	5	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,1-dichloroethene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
methylene chloride	< 0.5	0.5	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
carbon disulfide	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
trans-1,2-dichloroethene	**0.2**	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,1-dichloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
2-butanone (MEK)	< 1.0	1	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
2,2-dichloropropane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
cis-1,2-dichloroethene	**0.7**	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
chloroform	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
bromochloromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
tetrahydrofuran (THF)	< 1.0	1	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,1,1-trichloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,1-dichloropropene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
carbon tetrachloride	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,2-dichloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
benzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
trichloroethene	**20**	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,2-dichloropropane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
bromodichloromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
dibromomethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 1.0	1	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
cis-1,3-dichloropropene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
toluene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
trans-1,3-dichloropropene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
2-hexanone	< 1.0	1	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,1,2-trichloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,3-dichloropropane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
tetrachloroethene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
dibromochloromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
chlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
ethylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
m&p-xylenes	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-004
Sample ID: IH17-68-19.5
Matrix: Solid Percent Dry: 79.5 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 15:00

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
styrene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
bromoform	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
isopropylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,2,3-trichloropropane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
n-propylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
bromobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,3,5-trimethylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
2-chlorotoluene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
4-chlorotoluene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
tert-butylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,2,4-trimethylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
sec-butylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,3-dichlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
4-isopropyltoluene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,4-dichlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,2-dichlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
n-butylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,2,4-trichlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
hexachlorobutadiene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
naphthalene	< 0.5	0.5	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
1,2,3-trichlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	100	78-114	%	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
toluene-D8 SUR	95	88-110	%	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
4-bromofluorobenzene SUR	102	86-115	%	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B
a,a,a-trifluorotoluene SUR	141 *	70-130	%	2	LMM	1/10/07	1/12/07	0:44	SW5035A8260B

The high recovery of TFT is indicative of methanol loss prior to receipt at the lab. This may indicate a bias in the results.

Extraction may be incomplete due to high soil/methanol ratio and the difficulty in dispersing the clay in the solvent (MeOH). The soil plug was not submerged in MeOH at receipt. A small amount was spilled in the process of stirring the soil into the MeOH.

Project ID: MD
Lab ID: 11648

Lab Number: 11648-005
Sample ID: IH17-66-11.5
Matrix: Solid Percent Dry: 79.7 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:51

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
bromomethane	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
diethyl ether	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
acetone	< 2	2	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
methylene chloride	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
2-butanone (MEK)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
cis-1,2-dichloroethene	**0.9**	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
trichloroethene	**4.0**	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-005
Sample ID: IH17-66-11.5
Matrix: Solid Percent Dry: 79.7 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:51

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
naphthalene	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	101	78-114	%	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
toluene-D8 SUR	97	88-110	%	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
4-bromofluorobenzene SUR	107	86-115	%	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B
a,a,a-trifluorotoluene SUR	164 *	70-130	%	1	LMM	1/10/07	1/11/07	11:56	SW5035A8260B

The high recovery of TFT is indicative of methanol loss prior to receipt at the lab. This may indicate a bias in the results.

Project ID: MD
Lab ID: 11648

Lab Number: 11648-006
Sample ID: IH17-66-8.8
Matrix: Solid Percent Dry: 80.9 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:53

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
bromomethane	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
diethyl ether	< 0.4	0.4	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
acetone	< 2	2	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
methylene chloride	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
2-butanone (MEK)	< 0.4	0.4	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
cis-1,2-dichloroethene	**4.3**	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
tetrahydrofuran (THF)	< 0.4	0.4	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
trichloroethene	**4.6**	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.4	0.4	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
2-hexanone	< 0.4	0.4	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-006
Sample ID: IH17-66-8.8
Matrix: Solid Percent Dry: 80.9 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:53

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
naphthalene	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	101	78-114	%	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
toluene-D8 SUR	98	88-110	%	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
4-bromofluorobenzene SUR	105	86-115	%	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B
a,a,a-trifluorotoluene SUR	120	70-130	%	1	LMM	1/10/07	1/11/07	12:29	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-007
Sample ID: IH17-68-11
Matrix: Solid Percent Dry: 79.8 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 15:08

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
bromomethane	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
diethyl ether	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
acetone	< 2	2	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
methylene chloride	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
2-butanone (MEK)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
cis-1,2-dichloroethene	**1.1**	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
trichloroethene	**5.7**	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-007
Sample ID: IH17-68-11
Matrix: Solid Percent Dry: 79.8 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 15:08

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
naphthalene	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	101	78-114	%	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
toluene-D8 SUR	97	88-110	%	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
4-bromofluorobenzene SUR	105	86-115	%	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B
a,a,a-trifluorotoluene SUR	115	70-130	%	1	LMM	1/10/07	1/11/07	13:02	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-008
Sample ID: IH17-64-11
Matrix: Solid Percent Dry: 79.3 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 13:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
chloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
vinyl chloride	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
bromomethane	< 2.4	2.4	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
chloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
trichlorofluoromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
diethyl ether	< 4.7	4.7	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
acetone	< 24	24	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,1-dichloroethene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
methylene chloride	< 2.4	2.4	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
carbon disulfide	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
trans-1,2-dichloroethene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,1-dichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
2-butanone (MEK)	< 4.7	4.7	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
2,2-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
cis-1,2-dichloroethene	**13**	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
chloroform	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
bromochloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
tetrahydrofuran (THF)	< 4.7	4.7	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,1,1-trichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,1-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
carbon tetrachloride	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,2-dichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
benzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
trichloroethene	**170**	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,2-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
bromodichloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
dibromomethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 4.7	4.7	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
cis-1,3-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
toluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
trans-1,3-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
2-hexanone	< 4.7	4.7	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,1,2-trichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,3-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
tetrachloroethene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
dibromochloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
chlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
ethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
m&p-xylenes	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-008
Sample ID: IH17-64-11
Matrix: Solid Percent Dry: 79.3 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 13:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
styrene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
bromoform	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
isopropylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,2,3-trichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
n-propylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
bromobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,3,5-trimethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
2-chlorotoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
4-chlorotoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
tert-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,2,4-trimethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
sec-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,3-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
4-isopropyltoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,4-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,2-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
n-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,2,4-trichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
hexachlorobutadiene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
naphthalene	< 2.4	2.4	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
1,2,3-trichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	100	78-114	%	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
toluene-D8 SUR	96	88-110	%	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
4-bromofluorobenzene SUR	101	86-115	%	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B
a,a,a-trifluorotoluene SUR	112	70-130	%	10	LMM	1/10/07	1/11/07	18:04	SW5035A8260B

Methanol extraction may have been incomplete due to the high soil to methanol ratio and the difficulty in dispersing the clay in the methanol field preservative.

Project ID: MD
Lab ID: 11648

Lab Number: 11648-009
Sample ID: IH17-64-10.75
Matrix: Solid Percent Dry: 86.4 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 13:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
bromomethane	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
diethyl ether	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
acetone	< 2	2	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
methylene chloride	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
2-butanone (MEK)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
cis-1,2-dichloroethene	**2.5**	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
trichloroethene	**6.5**	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-009
Sample ID: IH17-64-10.75
Matrix: Solid Percent Dry: 86.4 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 13:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
naphthalene	< 0.2	0.2	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	99	78-114	%	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
toluene-D8 SUR	97	88-110	%	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
4-bromofluorobenzene SUR	104	86-115	%	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B
a,a,a-trifluorotoluene SUR	98	70-130	%	1	LMM	1/10/07	1/11/07	14:43	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-010
Sample ID: IH17-64-13.75
Matrix: Solid Percent Dry: 77 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:23

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
chloromethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
vinyl chloride	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
bromomethane	< 4.4	4.4	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
chloroethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
trichlorofluoromethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
diethyl ether	< 8.9	8.9	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
acetone	< 44	44	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,1-dichloroethene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
methylene chloride	< 4.4	4.4	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
carbon disulfide	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
methyl t-butyl ether (MTBE)	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
trans-1,2-dichloroethene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,1-dichloroethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
2-butanone (MEK)	< 8.9	8.9	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
2,2-dichloropropane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
cis-1,2-dichloroethene	**10**	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
chloroform	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
bromochloromethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
tetrahydrofuran (THF)	< 8.9	8.9	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,1,1-trichloroethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,1-dichloropropene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
carbon tetrachloride	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,2-dichloroethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
benzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
trichloroethene	**200**	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,2-dichloropropane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
bromodichloromethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
dibromomethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 8.9	8.9	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
cis-1,3-dichloropropene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
toluene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
trans-1,3-dichloropropene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
2-hexanone	< 8.9	8.9	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,1,2-trichloroethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,3-dichloropropane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
tetrachloroethene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
dibromochloromethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,2-dibromoethane (EDB)	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
chlorobenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,1,1,2-tetrachloroethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
ethylbenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
m&p-xylenes	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-010
Sample ID: IH17-64-13.75
Matrix: Solid Percent Dry: 77 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:23

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
styrene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
bromoform	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
isopropylbenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,1,2,2-tetrachloroethane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,2,3-trichloropropane	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
n-propylbenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
bromobenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,3,5-trimethylbenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
2-chlorotoluene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
4-chlorotoluene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
tert-butylbenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,2,4-trimethylbenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
sec-butylbenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,3-dichlorobenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
4-isopropyltoluene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,4-dichlorobenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,2-dichlorobenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
n-butylbenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,2,4-trichlorobenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
hexachlorobutadiene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
naphthalene	< 4.4	4.4	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
1,2,3-trichlorobenzene	< 1.8	1.8	ug/g	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	103	78-114	%	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
toluene-D8 SUR	98	88-110	%	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
4-bromofluorobenzene SUR	107	86-115	%	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B
a,a,a-trifluorotoluene SUR	101	70-130	%	20	LMM	1/10/07	1/12/07	16:26	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-011
Sample ID: IH17-64-14.1
Matrix: Solid Percent Dry: 79.9 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:28

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
chloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
vinyl chloride	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
bromomethane	< 1.1	1.1	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
chloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
trichlorofluoromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
diethyl ether	< 2.3	2.3	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
acetone	< 11	11	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,1-dichloroethene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
methylene chloride	< 1.1	1.1	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
carbon disulfide	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
trans-1,2-dichloroethene	**0.7**	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,1-dichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
2-butanone (MEK)	< 2.3	2.3	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
2,2-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
cis-1,2-dichloroethene	**6.4**	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
chloroform	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
bromochloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
tetrahydrofuran (THF)	< 2.3	2.3	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,1,1-trichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,1-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
carbon tetrachloride	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,2-dichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
benzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
trichloroethene	**110**	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,2-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
bromodichloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
dibromomethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 2.3	2.3	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
cis-1,3-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
toluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
trans-1,3-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
2-hexanone	< 2.3	2.3	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,1,2-trichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,3-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
tetrachloroethene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
dibromochloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
chlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
ethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
m&p-xylenes	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-011
Sample ID: IH17-64-14.1
Matrix: Solid Percent Dry: 79.9 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:28

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
styrene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
bromoform	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
isopropylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,2,3-trichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
n-propylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
bromobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,3,5-trimethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
2-chlorotoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
4-chlorotoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
tert-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,2,4-trimethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
sec-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,3-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
4-isopropyltoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,4-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,2-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
n-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,2,4-trichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
hexachlorobutadiene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
naphthalene	< 1.1	1.1	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
1,2,3-trichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	100	78-114	%	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
toluene-D8 SUR	94	88-110	%	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
4-bromofluorobenzene SUR	101	86-115	%	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B
a,a,a-trifluorotoluene SUR	99	70-130	%	5	LMM	1/10/07	1/12/07	2:23	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-012
Sample ID: IH17-64-15
Matrix: Solid Percent Dry: 74.3 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
chloromethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
vinyl chloride	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
bromomethane	< 2.5	2.5	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
chloroethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
trichlorofluoromethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
diethyl ether	< 5.0	5	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
acetone	< 25	25	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,1-dichloroethene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
methylene chloride	< 2.5	2.5	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
carbon disulfide	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
methyl t-butyl ether (MTBE)	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
trans-1,2-dichloroethene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,1-dichloroethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
2-butanone (MEK)	< 5.0	5	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
2,2-dichloropropane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
cis-1,2-dichloroethene	**5.1**	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
chloroform	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
bromochloromethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
tetrahydrofuran (THF)	< 5.0	5	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,1,1-trichloroethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,1-dichloropropene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
carbon tetrachloride	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,2-dichloroethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
benzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
trichloroethene	**220**	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,2-dichloropropane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
bromodichloromethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
dibromomethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 5.0	5	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
cis-1,3-dichloropropene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
toluene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
trans-1,3-dichloropropene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
2-hexanone	< 5.0	5	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,1,2-trichloroethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,3-dichloropropane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
tetrachloroethene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
dibromochloromethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,2-dibromoethane (EDB)	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
chlorobenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,1,1,2-tetrachloroethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
ethylbenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
m&p-xylenes	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-012
Sample ID: IH17-64-15
Matrix: Solid Percent Dry: 74.3 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:40

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
styrene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
bromoform	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
isopropylbenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,1,2,2-tetrachloroethane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,2,3-trichloropropane	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
n-propylbenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
bromobenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,3,5-trimethylbenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
2-chlorotoluene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
4-chlorotoluene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
tert-butylbenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,2,4-trimethylbenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
sec-butylbenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,3-dichlorobenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
4-isopropyltoluene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,4-dichlorobenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,2-dichlorobenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
n-butylbenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,2,4-trichlorobenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
hexachlorobutadiene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
naphthalene	< 2.5	2.5	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
1,2,3-trichlorobenzene	< 1.0	1	ug/g	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	100	78-114	%	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
toluene-D8 SUR	95	88-110	%	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
4-bromofluorobenzene SUR	103	86-115	%	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B
a,a,a-trifluorotoluene SUR	114	70-130	%	10	LMM	1/10/07	1/11/07	17:30	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-013
Sample ID: IH17-64-16
Matrix: Solid Percent Dry: 80.4 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:42

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
chloromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
vinyl chloride	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
bromomethane	< 0.5	0.5	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
chloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
trichlorofluoromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
diethyl ether	< 1.0	1	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
acetone	< 5	5	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,1-dichloroethene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
methylene chloride	< 0.5	0.5	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
carbon disulfide	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
trans-1,2-dichloroethene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,1-dichloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
2-butanone (MEK)	< 1.0	1	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
2,2-dichloropropane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
cis-1,2-dichloroethene	**0.4**	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
chloroform	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
bromochloromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
tetrahydrofuran (THF)	< 1.0	1	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,1,1-trichloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,1-dichloropropene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
carbon tetrachloride	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,2-dichloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
benzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
trichloroethene	**18**	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,2-dichloropropane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
bromodichloromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
dibromomethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 1.0	1	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
cis-1,3-dichloropropene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
toluene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
trans-1,3-dichloropropene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
2-hexanone	< 1.0	1	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,1,2-trichloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,3-dichloropropane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
tetrachloroethene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
dibromochloromethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
chlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
ethylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
m&p-xylenes	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-013
Sample ID: IH17-64-16
Matrix: Solid Percent Dry: 80.4 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 14:42

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
styrene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
bromoform	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
isopropylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,2,3-trichloropropane	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
n-propylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
bromobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,3,5-trimethylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
2-chlorotoluene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
4-chlorotoluene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
tert-butylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,2,4-trimethylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
sec-butylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,3-dichlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
4-isopropyltoluene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,4-dichlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,2-dichlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
n-butylbenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,2,4-trichlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
hexachlorobutadiene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
naphthalene	< 0.5	0.5	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
1,2,3-trichlorobenzene	< 0.2	0.2	ug/g	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	102	78-114	%	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
toluene-D8 SUR	97	88-110	%	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
4-bromofluorobenzene SUR	104	86-115	%	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B
a,a,a-trifluorotoluene SUR	144 *	70-130	%	2	LMM	1/10/07	1/11/07	13:36	SW5035A8260B

The high recovery of TFT is indicative of methanol loss prior to receipt at the lab. This may indicate a bias in the results.

Project ID: MD
Lab ID: 11648

Lab Number: 11648-014
Sample ID: IH17-68-14.5
Matrix: Solid Percent Dry: 77.6 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 15:24

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
chloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
vinyl chloride	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
bromomethane	< 1.2	1.2	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
chloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
trichlorofluoromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
diethyl ether	< 2.4	2.4	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
acetone	< 12	12	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,1-dichloroethene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
methylene chloride	< 1.2	1.2	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
carbon disulfide	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
trans-1,2-dichloroethene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,1-dichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
2-butanone (MEK)	< 2.4	2.4	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
2,2-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
cis-1,2-dichloroethene	**5.5**	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
chloroform	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
bromochloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
tetrahydrofuran (THF)	< 2.4	2.4	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,1,1-trichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,1-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
carbon tetrachloride	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,2-dichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
benzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
trichloroethene	**86**	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,2-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
bromodichloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
dibromomethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 2.4	2.4	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
cis-1,3-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
toluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
trans-1,3-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
2-hexanone	< 2.4	2.4	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,1,2-trichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,3-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
tetrachloroethene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
dibromochloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
chlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
ethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
m&p-xylenes	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-014
Sample ID: IH17-68-14.5
Matrix: Solid Percent Dry: 77.6 % Results are expressed on a dry weight basis.
Sampled: 1/4/07 15:24

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
styrene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
bromoform	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
isopropylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,2,3-trichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
n-propylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
bromobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,3,5-trimethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
2-chlorotoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
4-chlorotoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
tert-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,2,4-trimethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
sec-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,3-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
4-isopropyltoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,4-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,2-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
n-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,2,4-trichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
hexachlorobutadiene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
naphthalene	< 1.2	1.2	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
1,2,3-trichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	101	78-114	%	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
toluene-D8 SUR	96	88-110	%	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
4-bromofluorobenzene SUR	104	86-115	%	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B
a,a,a-trifluorotoluene SUR	103	70-130	%	5	LMM	1/10/07	1/11/07	16:57	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-015
Sample ID: IH17-67-12.25
Matrix: Solid Percent Dry: 79.8 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 13:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
chloromethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
vinyl chloride	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
bromomethane	< 210	210	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
chloroethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
trichlorofluoromethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
diethyl ether	< 420	420	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
acetone	< 2100	2100	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,1-dichloroethene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
methylene chloride	< 210	210	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
carbon disulfide	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
methyl t-butyl ether (MTBE)	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
trans-1,2-dichloroethene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,1-dichloroethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
2-butanone (MEK)	< 420	420	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
2,2-dichloropropane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
cis-1,2-dichloroethene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
chloroform	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
bromochloromethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
tetrahydrofuran (THF)	< 420	420	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,1,1-trichloroethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,1-dichloropropene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
carbon tetrachloride	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,2-dichloroethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
benzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
trichloroethene	**12000**	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,2-dichloropropane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
bromodichloromethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
dibromomethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 420	420	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
cis-1,3-dichloropropene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
toluene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
trans-1,3-dichloropropene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
2-hexanone	< 420	420	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,1,2-trichloroethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,3-dichloropropane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
tetrachloroethene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
dibromochloromethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,2-dibromoethane (EDB)	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
chlorobenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,1,1,2-tetrachloroethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
ethylbenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
m&p-xylenes	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-015
Sample ID: IH17-67-12.25
Matrix: Solid Percent Dry: 79.8 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 13:30

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
styrene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
bromoform	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
isopropylbenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,1,2,2-tetrachloroethane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,2,3-trichloropropane	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
n-propylbenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
bromobenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,3,5-trimethylbenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
2-chlorotoluene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
4-chlorotoluene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
tert-butylbenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,2,4-trimethylbenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
sec-butylbenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,3-dichlorobenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
4-isopropyltoluene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,4-dichlorobenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,2-dichlorobenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
n-butylbenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,2,4-trichlorobenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
hexachlorobutadiene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
naphthalene	< 210	210	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
1,2,3-trichlorobenzene	< 83	83	ug/g	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	103	78-114	%	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
toluene-D8 SUR	98	88-110	%	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
4-bromofluorobenzene SUR	107	86-115	%	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B
a,a,a-trifluorotoluene SUR	50	70-130	%	1000	LMM	1/10/07	1/12/07	17:00	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-016
Sample ID: IH17-67-10.25
Matrix: Solid Percent Dry: 83 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 12:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
chloromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
vinyl chloride	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
bromomethane	< 1.0	1	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
chloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
trichlorofluoromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
diethyl ether	< 1.9	1.9	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
acetone	< 10	10	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,1-dichloroethene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
methylene chloride	< 1.0	1	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
carbon disulfide	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
trans-1,2-dichloroethene	**0.5**	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,1-dichloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
2-butanone (MEK)	< 1.9	1.9	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
2,2-dichloropropane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
cis-1,2-dichloroethene	**2.2**	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
chloroform	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
bromochloromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
tetrahydrofuran (THF)	< 1.9	1.9	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,1,1-trichloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,1-dichloropropene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
carbon tetrachloride	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,2-dichloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
benzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
trichloroethene	**65**	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,2-dichloropropane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
bromodichloromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
dibromomethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 1.9	1.9	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
cis-1,3-dichloropropene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
toluene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
trans-1,3-dichloropropene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
2-hexanone	< 1.9	1.9	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,1,2-trichloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,3-dichloropropane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
tetrachloroethene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
dibromochloromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
chlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
ethylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
m&p-xylenes	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-016
Sample ID: IH17-67-10.25
Matrix: Solid Percent Dry: 83 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 12:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
styrene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
bromoform	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
isopropylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,2,3-trichloropropane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
n-propylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
bromobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,3,5-trimethylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
2-chlorotoluene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
4-chlorotoluene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
tert-butylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,2,4-trimethylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
sec-butylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,3-dichlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
4-isopropyltoluene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,4-dichlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,2-dichlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
n-butylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,2,4-trichlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
hexachlorobutadiene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
naphthalene	< 1.0	1	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
1,2,3-trichlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	100	78-114	%	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
toluene-D8 SUR	95	88-110	%	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
4-bromofluorobenzene SUR	103	86-115	%	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B
a,a,a-trifluorotoluene SUR	98	70-130	%	5	LMM	1/10/07	1/12/07	1:50	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-017
Sample ID: IH17-67-17.5
Matrix: Solid Percent Dry: 78.8 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 12:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
chloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
vinyl chloride	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
bromomethane	< 1.3	1.3	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
chloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
trichlorofluoromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
diethyl ether	< 2.5	2.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
acetone	< 13	13	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,1-dichloroethene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
methylene chloride	< 1.3	1.3	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
carbon disulfide	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
trans-1,2-dichloroethene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,1-dichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
2-butanone (MEK)	< 2.5	2.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
2,2-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
cis-1,2-dichloroethene	**6.5**	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
chloroform	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
bromochloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
tetrahydrofuran (THF)	< 2.5	2.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,1,1-trichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,1-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
carbon tetrachloride	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,2-dichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
benzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
trichloroethene	**160**	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,2-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
bromodichloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
dibromomethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 2.5	2.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
cis-1,3-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
toluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
trans-1,3-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
2-hexanone	< 2.5	2.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,1,2-trichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,3-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
tetrachloroethene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
dibromochloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
chlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
ethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
m&p-xylenes	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-017
Sample ID: IH17-67-17.5
Matrix: Solid Percent Dry: 78.8 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 12:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
styrene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
bromoform	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
isopropylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,2,3-trichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
n-propylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
bromobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,3,5-trimethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
2-chlorotoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
4-chlorotoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
tert-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,2,4-trimethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
sec-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,3-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
4-isopropyltoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,4-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,2-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
n-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,2,4-trichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
hexachlorobutadiene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
naphthalene	< 1.3	1.3	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
1,2,3-trichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	101	78-114	%	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
toluene-D8 SUR	97	88-110	%	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
4-bromofluorobenzene SUR	103	86-115	%	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B
a,a,a-trifluorotoluene SUR	89	70-130	%	5	LMM	1/10/07	1/11/07	15:50	SW5035A8260B

Methanol extraction may have been incomplete due to the high soil to methanol ratio and the difficulty in dispersing the clay in the methanol field preservative.

Project ID: MD
Lab ID: 11648

Lab Number: 11648-018
Sample ID: IH17-67-11.75
Matrix: Solid Percent Dry: 81 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 12:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
chloromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
vinyl chloride	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
bromomethane	< 1.0	1	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
chloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
trichlorofluoromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
diethyl ether	< 2.0	2	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
acetone	< 10	10	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,1-dichloroethene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
methylene chloride	< 1.0	1	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
carbon disulfide	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
trans-1,2-dichloroethene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,1-dichloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
2-butanone (MEK)	< 2.0	2	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
2,2-dichloropropane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
cis-1,2-dichloroethene	**1.0**	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
chloroform	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
bromochloromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
tetrahydrofuran (THF)	< 2.0	2	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,1,1-trichloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,1-dichloropropene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
carbon tetrachloride	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,2-dichloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
benzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
trichloroethene	**44**	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,2-dichloropropane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
bromodichloromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
dibromomethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 2.0	2	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
cis-1,3-dichloropropene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
toluene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
trans-1,3-dichloropropene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
2-hexanone	< 2.0	2	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,1,2-trichloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,3-dichloropropane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
tetrachloroethene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
dibromochloromethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
chlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
ethylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
m&p-xylenes	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-018
Sample ID: IH17-67-11.75
Matrix: Solid Percent Dry: 81 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 12:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
styrene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
bromoform	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
isopropylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,2,3-trichloropropane	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
n-propylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
bromobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,3,5-trimethylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
2-chlorotoluene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
4-chlorotoluene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
tert-butylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,2,4-trimethylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
sec-butylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,3-dichlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
4-isopropyltoluene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,4-dichlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,2-dichlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
n-butylbenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,2,4-trichlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
hexachlorobutadiene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
naphthalene	< 1.0	1	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
1,2,3-trichlorobenzene	< 0.4	0.4	ug/g	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	101	78-114	%	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
toluene-D8 SUR	96	88-110	%	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
4-bromofluorobenzene SUR	104	86-115	%	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B
a,a,a-trifluorotoluene SUR	117	70-130	%	5	LMM	1/10/07	1/11/07	14:09	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-019
Sample ID: IH17-67-8.25
Matrix: Solid Percent Dry: 77.3 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 12:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
chloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
vinyl chloride	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
bromomethane	< 2.3	2.3	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
chloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
trichlorofluoromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
diethyl ether	< 4.6	4.6	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
acetone	< 23	23	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,1-dichloroethene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
methylene chloride	< 2.3	2.3	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
carbon disulfide	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
trans-1,2-dichloroethene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,1-dichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
2-butanone (MEK)	< 4.6	4.6	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
2,2-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
cis-1,2-dichloroethene	**13**	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
chloroform	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
bromochloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
tetrahydrofuran (THF)	< 4.6	4.6	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,1,1-trichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,1-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
carbon tetrachloride	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,2-dichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
benzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
trichloroethene	**350**	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,2-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
bromodichloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
dibromomethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 4.6	4.6	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
cis-1,3-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
toluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
trans-1,3-dichloropropene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
2-hexanone	< 4.6	4.6	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,1,2-trichloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,3-dichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
tetrachloroethene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
dibromochloromethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
chlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
ethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
m&p-xylenes	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-019
Sample ID: IH17-67-8.25
Matrix: Solid Percent Dry: 77.3 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 12:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
styrene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
bromoform	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
isopropylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,2,3-trichloropropane	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
n-propylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
bromobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,3,5-trimethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
2-chlorotoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
4-chlorotoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
tert-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,2,4-trimethylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
sec-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,3-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
4-isopropyltoluene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,4-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,2-dichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
n-butylbenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,2,4-trichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
hexachlorobutadiene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
naphthalene	< 2.3	2.3	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
1,2,3-trichlorobenzene	< 0.9	0.9	ug/g	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	101	78-114	%	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
toluene-D8 SUR	95	88-110	%	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
4-bromofluorobenzene SUR	104	86-115	%	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B
a,a,a-trifluorotoluene SUR	76	70-130	%	10	LMM	1/10/07	1/11/07	16:23	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-020
Sample ID: Trip Blank
Matrix: Solid
Sampled: 1/3/07

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
chloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
vinyl chloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
bromomethane	< 0.2	0.3	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
chloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
trichlorofluoromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
diethyl ether	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
acetone	< 2	3	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,1-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
methylene chloride	< 0.2	0.3	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
carbon disulfide	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
trans-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,1-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
2-butanone (MEK)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
2,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
cis-1,2-dichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
chloroform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
bromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
tetrahydrofuran (THF)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,1,1-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,1-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
carbon tetrachloride	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,2-dichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
benzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
trichloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,2-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
bromodichloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
dibromomethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
cis-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
toluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
trans-1,3-dichloropropene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
2-hexanone	< 0.5	0.5	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,1,2-trichloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,3-dichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
tetrachloroethene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
dibromochloromethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
chlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
ethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
m&p-xylenes	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-020
Sample ID: Trip Blank
Matrix: Solid
Sampled: 1/3/07

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
styrene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
bromoform	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
isopropylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,2,3-trichloropropane	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
n-propylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
bromobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,3,5-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
2-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
4-chlorotoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
tert-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,2,4-trimethylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
sec-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,3-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
4-isopropyltoluene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,4-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,2-dichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
n-butylbenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,2,4-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
hexachlorobutadiene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
naphthalene	< 0.2	0.3	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
1,2,3-trichlorobenzene	< 0.1	0.1	ug/g	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	101	78-114	%	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
toluene-D8 SUR	98	88-110	%	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
4-bromofluorobenzene SUR	102	86-115	%	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B
a,a,a-trifluorotoluene SUR	101	70-130	%	1	LMM	1/10/07	1/11/07	23:04	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-021
Sample ID: IH17-67-14.5
Matrix: Solid Percent Dry: 77.5 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 12:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
chloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
vinyl chloride	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
bromomethane	< 1.3	1.3	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
chloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
trichlorofluoromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
diethyl ether	< 2.5	2.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
acetone	< 13	13	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,1-dichloroethene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
methylene chloride	< 1.3	1.3	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
carbon disulfide	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
methyl t-butyl ether (MTBE)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
trans-1,2-dichloroethene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,1-dichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
2-butanone (MEK)	< 2.5	2.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
2,2-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
cis-1,2-dichloroethene	**8.0**	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
chloroform	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
bromochloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
tetrahydrofuran (THF)	< 2.5	2.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,1,1-trichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,1-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
carbon tetrachloride	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,2-dichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
benzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
trichloroethene	**140**	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,2-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
bromodichloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
dibromomethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
4-methyl-2-pentanone (MIBK)	< 2.5	2.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
cis-1,3-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
toluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
trans-1,3-dichloropropene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
2-hexanone	< 2.5	2.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,1,2-trichloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,3-dichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
tetrachloroethene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
dibromochloromethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,2-dibromoethane (EDB)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
chlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,1,1,2-tetrachloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
ethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
m&p-xylenes	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B

Project ID: MD
Lab ID: 11648

Lab Number: 11648-021
Sample ID: IH17-67-14.5
Matrix: Solid Percent Dry: 77.5 % Results are expressed on a dry weight basis.
Sampled: 1/3/07 12:45

Parameter	Result	Quant Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Date	Analysis Time	Reference
o-xylene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
styrene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
bromoform	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
isopropylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,1,2,2-tetrachloroethane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,2,3-trichloropropane	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
n-propylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
bromobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,3,5-trimethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
2-chlorotoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
4-chlorotoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
tert-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,2,4-trimethylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
sec-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,3-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
4-isopropyltoluene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,4-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,2-dichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
n-butylbenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,2-dibromo-3-chloropropane (DBCP)	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,2,4-trichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
hexachlorobutadiene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
naphthalene	< 1.3	1.3	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
1,2,3-trichlorobenzene	< 0.5	0.5	ug/g	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
Surrogate Recovery		**Limits**							
dibromofluoromethane SUR	101	78-114	%	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
toluene-D8 SUR	96	88-110	%	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
4-bromofluorobenzene SUR	108	86-115	%	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B
a,a,a-trifluorotoluene SUR	99	70-130	%	5	LMM	1/10/07	1/11/07	15:16	SW5035A8260B

Methanol extraction may have been incomplete due to the high soil to methanol ratio and the difficulty in dispersing the clay in the methanol field preservative.

Quality Control Report

RESOURCE LABORATORIES, LLC.

Case Narrative
Lab # 11648

Sample Receiving and Chain of Custody Discrepancies
Samples were received in acceptable condition, at 6 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines. Sample 11648-21 was received by the lab but not listed on the COC. A revised COC was provided and is included in the report.

Method Blank
No exceptions noted.

Surrogate Recoveries
VOC: 11648-03, 04, 08, 17, and 21. One surrogate (TFT) did not meet acceptance limits due to suspected loss of methanol prior to receipt of sample in the lab. Methanol extraction may have been incomplete due to the high soil to methanol ratio and the difficulty of dispersing the clay like sample in the methanol field preservative.
11648-05 and 13. One surrogate (TFT) did not meet acceptance limits due to suspected loss of methanol prior to receipt at the lab. This may indicate a bias in the results.

Laboratory Control Sample Results
VOC: LCS0700101 did not meet acceptance limits for bromomethane. This compound is known to be problematic in the method.
VOC: LCSD0700090 did not meet the RPD acceptance limits for 2- Hexanone. The LCS recoveries are acceptable. This compound is known to be problematic in the method.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results
Not requested for this project.

Other
Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

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- QC Report -

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit	RPD	RPD Limit
SW5035A8260B	BLK0700086	dichlorodifluoromethane		<	2 ug/L					
		chloromethane		<	2 ug/L					
		vinyl chloride		<	2 ug/L					
		bromomethane		<	2 ug/L					
		chloroethane		<	2 ug/L					
		trichlorofluoromethane		<	2 ug/L					
		diethyl ether		<	10 ug/L					
		acetone		<	10 ug/L					
		1,1-dichloroethene		<	1 ug/L					
		methylene chloride		<	5 ug/L					
		carbon disulfide		<	2 ug/L					
		methyl t-butyl ether (MTBE)		<	2 ug/L					
		trans-1,2-dichloroethene		<	2 ug/L					
		1,1-dichloroethane		<	2 ug/L					
		2-butanone (MEK)		<	10 ug/L					
		2,2-dichloropropane		<	2 ug/L					
		cis-1,2-dichloroethene		<	2 ug/L					
		chloroform		<	2 ug/L					
		bromochloromethane		<	2 ug/L					
		tetrahydrofuran (THF)		<	10 ug/L					
		1,1,1-trichloroethane		<	2 ug/L					
		1,1-dichloropropene		<	2 ug/L					
		carbon tetrachloride		<	2 ug/L					
		1,2-dichloroethane		<	2 ug/L					
		benzene		<	2 ug/L					
		trichloroethene		<	2 ug/L					
		1,2-dichloropropane		<	2 ug/L					
		bromodichloromethane		<	2 ug/L					
		dibromomethane		<	2 ug/L					
		4-methyl-2-pentanone (MIBK)		<	10 ug/L					
		cis-1,3-dichloropropene		<	2 ug/L					
		toluene		<	2 ug/L					
		trans-1,3-dichloropropene		<	2 ug/L					
		2-hexanone		<	10 ug/L					
		1,1,2-trichloroethane		<	2 ug/L					
		1,3-dichloropropane		<	2 ug/L					
		tetrachloroethene		<	2 ug/L					
		dibromochloromethane		<	2 ug/L					
		1,2-dibromoethane (EDB)		<	2 ug/L					
		chlorobenzene		<	2 ug/L					
		1,1,1,2-tetrachloroethane		<	2 ug/L					
		ethylbenzene		<	2 ug/L					
		m&p-xylenes		<	2 ug/L					
		o-xylene		<	2 ug/L					
		styrene		<	2 ug/L					
		bromoform		<	2 ug/L					
		isopropylbenzene		<	2 ug/L					
		1,1,2,2-tetrachloroethane		<	2 ug/L					
		1,2,3-trichloropropane		<	2 ug/L					
		n-propylbenzene		<	2 ug/L					
		bromobenzene		<	2 ug/L					

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	BLK0700086	1,3,5-trimethylbenzene		< 2	ug/L						
		2-chlorotoluene		< 2	ug/L						
		4-chlorotoluene		< 2	ug/L						
		tert-butylbenzene		< 2	ug/L						
		1,2,4-trimethylbenzene		< 2	ug/L						
		sec-butylbenzene		< 2	ug/L						
		1,3-dichlorobenzene		< 2	ug/L						
		4-isopropyltoluene		< 2	ug/L						
		1,4-dichlorobenzene		< 2	ug/L						
		1,2-dichlorobenzene		< 2	ug/L						
		n-butylbenzene		< 2	ug/L						
		1,2-dibromo-3-chloropropane		< 2	ug/L						
		1,2,4-trichlorobenzene		< 2	ug/L						
		hexachlorobutadiene		< 2	ug/L						
		naphthalene		< 5	ug/L						
		1,2,3-trichlorobenzene		< 2	ug/L						
		dibromofluoromethane SUR		100	%			78	114		
		toluene-D8 SUR		97	%			88	110		
		4-bromofluorobenzene SUR		102	%			86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit	RPD	RPD Limit
SW5035A8260B	BLK0700090	dichlorodifluoromethane		<	2 ug/L					
		chloromethane		<	2 ug/L					
		vinyl chloride		<	2 ug/L					
		bromomethane		<	2 ug/L					
		chloroethane		<	2 ug/L					
		trichlorofluoromethane		<	2 ug/L					
		diethyl ether		<	10 ug/L					
		acetone		<	10 ug/L					
		1,1-dichloroethene		<	1 ug/L					
		methylene chloride		<	5 ug/L					
		carbon disulfide		<	2 ug/L					
		methyl t-butyl ether (MTBE)		<	2 ug/L					
		trans-1,2-dichloroethene		<	2 ug/L					
		1,1-dichloroethane		<	2 ug/L					
		2-butanone (MEK)		<	10 ug/L					
		2,2-dichloropropane		<	2 ug/L					
		cis-1,2-dichloroethene		<	2 ug/L					
		chloroform		<	2 ug/L					
		bromochloromethane		<	2 ug/L					
		tetrahydrofuran (THF)		<	10 ug/L					
		1,1,1-trichloroethane		<	2 ug/L					
		1,1-dichloropropene		<	2 ug/L					
		carbon tetrachloride		<	2 ug/L					
		1,2-dichloroethane		<	2 ug/L					
		benzene		<	2 ug/L					
		trichloroethene		<	2 ug/L					
		1,2-dichloropropane		<	2 ug/L					
		bromodichloromethane		<	2 ug/L					
		dibromomethane		<	2 ug/L					
		4-methyl-2-pentanone (MIBK)		<	10 ug/L					
		cis-1,3-dichloropropene		<	2 ug/L					
		toluene		<	2 ug/L					
		trans-1,3-dichloropropene		<	2 ug/L					
		2-hexanone		<	10 ug/L					
		1,1,2-trichloroethane		<	2 ug/L					
		1,3-dichloropropane		<	2 ug/L					
		tetrachloroethene		<	2 ug/L					
		dibromochloromethane		<	2 ug/L					
		1,2-dibromoethane (EDB)		<	2 ug/L					
		chlorobenzene		<	2 ug/L					
		1,1,1,2-tetrachloroethane		<	2 ug/L					
		ethylbenzene		<	2 ug/L					
		m&p-xylenes		<	2 ug/L					
		o-xylene		<	2 ug/L					
		styrene		<	2 ug/L					
		bromoform		<	2 ug/L					
		isopropylbenzene		<	2 ug/L					
		1,1,2,2-tetrachloroethane		<	2 ug/L					
		1,2,3-trichloropropane		<	2 ug/L					
		n-propylbenzene		<	2 ug/L					
		bromobenzene		<	2 ug/L					
		1,3,5-trimethylbenzene		<	2 ug/L					
		2-chlorotoluene		<	2 ug/L					

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	BLK0700090	4-chlorotoluene		< 2	ug/L						
		tert-butylbenzene		< 2	ug/L						
		1,2,4-trimethylbenzene		< 2	ug/L						
		sec-butylbenzene		< 2	ug/L						
		1,3-dichlorobenzene		< 2	ug/L						
		4-isopropyltoluene		< 2	ug/L						
		1,4-dichlorobenzene		< 2	ug/L						
		1,2-dichlorobenzene		< 2	ug/L						
		n-butylbenzene		< 2	ug/L						
		1,2-dibromo-3-chloropropane		< 2	ug/L						
		1,2,4-trichlorobenzene		< 2	ug/L						
		hexachlorobutadiene		< 2	ug/L						
		naphthalene		< 5	ug/L						
		1,2,3-trichlorobenzene		< 2	ug/L						
		dibromofluoromethane SUR		101	%			78	114		
		toluene-D8 SUR		97	%			88	110		
		4-bromofluorobenzene SUR		102	%			86	115		

- QC Report -

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit	RPD	RPD Limit
SW5035A8260B	BLK0700101	dichlorodifluoromethane		<	2 ug/L					
		chloromethane		<	2 ug/L					
		vinyl chloride		<	2 ug/L					
		bromomethane		<	2 ug/L					
		chloroethane		<	2 ug/L					
		trichlorofluoromethane		<	2 ug/L					
		diethyl ether		<	10 ug/L					
		acetone		<	10 ug/L					
		1,1-dichloroethene		<	1 ug/L					
		methylene chloride		<	5 ug/L					
		carbon disulfide		<	2 ug/L					
		methyl t-butyl ether (MTBE)		<	2 ug/L					
		trans-1,2-dichloroethene		<	2 ug/L					
		1,1-dichloroethane		<	2 ug/L					
		2-butanone (MEK)		<	10 ug/L					
		2,2-dichloropropane		<	2 ug/L					
		cis-1,2-dichloroethene		<	2 ug/L					
		chloroform		<	2 ug/L					
		bromochloromethane		<	2 ug/L					
		tetrahydrofuran (THF)		<	10 ug/L					
		1,1,1-trichloroethane		<	2 ug/L					
		1,1-dichloropropene		<	2 ug/L					
		carbon tetrachloride		<	2 ug/L					
		1,2-dichloroethane		<	2 ug/L					
		benzene		<	2 ug/L					
		trichloroethene		<	2 ug/L					
		1,2-dichloropropane		<	2 ug/L					
		bromodichloromethane		<	2 ug/L					
		dibromomethane		<	2 ug/L					
		4-methyl-2-pentanone (MIBK)		<	10 ug/L					
		cis-1,3-dichloropropene		<	2 ug/L					
		toluene		<	2 ug/L					
		trans-1,3-dichloropropene		<	2 ug/L					
		2-hexanone		<	10 ug/L					
		1,1,2-trichloroethane		<	2 ug/L					
		1,3-dichloropropane		<	2 ug/L					
		tetrachloroethene		<	2 ug/L					
		dibromochloromethane		<	2 ug/L					
		1,2-dibromoethane (EDB)		<	2 ug/L					
		chlorobenzene		<	2 ug/L					
		1,1,1,2-tetrachloroethane		<	2 ug/L					
		ethylbenzene		<	2 ug/L					
		m&p-xylenes		<	2 ug/L					
		o-xylene		<	2 ug/L					
		styrene		<	2 ug/L					
		bromoform		<	2 ug/L					
		isopropylbenzene		<	2 ug/L					
		1,1,2,2-tetrachloroethane		<	2 ug/L					
		1,2,3-trichloropropane		<	2 ug/L					
		n-propylbenzene		<	2 ug/L					
		bromobenzene		<	2 ug/L					

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	BLK0700101	1,3,5-trimethylbenzene		< 2	ug/L						
		2-chlorotoluene		< 2	ug/L						
		4-chlorotoluene		< 2	ug/L						
		tert-butylbenzene		< 2	ug/L						
		1,2,4-trimethylbenzene		< 2	ug/L						
		sec-butylbenzene		< 2	ug/L						
		1,3-dichlorobenzene		< 2	ug/L						
		4-isopropyltoluene		< 2	ug/L						
		1,4-dichlorobenzene		< 2	ug/L						
		1,2-dichlorobenzene		< 2	ug/L						
		n-butylbenzene		< 2	ug/L						
		1,2-dibromo-3-chloropropane		< 2	ug/L						
		1,2,4-trichlorobenzene		< 2	ug/L						
		hexachlorobutadiene		< 2	ug/L						
		naphthalene		< 5	ug/L						
		1,2,3-trichlorobenzene		< 2	ug/L						
		dibromofluoromethane SUR		99	%			78	114		
		toluene-D8 SUR		96	%			88	110		
		4-bromofluorobenzene SUR		105	%			86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	LCS0700086	dichlorodifluoromethane		16	ug/L	20	81	70	130		
		chloromethane		18	ug/L	20	89	70	130		
		vinyl chloride		19	ug/L	20	94	70	130		
		bromomethane		19	ug/L	20	95	70	130		
		chloroethane		19	ug/L	20	97	70	130		
		trichlorofluoromethane		19	ug/L	20	96	70	130		
		diethyl ether		18	ug/L	20	93	70	130		
		acetone		17	ug/L	20	84	70	130		
		1,1-dichloroethene		17	ug/L	20	87	70	130		
		methylene chloride		19	ug/L	20	94	70	130		
		carbon disulfide		17	ug/L	20	83	70	130		
		methyl t-butyl ether (MTBE)		19	ug/L	20	94	70	130		
		trans-1,2-dichloroethene		20	ug/L	20	102	70	130		
		1,1-dichloroethane		20	ug/L	20	101	70	130		
		2-butanone (MEK)		17	ug/L	20	83	70	130		
		2,2-dichloropropane		22	ug/L	20	110	70	130		
		cis-1,2-dichloroethene		21	ug/L	20	104	70	130		
		chloroform		20	ug/L	20	102	70	130		
		bromochloromethane		20	ug/L	20	101	70	130		
		tetrahydrofuran (THF)		20	ug/L	20	99	70	130		
		1,1,1-trichloroethane		20	ug/L	20	101	70	130		
		1,1-dichloropropene		20	ug/L	20	101	70	130		
		carbon tetrachloride		22	ug/L	20	110	70	130		
		1,2-dichloroethane		21	ug/L	20	104	70	130		
		benzene		22	ug/L	20	111	70	130		
		trichloroethene		20	ug/L	20	102	70	130		
		1,2-dichloropropane		20	ug/L	20	101	70	130		
		bromodichloromethane		21	ug/L	20	107	70	130		
		dibromomethane		21	ug/L	20	103	70	130		
		4-methyl-2-pentanone (MIBK)		18	ug/L	20	89	70	130		
		cis-1,3-dichloropropene		21	ug/L	20	103	70	130		
		toluene		21	ug/L	20	106	70	130		
		trans-1,3-dichloropropene		20	ug/L	20	102	70	130		
		2-hexanone		19	ug/L	20	94	70	130		
		1,1,2-trichloroethane		20	ug/L	20	100	70	130		
		1,3-dichloropropane		20	ug/L	20	101	70	130		
		tetrachloroethene		23	ug/L	20	116	70	130		
		dibromochloromethane		22	ug/L	20	107	70	130		
		1,2-dibromoethane (EDB)		20	ug/L	20	101	70	130		
		chlorobenzene		23	ug/L	20	117	70	130		
		1,1,1,2-tetrachloroethane		23	ug/L	20	116	70	130		
		ethylbenzene		22	ug/L	20	111	70	130		
		m&p-xylenes		42	ug/L	40	104	70	130		
		o-xylene		23	ug/L	20	117	70	130		
		styrene		23	ug/L	20	113	70	130		
		bromoform		20	ug/L	20	101	70	130		
		isopropylbenzene		24	ug/L	20	118	70	130		
		1,1,2,2-tetrachloroethane		18	ug/L	20	90	70	130		
		1,2,3-trichloropropane		18	ug/L	20	92	70	130		
		n-propylbenzene		21	ug/L	20	106	70	130		
		bromobenzene		21	ug/L	20	103	70	130		
		1,3,5-trimethylbenzene		23	ug/L	20	113	70	130		
		2-chlorotoluene		22	ug/L	20	108	70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	LCS0700086	4-chlorotoluene		24	ug/L	20	119	70	130		
		tert-butylbenzene		22	ug/L	20	109	70	130		
		1,2,4-trimethylbenzene		23	ug/L	20	115	70	130		
		sec-butylbenzene		21	ug/L	20	106	70	130		
		1,3-dichlorobenzene		20	ug/L	20	102	70	130		
		4-isopropyltoluene		21	ug/L	20	105	70	130		
		1,4-dichlorobenzene		21	ug/L	20	106	70	130		
		1,2-dichlorobenzene		20	ug/L	20	102	70	130		
		n-butylbenzene		21	ug/L	20	106	70	130		
		1,2-dibromo-3-chloropropane		17	ug/L	20	84	70	130		
		1,2,4-trichlorobenzene		19	ug/L	20	95	70	130		
		hexachlorobutadiene		22	ug/L	20	112	70	130		
		naphthalene		17	ug/L	20	83	70	130		
		1,2,3-trichlorobenzene		19	ug/L	20	93	70	130		
		dibromofluoromethane SUR		101	%			78	114		
		toluene-D8 SUR		98	%			88	110		
		4-bromofluorobenzene SUR		101	%			86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	LCS0700090	dichlorodifluoromethane		14	ug/L	20	72	70	130		
		chloromethane		19	ug/L	20	94	70	130		
		vinyl chloride		18	ug/L	20	88	70	130		
		bromomethane		16	ug/L	20	82	70	130		
		chloroethane		19	ug/L	20	94	70	130		
		trichlorofluoromethane		18	ug/L	20	88	70	130		
		diethyl ether		19	ug/L	20	95	70	130		
		acetone		20	ug/L	20	99	70	130		
		1,1-dichloroethene		16	ug/L	20	80	70	130		
		methylene chloride		18	ug/L	20	92	70	130		
		carbon disulfide		15	ug/L	20	73	70	130		
		methyl t-butyl ether (MTBE)		19	ug/L	20	93	70	130		
		trans-1,2-dichloroethene		20	ug/L	20	102	70	130		
		1,1-dichloroethane		19	ug/L	20	95	70	130		
		2-butanone (MEK)		18	ug/L	20	89	70	130		
		2,2-dichloropropane		15	ug/L	20	74	70	130		
		cis-1,2-dichloroethene		20	ug/L	20	99	70	130		
		chloroform		20	ug/L	20	98	70	130		
		bromochloromethane		20	ug/L	20	98	70	130		
		tetrahydrofuran (THF)		21	ug/L	20	105	70	130		
		1,1,1-trichloroethane		19	ug/L	20	94	70	130		
		1,1-dichloropropene		19	ug/L	20	94	70	130		
		carbon tetrachloride		20	ug/L	20	102	70	130		
		1,2-dichloroethane		21	ug/L	20	103	70	130		
		benzene		21	ug/L	20	107	70	130		
		trichloroethene		20	ug/L	20	99	70	130		
		1,2-dichloropropane		19	ug/L	20	97	70	130		
		bromodichloromethane		20	ug/L	20	101	70	130		
		dibromomethane		21	ug/L	20	103	70	130		
		4-methyl-2-pentanone (MIBK)		19	ug/L	20	96	70	130		
		cis-1,3-dichloropropene		19	ug/L	20	94	70	130		
		toluene		20	ug/L	20	101	70	130		
		trans-1,3-dichloropropene		19	ug/L	20	94	70	130		
		2-hexanone		19	ug/L	20	94	70	130		
		1,1,2-trichloroethane		20	ug/L	20	101	70	130		
		1,3-dichloropropane		20	ug/L	20	101	70	130		
		tetrachloroethene		21	ug/L	20	106	70	130		
		dibromochloromethane		21	ug/L	20	106	70	130		
		1,2-dibromoethane (EDB)		21	ug/L	20	104	70	130		
		chlorobenzene		23	ug/L	20	113	70	130		
		1,1,1,2-tetrachloroethane		22	ug/L	20	112	70	130		
		ethylbenzene		21	ug/L	20	103	70	130		
		m&p-xylenes		40	ug/L	40	100	70	130		
		o-xylene		23	ug/L	20	113	70	130		
		styrene		22	ug/L	20	109	70	130		
		bromoform		21	ug/L	20	104	70	130		
		isopropylbenzene		22	ug/L	20	112	70	130		
		1,1,2,2-tetrachloroethane		19	ug/L	20	94	70	130		
		1,2,3-trichloropropane		19	ug/L	20	93	70	130		
		n-propylbenzene		20	ug/L	20	98	70	130		
		bromobenzene		20	ug/L	20	100	70	130		
		1,3,5-trimethylbenzene		21	ug/L	20	106	70	130		
		2-chlorotoluene		22	ug/L	20	108	70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	LCS0700090	4-chlorotoluene		21	ug/L	20	107	70	130		
		tert-butylbenzene		20	ug/L	20	102	70	130		
		1,2,4-trimethylbenzene		21	ug/L	20	107	70	130		
		sec-butylbenzene		20	ug/L	20	98	70	130		
		1,3-dichlorobenzene		20	ug/L	20	98	70	130		
		4-isopropyltoluene		19	ug/L	20	97	70	130		
		1,4-dichlorobenzene		21	ug/L	20	103	70	130		
		1,2-dichlorobenzene		20	ug/L	20	100	70	130		
		n-butylbenzene		19	ug/L	20	93	70	130		
		1,2-dibromo-3-chloropropane		18	ug/L	20	88	70	130		
		1,2,4-trichlorobenzene		18	ug/L	20	91	70	130		
		hexachlorobutadiene		20	ug/L	20	100	70	130		
		naphthalene		17	ug/L	20	87	70	130		
		1,2,3-trichlorobenzene		18	ug/L	20	92	70	130		
		dibromofluoromethane SUR		100	%			78	114		
		toluene-D8 SUR		98	%			88	110		
		4-bromofluorobenzene SUR		102	%			86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limit		RPD	RPD Limit
SW5035A8260B	LCS0700101	dichlorodifluoromethane		15	ug/L	20	74		70	130		
		chloromethane		18	ug/L	20	88		70	130		
		vinyl chloride		17	ug/L	20	85		70	130		
		bromomethane		14	ug/L	20	69	#	70	130		
		chloroethane		18	ug/L	20	92		70	130		
		trichlorofluoromethane		18	ug/L	20	88		70	130		
		diethyl ether		21	ug/L	20	107		70	130		
		acetone		22	ug/L	20	108		70	130		
		1,1-dichloroethene		19	ug/L	20	95		70	130		
		methylene chloride		21	ug/L	20	103		70	130		
		carbon disulfide		21	ug/L	20	105		70	130		
		methyl t-butyl ether (MTBE)		19	ug/L	20	94		70	130		
		trans-1,2-dichloroethene		22	ug/L	20	110		70	130		
		1,1-dichloroethane		21	ug/L	20	103		70	130		
		2-butanone (MEK)		19	ug/L	20	96		70	130		
		2,2-dichloropropane		20	ug/L	20	99		70	130		
		cis-1,2-dichloroethene		21	ug/L	20	105		70	130		
		chloroform		21	ug/L	20	105		70	130		
		bromochloromethane		21	ug/L	20	106		70	130		
		tetrahydrofuran (THF)		23	ug/L	20	117		70	130		
		1,1,1-trichloroethane		20	ug/L	20	102		70	130		
		1,1-dichloropropene		20	ug/L	20	101		70	130		
		carbon tetrachloride		22	ug/L	20	110		70	130		
		1,2-dichloroethane		22	ug/L	20	111		70	130		
		benzene		23	ug/L	20	114		70	130		
		trichloroethene		21	ug/L	20	104		70	130		
		1,2-dichloropropane		20	ug/L	20	101		70	130		
		bromodichloromethane		22	ug/L	20	108		70	130		
		dibromomethane		22	ug/L	20	109		70	130		
		4-methyl-2-pentanone (MIBK)		21	ug/L	20	107		70	130		
		cis-1,3-dichloropropene		20	ug/L	20	101		70	130		
		toluene		21	ug/L	20	106		70	130		
		trans-1,3-dichloropropene		20	ug/L	20	102		70	130		
		2-hexanone		21	ug/L	20	106		70	130		
		1,1,2-trichloroethane		22	ug/L	20	109		70	130		
		1,3-dichloropropane		21	ug/L	20	107		70	130		
		tetrachloroethene		22	ug/L	20	112		70	130		
		dibromochloromethane		22	ug/L	20	110		70	130		
		1,2-dibromoethane (EDB)		22	ug/L	20	109		70	130		
		chlorobenzene		23	ug/L	20	116		70	130		
		1,1,1,2-tetrachloroethane		23	ug/L	20	117		70	130		
		ethylbenzene		21	ug/L	20	107		70	130		
		m&p-xylenes		42	ug/L	40	104		70	130		
		o-xylene		23	ug/L	20	117		70	130		
		styrene		22	ug/L	20	112		70	130		
		bromoform		22	ug/L	20	109		70	130		
		isopropylbenzene		23	ug/L	20	116		70	130		
		1,1,2,2-tetrachloroethane		20	ug/L	20	102		70	130		
		1,2,3-trichloropropane		20	ug/L	20	102		70	130		
		n-propylbenzene		20	ug/L	20	100		70	130		
		bromobenzene		20	ug/L	20	102		70	130		
		1,3,5-trimethylbenzene		21	ug/L	20	107		70	130		
		2-chlorotoluene		22	ug/L	20	110		70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	LCS0700101	4-chlorotoluene		21	ug/L	20	107	70	130		
		tert-butylbenzene		20	ug/L	20	102	70	130		
		1,2,4-trimethylbenzene		22	ug/L	20	109	70	130		
		sec-butylbenzene		20	ug/L	20	99	70	130		
		1,3-dichlorobenzene		20	ug/L	20	101	70	130		
		4-isopropyltoluene		20	ug/L	20	99	70	130		
		1,4-dichlorobenzene		21	ug/L	20	104	70	130		
		1,2-dichlorobenzene		20	ug/L	20	102	70	130		
		n-butylbenzene		19	ug/L	20	96	70	130		
		1,2-dibromo-3-chloropropane		19	ug/L	20	94	70	130		
		1,2,4-trichlorobenzene		19	ug/L	20	97	70	130		
		hexachlorobutadiene		21	ug/L	20	103	70	130		
		naphthalene		19	ug/L	20	96	70	130		
		1,2,3-trichlorobenzene		20	ug/L	20	98	70	130		
		dibromofluoromethane SUR		102	%			78	114		
		toluene-D8 SUR		100	%			88	110		
		4-bromofluorobenzene SUR		102	%			86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	LCSD0700086	dichlorodifluoromethane		15	ug/L	20	73	70	130	11	20
		chloromethane		18	ug/L	20	90	70	130	0.1	20
		vinyl chloride		17	ug/L	20	86	70	130	8.4	20
		bromomethane		16	ug/L	20	80	70	130	18	20
		chloroethane		19	ug/L	20	93	70	130	4.5	20
		trichlorofluoromethane		17	ug/L	20	87	70	130	9.9	20
		diethyl ether		19	ug/L	20	96	70	130	3.4	20
		acetone		19	ug/L	20	93	70	130	9.9	20
		1,1-dichloroethene		16	ug/L	20	82	70	130	5.6	20
		methylene chloride		19	ug/L	20	94	70	130	0.2	20
		carbon disulfide		16	ug/L	20	79	70	130	5.6	20
		methyl t-butyl ether (MTBE)		19	ug/L	20	96	70	130	1.9	20
		trans-1,2-dichloroethene		20	ug/L	20	100	70	130	2.5	20
		1,1-dichloroethane		20	ug/L	20	99	70	130	2.2	20
		2-butanone (MEK)		18	ug/L	20	89	70	130	6.9	20
		2,2-dichloropropane		19	ug/L	20	93	70	130	17	20
		cis-1,2-dichloroethene		20	ug/L	20	102	70	130	1.9	20
		chloroform		20	ug/L	20	101	70	130	0.9	20
		bromochloromethane		20	ug/L	20	102	70	130	1.2	20
		tetrahydrofuran (THF)		22	ug/L	20	108	70	130	8.7	20
		1,1,1-trichloroethane		20	ug/L	20	99	70	130	2.2	20
		1,1-dichloropropene		20	ug/L	20	99	70	130	2.5	20
		carbon tetrachloride		21	ug/L	20	107	70	130	3.1	20
		1,2-dichloroethane		21	ug/L	20	106	70	130	2.1	20
		benzene		22	ug/L	20	110	70	130	1	20
		trichloroethene		20	ug/L	20	102	70	130	0	20
		1,2-dichloropropane		20	ug/L	20	99	70	130	2	20
		bromodichloromethane		21	ug/L	20	105	70	130	1.5	20
		dibromomethane		21	ug/L	20	105	70	130	2.2	20
		4-methyl-2-pentanone (MIBK)		19	ug/L	20	95	70	130	5.6	20
		cis-1,3-dichloropropene		20	ug/L	20	98	70	130	4.7	20
		toluene		21	ug/L	20	104	70	130	1.5	20
		trans-1,3-dichloropropene		20	ug/L	20	100	70	130	1.8	20
		2-hexanone		20	ug/L	20	98	70	130	4	20
		1,1,2-trichloroethane		20	ug/L	20	102	70	130	2.1	20
		1,3-dichloropropane		20	ug/L	20	102	70	130	1	20
		tetrachloroethene		22	ug/L	20	110	70	130	5.2	20
		dibromochloromethane		22	ug/L	20	108	70	130	0.8	20
		1,2-dibromoethane (EDB)		21	ug/L	20	103	70	130	2	20
		chlorobenzene		23	ug/L	20	115	70	130	2.2	20
		1,1,1,2-tetrachloroethane		23	ug/L	20	115	70	130	0.9	20
		ethylbenzene		21	ug/L	20	107	70	130	3.6	20
		m&p-xylenes		41	ug/L	40	103	70	130	1.4	20
		o-xylene		23	ug/L	20	115	70	130	1.8	20
		styrene		22	ug/L	20	111	70	130	1.6	20
		bromoform		21	ug/L	20	104	70	130	3.1	20
		isopropylbenzene		23	ug/L	20	115	70	130	2.7	20
		1,1,2,2-tetrachloroethane		19	ug/L	20	95	70	130	5.8	20
		1,2,3-trichloropropane		19	ug/L	20	96	70	130	4.7	20
		n-propylbenzene		21	ug/L	20	103	70	130	3.5	20
		bromobenzene		21	ug/L	20	103	70	130	0.2	20
		1,3,5-trimethylbenzene		22	ug/L	20	110	70	130	2.1	20
		2-chlorotoluene		22	ug/L	20	111	70	130	2.5	20

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	LCSD0700086	4-chlorotoluene		23	ug/L	20	113	70	130	4.8	20
		tert-butylbenzene		21	ug/L	20	107	70	130	1.9	20
		1,2,4-trimethylbenzene		23	ug/L	20	113	70	130	1.8	20
		sec-butylbenzene		20	ug/L	20	102	70	130	3.1	20
		1,3-dichlorobenzene		21	ug/L	20	103	70	130	0.6	20
		4-isopropyltoluene		20	ug/L	20	102	70	130	3	20
		1,4-dichlorobenzene		21	ug/L	20	107	70	130	0.9	20
		1,2-dichlorobenzene		21	ug/L	20	103	70	130	1.6	20
		n-butylbenzene		20	ug/L	20	100	70	130	5.3	20
		1,2-dibromo-3-chloropropane		18	ug/L	20	90	70	130	6.6	20
		1,2,4-trichlorobenzene		19	ug/L	20	96	70	130	0.9	20
		hexachlorobutadiene		21	ug/L	20	105	70	130	6.7	20
		naphthalene		18	ug/L	20	90	70	130	7	20
		1,2,3-trichlorobenzene		19	ug/L	20	93	70	130	1	20
		dibromofluoromethane SUR		102	%			78	114		
		toluene-D8 SUR		99	%			88	110		
		4-bromofluorobenzene SUR		99	%			86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	LCSD0700101	dichlorodifluoromethane		15	ug/L	20	77	70	130	4.5	20
		chloromethane		18	ug/L	20	88	70	130	0.7	20
		vinyl chloride		17	ug/L	20	87	70	130	2.3	20
		bromomethane		15	ug/L	20	74	70	130	7.9	20
		chloroethane		19	ug/L	20	94	70	130	1.5	20
		trichlorofluoromethane		18	ug/L	20	92	70	130	4.5	20
		diethyl ether		21	ug/L	20	107	70	130	0.6	20
		acetone		22	ug/L	20	111	70	130	3	20
		1,1-dichloroethene		19	ug/L	20	97	70	130	1.8	20
		methylene chloride		21	ug/L	20	104	70	130	0.9	20
		carbon disulfide		21	ug/L	20	106	70	130	0.8	20
		methyl t-butyl ether (MTBE)		19	ug/L	20	95	70	130	0.9	20
		trans-1,2-dichloroethene		22	ug/L	20	110	70	130	0.5	20
		1,1-dichloroethane		21	ug/L	20	103	70	130	0.3	20
		2-butanone (MEK)		20	ug/L	20	100	70	130	4.6	20
		2,2-dichloropropane		20	ug/L	20	99	70	130	0	20
		cis-1,2-dichloroethene		21	ug/L	20	107	70	130	2	20
		chloroform		21	ug/L	20	105	70	130	0.4	20
		bromochloromethane		21	ug/L	20	106	70	130	0	20
		tetrahydrofuran (THF)		24	ug/L	20	118	70	130	1.3	20
		1,1,1-trichloroethane		20	ug/L	20	102	70	130	0.4	20
		1,1-dichloropropene		20	ug/L	20	102	70	130	0.9	20
		carbon tetrachloride		23	ug/L	20	113	70	130	2.3	20
		1,2-dichloroethane		23	ug/L	20	113	70	130	1.2	20
		benzene		23	ug/L	20	115	70	130	1.1	20
		trichloroethene		21	ug/L	20	103	70	130	1	20
		1,2-dichloropropane		20	ug/L	20	102	70	130	1	20
		bromodichloromethane		22	ug/L	20	109	70	130	0.8	20
		dibromomethane		23	ug/L	20	117	70	130	6.3	20
		4-methyl-2-pentanone (MIBK)		21	ug/L	20	104	70	130	2	20
		cis-1,3-dichloropropene		20	ug/L	20	101	70	130	0.4	20
		toluene		21	ug/L	20	107	70	130	0.9	20
		trans-1,3-dichloropropene		21	ug/L	20	103	70	130	1.2	20
		2-hexanone		22	ug/L	20	110	70	130	3.2	20
		1,1,2-trichloroethane		22	ug/L	20	110	70	130	0.9	20
		1,3-dichloropropane		22	ug/L	20	109	70	130	1.9	20
		tetrachloroethene		23	ug/L	20	115	70	130	2.5	20
		dibromochloromethane		23	ug/L	20	113	70	130	2.5	20
		1,2-dibromoethane (EDB)		22	ug/L	20	112	70	130	1.9	20
		chlorobenzene		24	ug/L	20	118	70	130	2.1	20
		1,1,1,2-tetrachloroethane		24	ug/L	20	119	70	130	1.6	20
		ethylbenzene		22	ug/L	20	111	70	130	3.7	20
		m&p-xylenes		43	ug/L	40	106	70	130	2.2	20
		o-xylene		24	ug/L	20	118	70	130	1.2	20
		styrene		23	ug/L	20	114	70	130	1.7	20
		bromoform		22	ug/L	20	112	70	130	2.5	20
		isopropylbenzene		24	ug/L	20	118	70	130	1.8	20
		1,1,2,2-tetrachloroethane		20	ug/L	20	102	70	130	0.4	20
		1,2,3-trichloropropane		20	ug/L	20	101	70	130	0.4	20
		n-propylbenzene		20	ug/L	20	100	70	130	0.4	20
		bromobenzene		20	ug/L	20	102	70	130	0.3	20
		1,3,5-trimethylbenzene		22	ug/L	20	108	70	130	0.4	20
		2-chlorotoluene		21	ug/L	20	103	70	130	6.4	20

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	LCSD0700101	4-chlorotoluene		23	ug/L	20	115	70	130	7.2	20
		tert-butylbenzene		21	ug/L	20	103	70	130	0.9	20
		1,2,4-trimethylbenzene		22	ug/L	20	112	70	130	2.4	20
		sec-butylbenzene		20	ug/L	20	100	70	130	0.5	20
		1,3-dichlorobenzene		20	ug/L	20	102	70	130	1.2	20
		4-isopropyltoluene		20	ug/L	20	99	70	130	0.4	20
		1,4-dichlorobenzene		21	ug/L	20	107	70	130	3.1	20
		1,2-dichlorobenzene		21	ug/L	20	104	70	130	1.7	20
		n-butylbenzene		19	ug/L	20	97	70	130	1.4	20
		1,2-dibromo-3-chloropropane		20	ug/L	20	99	70	130	5.3	20
		1,2,4-trichlorobenzene		20	ug/L	20	101	70	130	4.3	20
		hexachlorobutadiene		22	ug/L	20	108	70	130	4.2	20
		naphthalene		20	ug/L	20	102	70	130	6.5	20
		1,2,3-trichlorobenzene		21	ug/L	20	104	70	130	5.9	20
		dibromofluoromethane SUR		103	%			78	114		
		toluene-D8 SUR		100	%			88	110		
		4-bromofluorobenzene SUR		104	%			86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit	RPD	RPD Limit
SW5035A8260B	MB0700090	dichlorodifluoromethane	MB219	< 0.1	ug/g					
		chloromethane	MB219	< 0.1	ug/g					
		vinyl chloride	MB219	< 0.1	ug/g					
		bromomethane	MB219	< 0.2	ug/g					
		chloroethane	MB219	< 0.1	ug/g					
		trichlorofluoromethane	MB219	< 0.1	ug/g					
		diethyl ether	MB219	< 0.5	ug/g					
		acetone	MB219	< 2.5	ug/g					
		1,1-dichloroethene	MB219	< 0.1	ug/g					
		methylene chloride	MB219	< 0.2	ug/g					
		carbon disulfide	MB219	< 0.1	ug/g					
		methyl t-butyl ether (MTBE)	MB219	< 0.1	ug/g					
		trans-1,2-dichloroethene	MB219	< 0.1	ug/g					
		1,1-dichloroethane	MB219	< 0.1	ug/g					
		2-butanone (MEK)	MB219	< 0.5	ug/g					
		2,2-dichloropropane	MB219	< 0.1	ug/g					
		cis-1,2-dichloroethene	MB219	< 0.1	ug/g					
		chloroform	MB219	< 0.1	ug/g					
		bromochloromethane	MB219	< 0.1	ug/g					
		tetrahydrofuran (THF)	MB219	< 0.5	ug/g					
		1,1,1-trichloroethane	MB219	< 0.1	ug/g					
		1,1-dichloropropene	MB219	< 0.1	ug/g					
		carbon tetrachloride	MB219	< 0.1	ug/g					
		1,2-dichloroethane	MB219	< 0.1	ug/g					
		benzene	MB219	< 0.1	ug/g					
		trichloroethene	MB219	< 0.1	ug/g					
		1,2-dichloropropane	MB219	< 0.1	ug/g					
		bromodichloromethane	MB219	< 0.1	ug/g					
		dibromomethane	MB219	< 0.1	ug/g					
		4-methyl-2-pentanone (MIBK)	MB219	< 0.5	ug/g					
		cis-1,3-dichloropropene	MB219	< 0.1	ug/g					
		toluene	MB219	< 0.1	ug/g					
		trans-1,3-dichloropropene	MB219	< 0.1	ug/g					
		2-hexanone	MB219	< 0.5	ug/g					
		1,1,2-trichloroethane	MB219	< 0.1	ug/g					
		1,3-dichloropropane	MB219	< 0.1	ug/g					
		tetrachloroethene	MB219	< 0.1	ug/g					
		dibromochloromethane	MB219	< 0.1	ug/g					
		1,2-dibromoethane (EDB)	MB219	< 0.1	ug/g					
		chlorobenzene	MB219	< 0.1	ug/g					
		1,1,1,2-tetrachloroethane	MB219	< 0.1	ug/g					
		ethylbenzene	MB219	< 0.1	ug/g					
		m&p-xylenes	MB219	< 0.1	ug/g					
		o-xylene	MB219	< 0.1	ug/g					
		styrene	MB219	< 0.1	ug/g					
		bromoform	MB219	< 0.1	ug/g					
		isopropylbenzene	MB219	< 0.1	ug/g					
		1,1,2,2-tetrachloroethane	MB219	< 0.1	ug/g					
		1,2,3-trichloropropane	MB219	< 0.1	ug/g					
		n-propylbenzene	MB219	< 0.1	ug/g					
		bromobenzene	MB219	< 0.1	ug/g					
		1,3,5-trimethylbenzene	MB219	< 0.1	ug/g					
		2-chlorotoluene	MB219	< 0.1	ug/g					

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	MB0700090	4-chlorotoluene	MB219	< 0.1	ug/g						
		tert-butylbenzene	MB219	< 0.1	ug/g						
		1,2,4-trimethylbenzene	MB219	< 0.1	ug/g						
		sec-butylbenzene	MB219	< 0.1	ug/g						
		1,3-dichlorobenzene	MB219	< 0.1	ug/g						
		4-isopropyltoluene	MB219	< 0.1	ug/g						
		1,4-dichlorobenzene	MB219	< 0.1	ug/g						
		1,2-dichlorobenzene	MB219	< 0.1	ug/g						
		n-butylbenzene	MB219	< 0.1	ug/g						
		1,2-dibromo-3-chloropropane	MB219	< 0.1	ug/g						
		1,2,4-trichlorobenzene	MB219	< 0.1	ug/g						
		hexachlorobutadiene	MB219	< 0.1	ug/g						
		naphthalene	MB219	< 0.2	ug/g						
		1,2,3-trichlorobenzene	MB219	< 0.1	ug/g						
		dibromofluoromethane SUR	MB219	100	%			78	114		
		toluene-D8 SUR	MB219	97	%			88	110		
		4-bromofluorobenzene SUR	MB219	102	%			86	115		
		a,a,a-trifluorotoluene SUR	MB219	108	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit	RPD	RPD Limit
SW5035A8260B	MB0700089	dichlorodifluoromethane	MB220	< 0.1	ug/g					
		chloromethane	MB220	< 0.1	ug/g					
		vinyl chloride	MB220	< 0.1	ug/g					
		bromomethane	MB220	< 0.2	ug/g					
		chloroethane	MB220	< 0.1	ug/g					
		trichlorofluoromethane	MB220	< 0.1	ug/g					
		diethyl ether	MB220	< 0.5	ug/g					
		acetone	MB220	< 2.5	ug/g					
		1,1-dichloroethene	MB220	< 0.1	ug/g					
		methylene chloride	MB220	< 0.2	ug/g					
		carbon disulfide	MB220	< 0.1	ug/g					
		methyl t-butyl ether (MTBE)	MB220	< 0.1	ug/g					
		trans-1,2-dichloroethene	MB220	< 0.1	ug/g					
		1,1-dichloroethane	MB220	< 0.1	ug/g					
		2-butanone (MEK)	MB220	< 0.5	ug/g					
		2,2-dichloropropane	MB220	< 0.1	ug/g					
		cis-1,2-dichloroethene	MB220	< 0.1	ug/g					
		chloroform	MB220	< 0.1	ug/g					
		bromochloromethane	MB220	< 0.1	ug/g					
		tetrahydrofuran (THF)	MB220	< 0.5	ug/g					
		1,1,1-trichloroethane	MB220	< 0.1	ug/g					
		1,1-dichloropropene	MB220	< 0.1	ug/g					
		carbon tetrachloride	MB220	< 0.1	ug/g					
		1,2-dichloroethane	MB220	< 0.1	ug/g					
		benzene	MB220	< 0.1	ug/g					
		trichloroethene	MB220	< 0.1	ug/g					
		1,2-dichloropropane	MB220	< 0.1	ug/g					
		bromodichloromethane	MB220	< 0.1	ug/g					
		dibromomethane	MB220	< 0.1	ug/g					
		4-methyl-2-pentanone (MIBK)	MB220	< 0.5	ug/g					
		cis-1,3-dichloropropene	MB220	< 0.1	ug/g					
		toluene	MB220	< 0.1	ug/g					
		trans-1,3-dichloropropene	MB220	< 0.1	ug/g					
		2-hexanone	MB220	< 0.5	ug/g					
		1,1,2-trichloroethane	MB220	< 0.1	ug/g					
		1,3-dichloropropane	MB220	< 0.1	ug/g					
		tetrachloroethene	MB220	< 0.1	ug/g					
		dibromochloromethane	MB220	< 0.1	ug/g					
		1,2-dibromoethane (EDB)	MB220	< 0.1	ug/g					
		chlorobenzene	MB220	< 0.1	ug/g					
		1,1,1,2-tetrachloroethane	MB220	< 0.1	ug/g					
		ethylbenzene	MB220	< 0.1	ug/g					
		m&p-xylenes	MB220	< 0.1	ug/g					
		o-xylene	MB220	< 0.1	ug/g					
		styrene	MB220	< 0.1	ug/g					
		bromoform	MB220	< 0.1	ug/g					
		isopropylbenzene	MB220	< 0.1	ug/g					
		1,1,2,2-tetrachloroethane	MB220	< 0.1	ug/g					
		1,2,3-trichloropropane	MB220	< 0.1	ug/g					
		n-propylbenzene	MB220	< 0.1	ug/g					
		bromobenzene	MB220	< 0.1	ug/g					
		1,3,5-trimethylbenzene	MB220	< 0.1	ug/g					
		2-chlorotoluene	MB220	< 0.1	ug/g					

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	MB0700089	4-chlorotoluene	MB220	< 0.1	ug/g						
		tert-butylbenzene	MB220	< 0.1	ug/g						
		1,2,4-trimethylbenzene	MB220	< 0.1	ug/g						
		sec-butylbenzene	MB220	< 0.1	ug/g						
		1,3-dichlorobenzene	MB220	< 0.1	ug/g						
		4-isopropyltoluene	MB220	< 0.1	ug/g						
		1,4-dichlorobenzene	MB220	< 0.1	ug/g						
		1,2-dichlorobenzene	MB220	< 0.1	ug/g						
		n-butylbenzene	MB220	< 0.1	ug/g						
		1,2-dibromo-3-chloropropane	MB220	< 0.1	ug/g						
		1,2,4-trichlorobenzene	MB220	< 0.1	ug/g						
		hexachlorobutadiene	MB220	< 0.1	ug/g						
		naphthalene	MB220	< 0.2	ug/g						
		1,2,3-trichlorobenzene	MB220	< 0.1	ug/g						
		dibromofluoromethane SUR	MB220	100	%			78	114		
		toluene-D8 SUR	MB220	98	%			88	110		
		4-bromofluorobenzene SUR	MB220	102	%			86	115		
		a,a,a-trifluorotoluene SUR	MB220	101	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	MLCS0700090	dichlorodifluoromethane	MLCS219	<	0.1 ug/g						
		chloromethane	MLCS219	<	0.1 ug/g						
		vinyl chloride	MLCS219	<	0.1 ug/g						
		bromomethane	MLCS219	<	0.2 ug/g						
		chloroethane	MLCS219	<	0.1 ug/g						
		trichlorofluoromethane	MLCS219	<	0.1 ug/g						
		diethyl ether	MLCS219	<	0.5 ug/g						
		acetone	MLCS219	<	2.5 ug/g						
		1,1-dichloroethene	MLCS219		0.8 ug/g	1	80	70	130		
		methylene chloride	MLCS219	<	0.2 ug/g						
		carbon disulfide	MLCS219	<	0.1 ug/g						
		methyl t-butyl ether (MTBE)	MLCS219	<	0.1 ug/g						
		trans-1,2-dichloroethene	MLCS219	<	0.1 ug/g						
		1,1-dichloroethane	MLCS219	<	0.1 ug/g						
		2-butanone (MEK)	MLCS219	<	0.5 ug/g						
		2,2-dichloropropane	MLCS219	<	0.1 ug/g						
		cis-1,2-dichloroethene	MLCS219	<	0.1 ug/g						
		chloroform	MLCS219	<	0.1 ug/g						
		bromochloromethane	MLCS219	<	0.1 ug/g						
		tetrahydrofuran (THF)	MLCS219	<	0.5 ug/g						
		1,1,1-trichloroethane	MLCS219	<	0.1 ug/g						
		1,1-dichloropropene	MLCS219	<	0.1 ug/g						
		carbon tetrachloride	MLCS219	<	0.1 ug/g						
		1,2-dichloroethane	MLCS219	<	0.1 ug/g						
		benzene	MLCS219		1.0 ug/g	1	104	70	130		
		trichloroethene	MLCS219		0.9 ug/g	1	95	70	130		
		1,2-dichloropropane	MLCS219	<	0.1 ug/g						
		bromodichloromethane	MLCS219	<	0.1 ug/g						
		dibromomethane	MLCS219	<	0.1 ug/g						
		4-methyl-2-pentanone (MIBK)	MLCS219	<	0.5 ug/g						
		cis-1,3-dichloropropene	MLCS219	<	0.1 ug/g						
		toluene	MLCS219		1.0 ug/g	1	101	70	130		
		trans-1,3-dichloropropene	MLCS219	<	0.1 ug/g						
		2-hexanone	MLCS219	<	0.5 ug/g						
		1,1,2-trichloroethane	MLCS219	<	0.1 ug/g						
		1,3-dichloropropane	MLCS219	<	0.1 ug/g						
		tetrachloroethene	MLCS219	<	0.1 ug/g						
		dibromochloromethane	MLCS219	<	0.1 ug/g						
		1,2-dibromoethane (EDB)	MLCS219	<	0.1 ug/g						
		chlorobenzene	MLCS219		1.1 ug/g	1	113	70	130		
		1,1,1,2-tetrachloroethane	MLCS219	<	0.1 ug/g						
		ethylbenzene	MLCS219	<	0.1 ug/g						
		m&p-xylenes	MLCS219	<	0.1 ug/g						
		o-xylene	MLCS219	<	0.1 ug/g						
		styrene	MLCS219	<	0.1 ug/g						
		bromoform	MLCS219	<	0.1 ug/g						
		isopropylbenzene	MLCS219	<	0.1 ug/g						
		1,1,2,2-tetrachloroethane	MLCS219	<	0.1 ug/g						
		1,2,3-trichloropropane	MLCS219	<	0.1 ug/g						
		n-propylbenzene	MLCS219	<	0.1 ug/g						
		bromobenzene	MLCS219	<	0.1 ug/g						
		1,3,5-trimethylbenzene	MLCS219	<	0.1 ug/g						
		2-chlorotoluene	MLCS219	<	0.1 ug/g						

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	MLCS0700090	4-chlorotoluene	MLCS219	< 0.1	ug/g						
		tert-butylbenzene	MLCS219	< 0.1	ug/g						
		1,2,4-trimethylbenzene	MLCS219	< 0.1	ug/g						
		sec-butylbenzene	MLCS219	< 0.1	ug/g						
		1,3-dichlorobenzene	MLCS219	< 0.1	ug/g						
		4-isopropyltoluene	MLCS219	< 0.1	ug/g						
		1,4-dichlorobenzene	MLCS219	< 0.1	ug/g						
		1,2-dichlorobenzene	MLCS219	< 0.1	ug/g						
		n-butylbenzene	MLCS219	< 0.1	ug/g						
		1,2-dibromo-3-chloropropane	MLCS219	< 0.1	ug/g						
		1,2,4-trichlorobenzene	MLCS219	< 0.1	ug/g						
		hexachlorobutadiene	MLCS219	< 0.1	ug/g						
		naphthalene	MLCS219	< 0.2	ug/g						
		1,2,3-trichlorobenzene	MLCS219	< 0.1	ug/g						
		dibromofluoromethane SUR	MLCS219	101	%			78	114		
		toluene-D8 SUR	MLCS219	98	%			88	110		
		4-bromofluorobenzene SUR	MLCS219	102	%			86	115		
		a,a,a-trifluorotoluene SUR	MLCS219	100	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	MLCS0700089	dichlorodifluoromethane	MLCS220	<	0.1 ug/g						
		chloromethane	MLCS220	<	0.1 ug/g						
		vinyl chloride	MLCS220	<	0.1 ug/g						
		bromomethane	MLCS220	<	0.2 ug/g						
		chloroethane	MLCS220	<	0.1 ug/g						
		trichlorofluoromethane	MLCS220	<	0.1 ug/g						
		diethyl ether	MLCS220	<	0.5 ug/g						
		acetone	MLCS220	<	2.5 ug/g						
		1,1-dichloroethene	MLCS220		0.8 ug/g	1	78	70	130		
		methylene chloride	MLCS220	<	0.2 ug/g						
		carbon disulfide	MLCS220	<	0.1 ug/g						
		methyl t-butyl ether (MTBE)	MLCS220	<	0.1 ug/g						
		trans-1,2-dichloroethene	MLCS220	<	0.1 ug/g						
		1,1-dichloroethane	MLCS220	<	0.1 ug/g						
		2-butanone (MEK)	MLCS220	<	0.5 ug/g						
		2,2-dichloropropane	MLCS220	<	0.1 ug/g						
		cis-1,2-dichloroethene	MLCS220	<	0.1 ug/g						
		chloroform	MLCS220	<	0.1 ug/g						
		bromochloromethane	MLCS220	<	0.1 ug/g						
		tetrahydrofuran (THF)	MLCS220	<	0.5 ug/g						
		1,1,1-trichloroethane	MLCS220	<	0.1 ug/g						
		1,1-dichloropropene	MLCS220	<	0.1 ug/g						
		carbon tetrachloride	MLCS220	<	0.1 ug/g						
		1,2-dichloroethane	MLCS220	<	0.1 ug/g						
		benzene	MLCS220		1.0 ug/g	1	105	70	130		
		trichloroethene	MLCS220		0.9 ug/g	1	94	70	130		
		1,2-dichloropropane	MLCS220	<	0.1 ug/g						
		bromodichloromethane	MLCS220	<	0.1 ug/g						
		dibromomethane	MLCS220	<	0.1 ug/g						
		4-methyl-2-pentanone (MIBK)	MLCS220	<	0.5 ug/g						
		cis-1,3-dichloropropene	MLCS220	<	0.1 ug/g						
		toluene	MLCS220		1.0 ug/g	1	102	70	130		
		trans-1,3-dichloropropene	MLCS220	<	0.1 ug/g						
		2-hexanone	MLCS220	<	0.5 ug/g						
		1,1,2-trichloroethane	MLCS220	<	0.1 ug/g						
		1,3-dichloropropane	MLCS220	<	0.1 ug/g						
		tetrachloroethene	MLCS220	<	0.1 ug/g						
		dibromochloromethane	MLCS220	<	0.1 ug/g						
		1,2-dibromoethane (EDB)	MLCS220	<	0.1 ug/g						
		chlorobenzene	MLCS220		1.2 ug/g	1	116	70	130		
		1,1,1,2-tetrachloroethane	MLCS220	<	0.1 ug/g						
		ethylbenzene	MLCS220	<	0.1 ug/g						
		m&p-xylenes	MLCS220	<	0.1 ug/g						
		o-xylene	MLCS220	<	0.1 ug/g						
		styrene	MLCS220	<	0.1 ug/g						
		bromoform	MLCS220	<	0.1 ug/g						
		isopropylbenzene	MLCS220	<	0.1 ug/g						
		1,1,2,2-tetrachloroethane	MLCS220	<	0.1 ug/g						
		1,2,3-trichloropropane	MLCS220	<	0.1 ug/g						
		n-propylbenzene	MLCS220	<	0.1 ug/g						
		bromobenzene	MLCS220	<	0.1 ug/g						
		1,3,5-trimethylbenzene	MLCS220	<	0.1 ug/g						
		2-chlorotoluene	MLCS220	<	0.1 ug/g						

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	MLCS0700089	4-chlorotoluene	MLCS220	< 0.1	ug/g						
		tert-butylbenzene	MLCS220	< 0.1	ug/g						
		1,2,4-trimethylbenzene	MLCS220	< 0.1	ug/g						
		sec-butylbenzene	MLCS220	< 0.1	ug/g						
		1,3-dichlorobenzene	MLCS220	< 0.1	ug/g						
		4-isopropyltoluene	MLCS220	< 0.1	ug/g						
		1,4-dichlorobenzene	MLCS220	< 0.1	ug/g						
		1,2-dichlorobenzene	MLCS220	< 0.1	ug/g						
		n-butylbenzene	MLCS220	< 0.1	ug/g						
		1,2-dibromo-3-chloropropane	MLCS220	< 0.1	ug/g						
		1,2,4-trichlorobenzene	MLCS220	< 0.1	ug/g						
		hexachlorobutadiene	MLCS220	< 0.1	ug/g						
		naphthalene	MLCS220	< 0.2	ug/g						
		1,2,3-trichlorobenzene	MLCS220	< 0.1	ug/g						
		dibromofluoromethane SUR	MLCS220	100	%			78	114		
		toluene-D8 SUR	MLCS220	97	%			88	110		
		4-bromofluorobenzene SUR	MLCS220	103	%			86	115		
		a,a,a-trifluorotoluene SUR	MLCS220	99	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	MLCSD0700090	dichlorodifluoromethane	MLCSD219	< 0.1	ug/g						
		chloromethane	MLCSD219	< 0.1	ug/g						
		vinyl chloride	MLCSD219	< 0.1	ug/g						
		bromomethane	MLCSD219	< 0.2	ug/g						
		chloroethane	MLCSD219	< 0.1	ug/g						
		trichlorofluoromethane	MLCSD219	< 0.1	ug/g						
		diethyl ether	MLCSD219	< 0.5	ug/g						
		acetone	MLCSD219	< 2.5	ug/g						
		1,1-dichloroethene	MLCSD219	0.8	ug/g	1	78	70	130	0	20
		methylene chloride	MLCSD219	< 0.2	ug/g						
		carbon disulfide	MLCSD219	< 0.1	ug/g						
		methyl t-butyl ether (MTBE)	MLCSD219	< 0.1	ug/g						
		trans-1,2-dichloroethene	MLCSD219	< 0.1	ug/g						
		1,1-dichloroethane	MLCSD219	< 0.1	ug/g						
		2-butanone (MEK)	MLCSD219	< 0.5	ug/g						
		2,2-dichloropropane	MLCSD219	< 0.1	ug/g						
		cis-1,2-dichloroethene	MLCSD219	< 0.1	ug/g						
		chloroform	MLCSD219	< 0.1	ug/g						
		bromochloromethane	MLCSD219	< 0.1	ug/g						
		tetrahydrofuran (THF)	MLCSD219	< 0.5	ug/g						
		1,1,1-trichloroethane	MLCSD219	< 0.1	ug/g						
		1,1-dichloropropene	MLCSD219	< 0.1	ug/g						
		carbon tetrachloride	MLCSD219	< 0.1	ug/g						
		1,2-dichloroethane	MLCSD219	< 0.1	ug/g						
		benzene	MLCSD219	1.0	ug/g	1	105	70	130	1.2	20
		trichloroethene	MLCSD219	0.9	ug/g	1	94	70	130	0	20
		1,2-dichloropropane	MLCSD219	< 0.1	ug/g						
		bromodichloromethane	MLCSD219	< 0.1	ug/g						
		dibromomethane	MLCSD219	< 0.1	ug/g						
		4-methyl-2-pentanone (MIBK)	MLCSD219	< 0.5	ug/g						
		cis-1,3-dichloropropene	MLCSD219	< 0.1	ug/g						
		toluene	MLCSD219	1.0	ug/g	1	102	70	130	0.8	20
		trans-1,3-dichloropropene	MLCSD219	< 0.1	ug/g						
		2-hexanone	MLCSD219	< 0.5	ug/g						
		1,1,2-trichloroethane	MLCSD219	< 0.1	ug/g						
		1,3-dichloropropane	MLCSD219	< 0.1	ug/g						
		tetrachloroethene	MLCSD219	< 0.1	ug/g						
		dibromochloromethane	MLCSD219	< 0.1	ug/g						
		1,2-dibromoethane (EDB)	MLCSD219	< 0.1	ug/g						
		chlorobenzene	MLCSD219	1.1	ug/g	1	114	70	130	1	20
		1,1,1,2-tetrachloroethane	MLCSD219	< 0.1	ug/g						
		ethylbenzene	MLCSD219	< 0.1	ug/g						
		m&p-xylenes	MLCSD219	< 0.1	ug/g						
		o-xylene	MLCSD219	< 0.1	ug/g						
		styrene	MLCSD219	< 0.1	ug/g						
		bromoform	MLCSD219	< 0.1	ug/g						
		isopropylbenzene	MLCSD219	< 0.1	ug/g						
		1,1,2,2-tetrachloroethane	MLCSD219	< 0.1	ug/g						
		1,2,3-trichloropropane	MLCSD219	< 0.1	ug/g						
		n-propylbenzene	MLCSD219	< 0.1	ug/g						
		bromobenzene	MLCSD219	< 0.1	ug/g						
		1,3,5-trimethylbenzene	MLCSD219	< 0.1	ug/g						
		2-chlorotoluene	MLCSD219	< 0.1	ug/g						

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	MLCSD0700090	4-chlorotoluene	MLCSD219	< 0.1	ug/g						
		tert-butylbenzene	MLCSD219	<	ug/g						
		1,2,4-trimethylbenzene	MLCSD219	< 0.1	ug/g						
		sec-butylbenzene	MLCSD219	< 0.1	ug/g						
		1,3-dichlorobenzene	MLCSD219	< 0.1	ug/g						
		4-isopropyltoluene	MLCSD219	< 0.1	ug/g						
		1,4-dichlorobenzene	MLCSD219	< 0.1	ug/g						
		1,2-dichlorobenzene	MLCSD219	< 0.1	ug/g						
		n-butylbenzene	MLCSD219	< 0.1	ug/g						
		1,2-dibromo-3-chloropropane	MLCSD219	< 0.1	ug/g						
		1,2,4-trichlorobenzene	MLCSD219	< 0.1	ug/g						
		hexachlorobutadiene	MLCSD219	< 0.1	ug/g						
		naphthalene	MLCSD219	< 0.2	ug/g						
		1,2,3-trichlorobenzene	MLCSD219	< 0.1	ug/g						
		dibromofluoromethane SUR	MLCSD219	101	%			78	114		
		toluene-D8 SUR	MLCSD219	98	%			88	110		
		4-bromofluorobenzene SUR	MLCSD219	103	%			86	115		
		a,a,a-trifluorotoluene SUR	MLCSD219	96	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	MLCSD0700089	dichlorodifluoromethane	MLCSD220	< 0.1	ug/g						
		chloromethane	MLCSD220	< 0.1	ug/g						
		vinyl chloride	MLCSD220	< 0.1	ug/g						
		bromomethane	MLCSD220	< 0.2	ug/g						
		chloroethane	MLCSD220	< 0.1	ug/g						
		trichlorofluoromethane	MLCSD220	< 0.1	ug/g						
		diethyl ether	MLCSD220	< 0.5	ug/g						
		acetone	MLCSD220	< 2.5	ug/g						
		1,1-dichloroethene	MLCSD220	0.8	ug/g	1	76	70	130	3	20
		methylene chloride	MLCSD220	< 0.2	ug/g						
		carbon disulfide	MLCSD220	< 0.1	ug/g						
		methyl t-butyl ether (MTBE)	MLCSD220	< 0.1	ug/g						
		trans-1,2-dichloroethene	MLCSD220	< 0.1	ug/g						
		1,1-dichloroethane	MLCSD220	< 0.1	ug/g						
		2-butanone (MEK)	MLCSD220	< 0.5	ug/g						
		2,2-dichloropropane	MLCSD220	< 0.1	ug/g						
		cis-1,2-dichloroethene	MLCSD220	< 0.1	ug/g						
		chloroform	MLCSD220	< 0.1	ug/g						
		bromochloromethane	MLCSD220	< 0.1	ug/g						
		tetrahydrofuran (THF)	MLCSD220	< 0.5	ug/g						
		1,1,1-trichloroethane	MLCSD220	< 0.1	ug/g						
		1,1-dichloropropene	MLCSD220	< 0.1	ug/g						
		carbon tetrachloride	MLCSD220	< 0.1	ug/g						
		1,2-dichloroethane	MLCSD220	< 0.1	ug/g						
		benzene	MLCSD220	1.0	ug/g	1	104	70	130	0.5	20
		trichloroethene	MLCSD220	0.9	ug/g	1	93	70	130	0.9	20
		1,2-dichloropropane	MLCSD220	< 0.1	ug/g						
		bromodichloromethane	MLCSD220	< 0.1	ug/g						
		dibromomethane	MLCSD220	< 0.1	ug/g						
		4-methyl-2-pentanone (MIBK)	MLCSD220	< 0.5	ug/g						
		cis-1,3-dichloropropene	MLCSD220	< 0.1	ug/g						
		toluene	MLCSD220	1.0	ug/g	1	102	70	130	0.5	20
		trans-1,3-dichloropropene	MLCSD220	< 0.1	ug/g						
		2-hexanone	MLCSD220	< 0.5	ug/g						
		1,1,2-trichloroethane	MLCSD220	< 0.1	ug/g						
		1,3-dichloropropane	MLCSD220	< 0.1	ug/g						
		tetrachloroethene	MLCSD220	< 0.1	ug/g						
		dibromochloromethane	MLCSD220	< 0.1	ug/g						
		1,2-dibromoethane (EDB)	MLCSD220	< 0.1	ug/g						
		chlorobenzene	MLCSD220	1.2	ug/g	1	118	70	130	1.2	20
		1,1,1,2-tetrachloroethane	MLCSD220	< 0.1	ug/g						
		ethylbenzene	MLCSD220	< 0.1	ug/g						
		m&p-xylenes	MLCSD220	< 0.1	ug/g						
		o-xylene	MLCSD220	< 0.1	ug/g						
		styrene	MLCSD220	< 0.1	ug/g						
		bromoform	MLCSD220	< 0.1	ug/g						
		isopropylbenzene	MLCSD220	< 0.1	ug/g						
		1,1,2,2-tetrachloroethane	MLCSD220	< 0.1	ug/g						
		1,2,3-trichloropropane	MLCSD220	< 0.1	ug/g						
		n-propylbenzene	MLCSD220	< 0.1	ug/g						
		bromobenzene	MLCSD220	< 0.1	ug/g						
		1,3,5-trimethylbenzene	MLCSD220	< 0.1	ug/g						
		2-chlorotoluene	MLCSD220	< 0.1	ug/g						

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	MLCSD0700089	4-chlorotoluene	MLCSD220	< 0.1	ug/g						
		tert-butylbenzene	MLCSD220	< 0.1	ug/g						
		1,2,4-trimethylbenzene	MLCSD220	< 0.1	ug/g						
		sec-butylbenzene	MLCSD220	< 0.1	ug/g						
		1,3-dichlorobenzene	MLCSD220	< 0.1	ug/g						
		4-isopropyltoluene	MLCSD220	< 0.1	ug/g						
		1,4-dichlorobenzene	MLCSD220	< 0.1	ug/g						
		1,2-dichlorobenzene	MLCSD220	< 0.1	ug/g						
		n-butylbenzene	MLCSD220	< 0.1	ug/g						
		1,2-dibromo-3-chloropropane	MLCSD220	< 0.1	ug/g						
		1,2,4-trichlorobenzene	MLCSD220	< 0.1	ug/g						
		hexachlorobutadiene	MLCSD220	< 0.1	ug/g						
		naphthalene	MLCSD220	< 0.2	ug/g						
		1,2,3-trichlorobenzene	MLCSD220	< 0.1	ug/g						
		dibromofluoromethane SUR	MLCSD220	101	%			78	114		
		toluene-D8 SUR	MLCSD220	98	%			88	110		
		4-bromofluorobenzene SUR	MLCSD220	106	%			86	115		
		a,a,a-trifluorotoluene SUR	MLCSD220	98	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	LCSD0700090	dichlorodifluoromethane		15	ug/L	20	76	70	130	4.6	20
		chloromethane		19	ug/L	20	93	70	130	0.7	20
		vinyl chloride		18	ug/L	20	89	70	130	1.7	20
		bromomethane		17	ug/L	20	83	70	130	1.3	20
		chloroethane		19	ug/L	20	93	70	130	1.4	20
		trichlorofluoromethane		18	ug/L	20	92	70	130	4.9	20
		diethyl ether		19	ug/L	20	94	70	130	0.6	20
		acetone		19	ug/L	20	96	70	130	2.5	20
		1,1-dichloroethene		16	ug/L	20	82	70	130	2.6	20
		methylene chloride		19	ug/L	20	94	70	130	1.9	20
		carbon disulfide		15	ug/L	20	75	70	130	2	20
		methyl t-butyl ether (MTBE)		19	ug/L	20	95	70	130	2.6	20
		trans-1,2-dichloroethene		21	ug/L	20	105	70	130	2.5	20
		1,1-dichloroethane		19	ug/L	20	97	70	130	2.1	20
		2-butanone (MEK)		15	ug/L	20	76	70	130	16	20
		2,2-dichloropropane		15	ug/L	20	75	70	130	1.4	20
		cis-1,2-dichloroethene		20	ug/L	20	102	70	130	3.6	20
		chloroform		20	ug/L	20	101	70	130	2.7	20
		bromochloromethane		20	ug/L	20	100	70	130	1.4	20
		tetrahydrofuran (THF)		21	ug/L	20	103	70	130	1.8	20
		1,1,1-trichloroethane		20	ug/L	20	98	70	130	3.6	20
		1,1-dichloropropene		19	ug/L	20	96	70	130	2.3	20
		carbon tetrachloride		21	ug/L	20	105	70	130	2.7	20
		1,2-dichloroethane		21	ug/L	20	105	70	130	1.8	20
		benzene		22	ug/L	20	108	70	130	1.5	20
		trichloroethene		20	ug/L	20	101	70	130	2	20
		1,2-dichloropropane		20	ug/L	20	99	70	130	1.9	20
		bromodichloromethane		21	ug/L	20	104	70	130	2.7	20
		dibromomethane		21	ug/L	20	104	70	130	0.7	20
		4-methyl-2-pentanone (MIBK)		18	ug/L	20	91	70	130	4.5	20
		cis-1,3-dichloropropene		19	ug/L	20	95	70	130	1.4	20
		toluene		21	ug/L	20	103	70	130	2	20
		trans-1,3-dichloropropene		19	ug/L	20	95	70	130	1.2	20
		2-hexanone		15	ug/L	20	75	70	130	22 #	20
		1,1,2-trichloroethane		20	ug/L	20	101	70	130	0	20
		1,3-dichloropropane		21	ug/L	20	103	70	130	2.2	20
		tetrachloroethene		22	ug/L	20	111	70	130	3.9	20
		dibromochloromethane		22	ug/L	20	109	70	130	2.3	20
		1,2-dibromoethane (EDB)		21	ug/L	20	104	70	130	0.7	20
		chlorobenzene		23	ug/L	20	116	70	130	3.2	20
		1,1,1,2-tetrachloroethane		23	ug/L	20	116	70	130	3	20
		ethylbenzene		21	ug/L	20	107	70	130	3.8	20
		m&p-xylenes		42	ug/L	40	104	70	130	3.9	20
		o-xylene		23	ug/L	20	116	70	130	2.5	20
		styrene		23	ug/L	20	113	70	130	4.2	20
		bromoform		21	ug/L	20	104	70	130	0.2	20
		isopropylbenzene		23	ug/L	20	116	70	130	3.3	20
		1,1,2,2-tetrachloroethane		19	ug/L	20	94	70	130	0	20
		1,2,3-trichloropropane		19	ug/L	20	97	70	130	4.1	20
		n-propylbenzene		20	ug/L	20	101	70	130	2.7	20
		bromobenzene		21	ug/L	20	103	70	130	2.7	20
		1,3,5-trimethylbenzene		22	ug/L	20	108	70	130	2.2	20
		2-chlorotoluene		22	ug/L	20	110	70	130	1.9	20

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limit		RPD	RPD Limit
SW5035A8260B	LCSD0700090	4-chlorotoluene		22	ug/L	20	110	70	130	2.1	20
		tert-butylbenzene		21	ug/L	20	105	70	130	3.2	20
		1,2,4-trimethylbenzene		22	ug/L	20	111	70	130	4	20
		sec-butylbenzene		20	ug/L	20	100	70	130	1.9	20
		1,3-dichlorobenzene		20	ug/L	20	100	70	130	2.5	20
		4-isopropyltoluene		20	ug/L	20	99	70	130	2.4	20
		1,4-dichlorobenzene		21	ug/L	20	105	70	130	2.2	20
		1,2-dichlorobenzene		20	ug/L	20	102	70	130	2.2	20
		n-butylbenzene		19	ug/L	20	96	70	130	4.1	20
		1,2-dibromo-3-chloropropane		17	ug/L	20	87	70	130	0.4	20
		1,2,4-trichlorobenzene		19	ug/L	20	95	70	130	4.4	20
		hexachlorobutadiene		21	ug/L	20	107	70	130	6.9	20
		naphthalene		18	ug/L	20	92	70	130	5.4	20
		1,2,3-trichlorobenzene		20	ug/L	20	99	70	130	6.6	20
		dibromofluoromethane SUR		102	%			78	114		
		toluene-D8 SUR		99	%			88	110		
		4-bromofluorobenzene SUR		103	%			86	115		

RL Resource Laboratories, LLC
124 Heritage Avenue • Portsmouth, NH 03801
Phone: 603-436-2001 • Fax: 603-430-2100

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

11648

Company Name: XDD-LLC
Phone #: 603-778-1102
FAX #: 603-778-2121
Company Address: 22 MARIN WAY #3 STRATHAM, NH
Report To: ANNETTE LEE
Project Info: NH MA ME VT MD.
Invoice To: PO # 941
Protocol: RCRA SDWA NPDES MCP NHDES OTHER

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	Matrix: SOLID	Matrix: OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER (Specify)	Sampling: DATE	TIME	SAMPLER*
11648-01	1H17-68-15.5	1		X						X		1/4/07	1533	PR
-02	1H17-68-15.75	1		X						X		1/4/07	1538	PR
-03	1H17-66-10.5	1		X						X		1/4/07	14:50	DN
-04	1H17-68-19.5	1		X						X		1/4/07	15:00	DN
-05	1H17-66-11.5	1		X						X		1/4/07	14:51	DN
-06	1H17-66-8.8	1		X						X		1/4/07	14:53	PR
-07	1H17-68-11	1		X						X		1/4/07	15:08	PR
-08	1H17-64-11	1		X						X		1/4/07	1330	DN
-09	1H17-64-10.75	1		X						X		1/4/07	13:30	DN
-10	1H17-64-13.75	1		X						X		1/4/07	14:23	PR
-11	1H17-64-14.1	1		X						X		1/4/07	14:28	PR

Analysis requested (all samples): ☒ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP; ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only; ☐ VPH MADEP ☐ MEGRO ☐ GRO; ☐ VOC 524.2 ☐ VOC 524.2 NH List; ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint; ☐ 8270PAH ☐ 8270ABN ☐ 625; ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB; ☐ O&G 1664 ☐ Mineral O&G SM5520F; ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity; ☐ TSS ☐ TDS ☐ TS; ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals; ☐ Total Metals-list ☐ Dissolved Metals-list; ☐ Ammonia ☐ COD ☐ TKN; ☐ T-Phosphorus ☐ Phenol; ☐ Cyanide ☐ Sulfide; ☐ Nitrate ☐ Nitrite ☐ Ortho P ☐ Sulfate ☐ Bromide ☐ Chloride; ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP; ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC; ☐ TCLP Pesticide ☐ TCLP Herbicides (subcontract); ☐ Standard Drinking Water Test ☐ Bacteria P/A; Grab (G) or Composite (C)

TAT REQUESTED
Priority (24 hr) ☐
Expedited (48 hr) ☐
10 Business Days ☒
Date Needed STANDARD

* See www.reslabs.com for sample acceptance policy.

E-Mail Address lee@xdd-llc.com
Quote #
PO #

SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS
☐ FAX ☐ OTHER (specify)
☒ PDF ☒ Excel Spreadsheet

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 6 °C

CUSTODY RECORD

Relinquished by Sampler:	Date	Time	Received by:	Date	Time
Deph	1/4/07	16:15			
Relinquished by:	Date	Time	Received by:	Date	Time
	1/9/07	15:45			
Relinquished by:	Date	Time	Received by Laboratory: Way Bill#:	Date	Time
			Jane Brunn	1/9/07	3:20

RL Resource Laboratories, LLC
124 Heritage Avenue • Portsmouth, NH 03801
Phone: 603-436-2001 • Fax: 603-430-2100

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Company Name: XDD-LLC
Phone #: 603-778-1100
FAX #: 603-778-2121
Company Address: 22 MARIN WAY #3 STRATHAM, NH
Report To: ANNETTE LEE
Project Info: NH MA ME VT MD
Invoice To: PO# 941
Protocol: RCRA SDWA NPDES MCP NHDES OTHER

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	Matrix: SOLID	Matrix: OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER (Specify)	Sampling: DATE	TIME	SAMPLER*	VOC 8260 NHDES / VOC 8260 MADEP	VOC 8260 / VOC BTEX / MtBE, only	VOC 624 / VOC 524.2 NH List	VPH MADEP / MEGRO / GRO	VOC 524.2 / DRO 8015 / MEDRO	TPH / EPH MADEP / TPH Fingerprint	8270PAH / 8270ABN / 625	8082 PCB / 8081 Pesticides / 608 Pest/PCB	O&G 1664 / Mineral O&G SM5520F	pH / BOD / Conductivity / Turbidity	TSS / TDS / TS	RCRA Metals / Priority Pollutant Metals / TAL Metals	Total Metals-list / Dissolved Metals-list	Ammonia / COD / TKN	T-Phosphorus / Phenol	Cyanide / Sulfide	Nitrate / Nitrite / Ortho P / Sulfate / Bromide / Chloride	Corrosivity / Reactive CN / Reactive S- / Ignitibility/FP	TCLP Metals / TCLP VOC / TCLP SVOC	TCLP Pesticide / TCLP Herbicides (subcontract)	Standard Drinking Water Test / Bacteria P/A				Grab (G) or Composite (C)
11648-12	IH17-66-15	1		X						X		1/4/07	1440	PR	X																								
-13	IH17-66-16	1		X						X		1/4/07	1442	DN																									
-14	IH17-68-14.5	1		X						X		1/4/07	1524	PR																									
-15	IH17-67-12.25	1		X						X		1/3/07	1330	DN																									
-16	IH17-67-10.25	1		X						X		1/3/07	12:45	DN																									
-17	IH17-67-17.5	1		X						X		1/3/07	12:45	DN																									
-18	IH17-67-11.75	1		X						X		1/3/07	1245	DN																									
-19	IH17-67-8.25	1		X						X		1/3/07	1245	DN																									
-20	TRIP BLANK	1	X			X																																	
3 1/07 -21	IH17-67-14.5	1		X						X		1/3/0.	12.45		X																								

TAT REQUESTED
Priority (24 hr) ☐
Expedited (48 hr) ☐
10 Business Days ☒
Date Needed Std.

* See www.reslabs.com for sample acceptance policy.

E-Mail Address lee@xdd-llc.com
Quote #
PO #

SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS
☐ FAX ☐ OTHER (specify)
☒ PDF ☒ Excel Spreadsheet

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 6 °C

CUSTODY RECORD

Relinquished by Sampler:	Date	Time	Received by:	Date	Time
Deep	1/4/07	16:15			
Relinquished by:	1/9/07	15:45	Received by:		
Relinquished by:			Received by Laboratory: Way Bill#:	1/9/07	3:30 45

Resource Laboratories, LLC

124 Heritage Avenue • Portsmouth, NH 03801
Phone: 603-436-2001 • Fax: 603-430-2100

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Company Name: XDD - LLC
Phone #: 603-778-1100
FAX #: 603-778-2121
Company Address: 22 MARIN WAY #3 STRATHAM, NH
Report To: ANNETTE LEE
Project Info: NH MA ME VT MD
Invoice To: PO# 941
Protocol: RCRA SDWA NPDES MCP NHDES OTHER

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	Matrix: SOLID	Matrix: OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER (Specify)	Sampling: DATE	TIME	SAMPLER*
	1H17-64-15	1		x						x		1/4/07	1440	PR
	1H17-64-16	1		x						x		1/4/07	1442	DN
	1H15-68-14.5	1		x						x		1/4/07	1524	PR
	1H17-67-12.5	1		x						x		1/3/07	1330	DN
	1H17-67-10.25	1		x						x		1/3/07	12:45	DN
	1H17-67-17.5	1		x						x		1/3/07	12:45	DN
	1H17-67-11.5	1		x						x		1/3/07	1245	DN
	1H17-67-8.75	1		x						x		1/3/07	12 45	DN
	TRIP BLANK	1	x			x								
DN	1H17-67-14.5	1		x						x		1/3/07	1245	DN

Analysis requested (✓): VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VPH MADEP ☐ MEGRO ☐ GRO ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TS ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Total Metals-list ☐ Dissolved Metals-list ☐ Ammonia ☐ COD ☐ TKN ☐ T-Phosphorus ☐ Phenol ☐ Cyanide ☐ Sulfide ☐ Nitrate ☐ Nitrite ☐ Ortho P ☐ Sulfate ☐ Bromide ☐ Chloride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide ☐ TCLP Herbicides (subcontract) ☐ Standard Drinking Water Test ☐ Bacteria P/A ☐ Grab (G) or Composite (C)

TAT REQUESTED
Priority (24 hr) ☐
Expedited (48 hr) ☐
10 Business Days ☑
Date Needed: Std

* See www.reslabs.com for sample acceptance policy.

E-Mail Address: lee@xdd-llc.com
Quote #:
PO #:

SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS
☐ FAX ☐ OTHER (specify)
☑ PDF ☑ Excel Spreadsheet

RECEIVED ON ICE ☐ YES ☐ NO
TEMPERATURE ____ °C

CUSTODY RECORD

Relinquished by:	Date	Time	Received by:	Date	Time
Sampler: [illegible]	DN 1/4/07	~~16:75~~			
Relinquished by:	1/9/ Date	15.9 Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by Laboratory: [illegible] Way Bill#	1/9/07 Date	3:20 Time

Baseline Assessment and Preliminary Test Analytical Reports

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

ANALYTICAL DATA REPORT

Report Number: E703974
Project: Indian Head - Site 17

prepared for:

XDD, LLC
22 Marin Way #3
Stratham, NH 03885

Attn: Annette Lee

Received Date: 3/20/2007
Report Date: 4/2/2007

Premier Laboratory, LLC
Authorized Signature

Certifications:
CT (PH-0465), MA (M-CT008), ME (CT050), NH (2020), NJ (CT002), NY (11549), RI (RI246)

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

Report No: E703974
Client: XDD
Project: Indian Head - Site 17

CASE NARRATIVE / METHOD CONFORMANCE SUMMARY

Premier Laboratory received six samples from XDD on 03/20/2007. The samples were analyzed from the following list of analyses:

Moisture, Percent	Sieve Analysis
Volatiles by 8260B in GW/SW	UNKWN
8260B	

Variances:

SDG:

None reported.

Method:

None reported.

QA/QC:

Sample 2, Baseline-1 (Soil), Volatiles by 8260B: One internal standard was outside quality control limits for the sample due to matrix interference. The sample was re-analyzed and the internal standard was still outside the limits.

INORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC
PL Report No: E703974
Date Received: 3/20/2007

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17

Parameter	Result	DL	Units	Completed	By	Dilution
(4) Grainsize-1						
Date Collected: 3/19/2007 Matrix: Solid						
Sieve Analysis						
	See Attached			03/20/07	ESS	

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703974
PL Sample No: 1

Date Collected: 3/15/2007
Date Received: 3/20/2007
Date Extracted: By:
Date Analyzed: 03/22/07 By: GP
Method: 8260B
QC Batch#: 52858
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: IH17PP-Baseline

Matrix: Solid
Percent Moisture: 23.7
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: M34019.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	260000
107-13-1	Acrylonitrile	ND	330000
71-43-2	Benzene	ND	66000
108-86-1	Bromobenzene	ND	66000
74-97-5	Bromochloromethane	ND	66000
75-27-4	Bromodichloromethane	ND	66000
75-25-2	Bromoform	ND	66000
74-83-9	Bromomethane	ND	66000
78-93-3	2-Butanone (MEK)	ND	130000
104-51-8	n-Butylbenzene	ND	66000
135-98-8	sec-Butylbenzene	ND	66000
98-06-6	tert-Butylbenzene	ND	66000
75-15-0	Carbon disulfide	ND	66000
56-23-5	Carbon tetrachloride	ND	66000
108-90-7	Chlorobenzene	ND	66000
75-00-3	Chloroethane	ND	66000
67-66-3	Chloroform	ND	66000
74-87-3	Chloromethane	ND	66000
95-49-8	2-Chlorotoluene	ND	66000
106-43-4	4-Chlorotoluene	ND	66000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	66000
124-48-1	Dibromochloromethane	ND	66000
106-93-4	1,2-Dibromoethane (EDB)	ND	66000
74-95-3	Dibromomethane	ND	66000
95-50-1	1,2-Dichlorobenzene	ND	66000
541-73-1	1,3-Dichlorobenzene	ND	66000
106-46-7	1,4-Dichlorobenzene	ND	66000
75-71-8	Dichlorodifluoromethane	ND	66000
75-34-3	1,1-Dichloroethane	ND	66000
107-06-2	1,2-Dichloroethane	ND	66000
75-35-4	1,1-Dichloroethene	ND	66000
156-59-2	cis-1,2-Dichloroethene	ND	66000
156-60-5	trans-1,2-Dichloroethene	ND	66000
78-87-5	1,2-Dichloropropane	ND	66000
142-28-9	1,3-Dichloropropane	ND	66000
590-20-7	2,2-Dichloropropane	ND	66000
563-58-6	1,1-Dichloropropene	ND	66000
10061-01-5	cis-1,3-Dichloropropene	ND	66000
10061-02-6	trans-1,3-Dichloropropene	ND	66000
100-41-4	Ethylbenzene	ND	66000
87-68-3	Hexachlorobutadiene	ND	66000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703974
PL Sample No: 1 (continued)

Date Collected: 3/15/2007
Date Received: 3/20/2007
Date Extracted: By:
Date Analyzed: 03/22/07 By: GP
Method: 8260B
QC Batch#: 52858
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: IH17PP-Baseline

Matrix: Solid
Percent Moisture: 23.7
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: M34019.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	130000
98-82-8	Isopropylbenzene	ND	66000
99-87-6	4-Isopropyltoluene	ND	66000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	66000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	130000
75-09-2	Methylene chloride	ND	66000
91-20-3	Naphthalene	ND	66000
103-65-1	n-Propylbenzene	ND	66000
100-42-5	Styrene	ND	66000
96-18-4	1,2,3-Trichloropropane	ND	66000
630-20-6	1,1,1,2-Tetrachloroethane	ND	66000
79-34-5	1,1,2,2-Tetrachloroethane	ND	66000
127-18-4	Tetrachloroethene (PCE)	ND	66000
108-88-3	Toluene	ND	66000
87-61-6	1,2,3-Trichlorobenzene	ND	66000
120-82-1	1,2,4-Trichlorobenzene	ND	66000
71-55-6	1,1,1-Trichloroethane	ND	66000
79-00-5	1,1,2-Trichloroethane	ND	66000
79-01-6	Trichloroethene (TCE)	2300000	66000
75-69-4	Trichlorofluoromethane	ND	66000
95-63-6	1,2,4-Trimethylbenzene	ND	66000
108-67-8	1,3,5-Trimethylbenzene	ND	66000
75-01-4	Vinyl chloride	ND	66000
95-47-6	o-Xylene	ND	66000
	m,p-Xylenes	ND	66000

Surrogate	Recovery	Limits
Bromofluorobenzene	97%	63%-113%
1,2-Dichloroethane-d4	102%	85%-116%
Toluene-d8	98%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703974
PL Sample No: 2

Date Collected: 3/19/2007
Date Received: 3/20/2007
Date Extracted: By:
Date Analyzed: 03/22/07 By: GP
Method: 8260B
QC Batch#: 52860
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Baseline-1 (Soil)

Matrix: Solid
Percent Moisture: 14.9
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: J29762.D;M34043.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	24
107-13-1	Acrylonitrile	ND	29
71-43-2	Benzene	ND	5.9
108-86-1	Bromobenzene	ND	5.9
74-97-5	Bromochloromethane	ND	5.9
75-27-4	Bromodichloromethane	ND	5.9
75-25-2	Bromoform	ND	5.9
74-83-9	Bromomethane	ND	5.9
78-93-3	2-Butanone (MEK)	ND	12
104-51-8	n-Butylbenzene	ND	5.9
135-98-8	sec-Butylbenzene	ND	5.9
98-06-6	tert-Butylbenzene	ND	5.9
75-15-0	Carbon disulfide	ND	5.9
56-23-5	Carbon tetrachloride	ND	5.9
108-90-7	Chlorobenzene	ND	5.9
75-00-3	Chloroethane	ND	5.9
67-66-3	Chloroform	ND	5.9
74-87-3	Chloromethane	ND	5.9
95-49-8	2-Chlorotoluene	ND	5.9
106-43-4	4-Chlorotoluene	ND	5.9
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	5.9
124-48-1	Dibromochloromethane	ND	5.9
106-93-4	1,2-Dibromoethane (EDB)	ND	5.9
74-95-3	Dibromomethane	ND	5.9
95-50-1	1,2-Dichlorobenzene	ND	5.9
541-73-1	1,3-Dichlorobenzene	ND	5.9
106-46-7	1,4-Dichlorobenzene	ND	5.9
75-71-8	Dichlorodifluoromethane	ND	5.9
75-34-3	1,1-Dichloroethane	ND	5.9
107-06-2	1,2-Dichloroethane	ND	5.9
75-35-4	1,1-Dichloroethene	ND	5.9
156-59-2	cis-1,2-Dichloroethene	14	5.9
156-60-5	trans-1,2-Dichloroethene	ND	5.9
78-87-5	1,2-Dichloropropane	ND	5.9
142-28-9	1,3-Dichloropropane	ND	5.9
590-20-7	2,2-Dichloropropane	ND	5.9
563-58-6	1,1-Dichloropropene	ND	5.9
10061-01-5	cis-1,3-Dichloropropene	ND	5.9
10061-02-6	trans-1,3-Dichloropropene	ND	5.9
100-41-4	Ethylbenzene	ND	5.9
87-68-3	Hexachlorobutadiene	ND	5.9

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703974
PL Sample No: 2 (continued)

Date Collected: 3/19/2007
Date Received: 3/20/2007
Date Extracted: By:
Date Analyzed: 03/22/07 By: GP
Method: 8260B
QC Batch#: 52860
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Baseline-1 (Soil)

Matrix: Solid
Percent Moisture: 14.9
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: J29762.D;M34043.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	12
98-82-8	Isopropylbenzene	ND	5.9
99-87-6	4-Isopropyltoluene	ND	5.9
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	5.9
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	12
75-09-2	Methylene chloride	ND	5.9
91-20-3	Naphthalene	ND	5.9
103-65-1	n-Propylbenzene	ND	5.9
100-42-5	Styrene	ND	5.9
96-18-4	1,2,3-Trichloropropane	ND	5.9
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.9
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.9
127-18-4	Tetrachloroethene (PCE)	7.9	5.9
108-88-3	Toluene	ND	5.9
87-61-6	1,2,3-Trichlorobenzene	ND	5.9
120-82-1	1,2,4-Trichlorobenzene	ND	5.9
71-55-6	1,1,1-Trichloroethane	ND	5.9
79-00-5	1,1,2-Trichloroethane	ND	5.9
79-01-6	Trichloroethene (TCE)	2100	5.9
75-69-4	Trichlorofluoromethane	ND	5.9
95-63-6	1,2,4-Trimethylbenzene	ND	5.9
108-67-8	1,3,5-Trimethylbenzene	ND	5.9
75-01-4	Vinyl chloride	ND	5.9
95-47-6	o-Xylene	ND	5.9
	m,p-Xylenes	ND	5.9

Surrogate	Recovery	Limits
Bromofluorobenzene	83%	63%-113%
1,2-Dichloroethane-d4	96%	85%-116%
Toluene-d8	97%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703974
PL Sample No: 3

Date Collected: 3/19/2007
Date Received: 3/20/2007
Date Extracted: By:
Date Analyzed: 03/22/07 By: GP
Method: 8260B
QC Batch#: 52860
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Baseline-2 (Soil)

Matrix: Solid
Percent Moisture: 15.4
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: J29763.D;M34044.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	24
107-13-1	Acrylonitrile	ND	30
71-43-2	Benzene	ND	5.9
108-86-1	Bromobenzene	ND	5.9
74-97-5	Bromochloromethane	ND	5.9
75-27-4	Bromodichloromethane	ND	5.9
75-25-2	Bromoform	ND	5.9
74-83-9	Bromomethane	ND	5.9
78-93-3	2-Butanone (MEK)	ND	12
104-51-8	n-Butylbenzene	ND	5.9
135-98-8	sec-Butylbenzene	ND	5.9
98-06-6	tert-Butylbenzene	ND	5.9
75-15-0	Carbon disulfide	ND	5.9
56-23-5	Carbon tetrachloride	ND	5.9
108-90-7	Chlorobenzene	ND	5.9
75-00-3	Chloroethane	ND	5.9
67-66-3	Chloroform	ND	5.9
74-87-3	Chloromethane	ND	5.9
95-49-8	2-Chlorotoluene	ND	5.9
106-43-4	4-Chlorotoluene	ND	5.9
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	5.9
124-48-1	Dibromochloromethane	ND	5.9
106-93-4	1,2-Dibromoethane (EDB)	ND	5.9
74-95-3	Dibromomethane	ND	5.9
95-50-1	1,2-Dichlorobenzene	ND	5.9
541-73-1	1,3-Dichlorobenzene	ND	5.9
106-46-7	1,4-Dichlorobenzene	ND	5.9
75-71-8	Dichlorodifluoromethane	ND	5.9
75-34-3	1,1-Dichloroethane	ND	5.9
107-06-2	1,2-Dichloroethane	ND	5.9
75-35-4	1,1-Dichloroethene	ND	5.9
156-59-2	cis-1,2-Dichloroethene	13	5.9
156-60-5	trans-1,2-Dichloroethene	ND	5.9
78-87-5	1,2-Dichloropropane	ND	5.9
142-28-9	1,3-Dichloropropane	ND	5.9
590-20-7	2,2-Dichloropropane	ND	5.9
563-58-6	1,1-Dichloropropene	ND	5.9
10061-01-5	cis-1,3-Dichloropropene	ND	5.9
10061-02-6	trans-1,3-Dichloropropene	ND	5.9
100-41-4	Ethylbenzene	ND	5.9
87-68-3	Hexachlorobutadiene	ND	5.9

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703974
PL Sample No: 3 (continued)

Date Collected: 3/19/2007
Date Received: 3/20/2007
Date Extracted: By:
Date Analyzed: 03/22/07 By: GP
Method: 8260B
QC Batch#: 52860
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Baseline-2 (Soil)

Matrix: Solid
Percent Moisture: 15.4
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: J29763.D;M34044.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	12
98-82-8	Isopropylbenzene	ND	5.9
99-87-6	4-Isopropyltoluene	ND	5.9
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	5.9
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	12
75-09-2	Methylene chloride	ND	5.9
91-20-3	Naphthalene	ND	5.9
103-65-1	n-Propylbenzene	ND	5.9
100-42-5	Styrene	ND	5.9
96-18-4	1,2,3-Trichloropropane	ND	5.9
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.9
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.9
127-18-4	Tetrachloroethene (PCE)	7.1	5.9
108-88-3	Toluene	ND	5.9
87-61-6	1,2,3-Trichlorobenzene	ND	5.9
120-82-1	1,2,4-Trichlorobenzene	ND	5.9
71-55-6	1,1,1-Trichloroethane	ND	5.9
79-00-5	1,1,2-Trichloroethane	ND	5.9
79-01-6	Trichloroethene (TCE)	1200	5.9
75-69-4	Trichlorofluoromethane	ND	5.9
95-63-6	1,2,4-Trimethylbenzene	ND	5.9
108-67-8	1,3,5-Trimethylbenzene	ND	5.9
75-01-4	Vinyl chloride	ND	5.9
95-47-6	o-Xylene	ND	5.9
	m,p-Xylenes	ND	5.9

Surrogate	Recovery	Limits
Bromofluorobenzene	87%	63%-113%
1,2-Dichloroethane-d4	96%	85%-116%
Toluene-d8	97%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703974
PL Sample No: 5

Date Collected: 3/19/2007
Date Received: 3/20/2007
Date Extracted: By:
Date Analyzed: 03/26/07 By: GP
Method: 8260B
QC Batch#: 52896
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: GW-Baseline-1

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M34078.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	40000
107-13-1	Acrylonitrile	ND	50000
71-43-2	Benzene	ND	10000
108-86-1	Bromobenzene	ND	10000
74-97-5	Bromochloromethane	ND	10000
75-27-4	Bromodichloromethane	ND	10000
75-25-2	Bromoform	ND	10000
74-83-9	Bromomethane	ND	10000
78-93-3	2-Butanone (MEK)	ND	20000
104-51-8	n-Butylbenzene	ND	10000
135-98-8	sec-Butylbenzene	ND	10000
98-06-6	tert-Butylbenzene	ND	10000
75-15-0	Carbon disulfide	ND	10000
56-23-5	Carbon tetrachloride	ND	10000
108-90-7	Chlorobenzene	ND	10000
75-00-3	Chloroethane	ND	10000
67-66-3	Chloroform	ND	10000
74-87-3	Chloromethane	ND	10000
95-49-8	2-Chlorotoluene	ND	10000
106-43-4	4-Chlorotoluene	ND	10000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	10000
124-48-1	Dibromochloromethane	ND	10000
106-93-4	1,2-Dibromoethane (EDB)	ND	10000
74-95-3	Dibromomethane	ND	10000
95-50-1	1,2-Dichlorobenzene	ND	10000
541-73-1	1,3-Dichlorobenzene	ND	10000
106-46-7	1,4-Dichlorobenzene	ND	10000
75-71-8	Dichlorodifluoromethane	ND	10000
75-34-3	1,1-Dichloroethane	ND	10000
107-06-2	1,2-Dichloroethane	ND	10000
75-35-4	1,1-Dichloroethene	ND	10000
156-59-2	cis-1,2-Dichloroethene	58000	10000
156-60-5	trans-1,2-Dichloroethene	ND	10000
78-87-5	1,2-Dichloropropane	ND	10000
142-28-9	1,3-Dichloropropane	ND	10000
590-20-7	2,2-Dichloropropane	ND	10000
563-58-6	1,1-Dichloropropene	ND	10000
10061-01-5	cis-1,3-Dichloropropene	ND	10000
10061-02-6	trans-1,3-Dichloropropene	ND	10000
100-41-4	Ethylbenzene	ND	10000
87-68-3	Hexachlorobutadiene	ND	10000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703974
PL Sample No: 5 (continued)

Date Collected: 3/19/2007
Date Received: 3/20/2007
Date Extracted: By:
Date Analyzed: 03/26/07 By: GP
Method: 8260B
QC Batch#: 52896
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: GW-Baseline-1

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M34078.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	20000
98-82-8	Isopropylbenzene	ND	10000
99-87-6	4-Isopropyltoluene	ND	10000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	20000
75-09-2	Methylene chloride	ND	10000
91-20-3	Naphthalene	ND	10000
103-65-1	n-Propylbenzene	ND	10000
100-42-5	Styrene	ND	10000
96-18-4	1,2,3-Trichloropropane	ND	10000
630-20-6	1,1,1,2-Tetrachloroethane	ND	10000
79-34-5	1,1,2,2-Tetrachloroethane	ND	10000
127-18-4	Tetrachloroethene (PCE)	ND	10000
108-88-3	Toluene	ND	10000
87-61-6	1,2,3-Trichlorobenzene	ND	10000
120-82-1	1,2,4-Trichlorobenzene	ND	10000
71-55-6	1,1,1-Trichloroethane	ND	10000
79-00-5	1,1,2-Trichloroethane	ND	10000
79-01-6	Trichloroethene (TCE)	400000	10000
75-69-4	Trichlorofluoromethane	ND	10000
95-63-6	1,2,4-Trimethylbenzene	ND	10000
108-67-8	1,3,5-Trimethylbenzene	ND	10000
75-01-4	Vinyl chloride	ND	10000
95-47-6	o-Xylene	ND	10000
	m,p-Xylenes	ND	10000

Surrogate	Recovery	Limits
Bromofluorobenzene	96%	83%-107%
1,2-Dichloroethane-d4	109%	86%-113%
Toluene-d8	96%	88%-108%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703974
PL Sample No: 6

Date Collected: 3/19/2007
Date Received: 3/20/2007
Date Extracted: By:
Date Analyzed: 03/26/07 By: GP
Method: 8260B
QC Batch#: 52896
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: GW-Baseline-2

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M34079.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	40000
107-13-1	Acrylonitrile	ND	50000
71-43-2	Benzene	ND	10000
108-86-1	Bromobenzene	ND	10000
74-97-5	Bromochloromethane	ND	10000
75-27-4	Bromodichloromethane	ND	10000
75-25-2	Bromoform	ND	10000
74-83-9	Bromomethane	ND	10000
78-93-3	2-Butanone (MEK)	ND	20000
104-51-8	n-Butylbenzene	ND	10000
135-98-8	sec-Butylbenzene	ND	10000
98-06-6	tert-Butylbenzene	ND	10000
75-15-0	Carbon disulfide	ND	10000
56-23-5	Carbon tetrachloride	ND	10000
108-90-7	Chlorobenzene	ND	10000
75-00-3	Chloroethane	ND	10000
67-66-3	Chloroform	ND	10000
74-87-3	Chloromethane	ND	10000
95-49-8	2-Chlorotoluene	ND	10000
106-43-4	4-Chlorotoluene	ND	10000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	10000
124-48-1	Dibromochloromethane	ND	10000
106-93-4	1,2-Dibromoethane (EDB)	ND	10000
74-95-3	Dibromomethane	ND	10000
95-50-1	1,2-Dichlorobenzene	ND	10000
541-73-1	1,3-Dichlorobenzene	ND	10000
106-46-7	1,4-Dichlorobenzene	ND	10000
75-71-8	Dichlorodifluoromethane	ND	10000
75-34-3	1,1-Dichloroethane	ND	10000
107-06-2	1,2-Dichloroethane	ND	10000
75-35-4	1,1-Dichloroethene	ND	10000
156-59-2	cis-1,2-Dichloroethene	58000	10000
156-60-5	trans-1,2-Dichloroethene	ND	10000
78-87-5	1,2-Dichloropropane	ND	10000
142-28-9	1,3-Dichloropropane	ND	10000
590-20-7	2,2-Dichloropropane	ND	10000
563-58-6	1,1-Dichloropropene	ND	10000
10061-01-5	cis-1,3-Dichloropropene	ND	10000
10061-02-6	trans-1,3-Dichloropropene	ND	10000
100-41-4	Ethylbenzene	ND	10000
87-68-3	Hexachlorobutadiene	ND	10000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703974
PL Sample No: 6 (continued)

Date Collected: 3/19/2007
Date Received: 3/20/2007
Date Extracted: By:
Date Analyzed: 03/26/07 By: GP
Method: 8260B
QC Batch#: 52896
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: GW-Baseline-2

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M34079.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	20000
98-82-8	Isopropylbenzene	ND	10000
99-87-6	4-Isopropyltoluene	ND	10000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	20000
75-09-2	Methylene chloride	ND	10000
91-20-3	Naphthalene	ND	10000
103-65-1	n-Propylbenzene	ND	10000
100-42-5	Styrene	ND	10000
96-18-4	1,2,3-Trichloropropane	ND	10000
630-20-6	1,1,1,2-Tetrachloroethane	ND	10000
79-34-5	1,1,2,2-Tetrachloroethane	ND	10000
127-18-4	Tetrachloroethene (PCE)	ND	10000
108-88-3	Toluene	ND	10000
87-61-6	1,2,3-Trichlorobenzene	ND	10000
120-82-1	1,2,4-Trichlorobenzene	ND	10000
71-55-6	1,1,1-Trichloroethane	ND	10000
79-00-5	1,1,2-Trichloroethane	ND	10000
79-01-6	Trichloroethene (TCE)	410000	10000
75-69-4	Trichlorofluoromethane	ND	10000
95-63-6	1,2,4-Trimethylbenzene	ND	10000
108-67-8	1,3,5-Trimethylbenzene	ND	10000
75-01-4	Vinyl chloride	ND	10000
95-47-6	o-Xylene	ND	10000
	m,p-Xylenes	ND	10000

Surrogate	Recovery	Limits
Bromofluorobenzene	97%	83%-107%
1,2-Dichloroethane-d4	108%	86%-113%
Toluene-d8	96%	88%-108%

Premier Laboratory, LLC
CHAIN OF CUSTODY

www.PremierLaboratory.com

SHADED AREAS FOR LAB USE ONLY

Lab WO# E703974

Project Manager

COPY OF REPORT TO

CUSTOMER: ANNETTE LEE
ADDRESS: 22 MARIN WAY #3
STRATHAM, NH 03885
ATTENTION: ANNETTE LEE
E-MAIL: lee@xdd-llc.com
PHONE: 603-778-1100 FAX: 603-778-2121

BILLING INFORMATION

BILL TO: XDD-LLC
ADDRESS: 22 MARIN WAY #3
ATTENTION: ANNETTE LEE
TELEPHONE: 603-778-1100
PURCHASE ORDER #:

PROJECT INFORMATION

PROJECT: SNDIAN HEAD SITE 17
PROJECT LOCATION: ~~MD~~ INDIANHEAD STATE: MD
PROJECT MANAGER: ANNETTE LEE
IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:
E-MAIL: lee@xdd-llc.com
TELEPHONE: 603-778-1100
FAX: 603-778-2121

SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE COMPOSITE	SAMPLE TYPE GRAB	SAMPLE MATRIX	# OF BOTTLES	VOC 8260	ASTM D422										PRESERVATIVES NONE	H2SO4	HCL	HNO3	NAOH	NON-PRES	MeOH
IH17 PP-BASELINE	3/15/07	1800		G	SOIL	1	X(*)											X						
BASELINE-1 (SOIL)	3/19/07	1500		G	SOIL	1	X											X						
BASELINE-2 (SOIL)	3/19/07	1500		G	SOIL	1	X											X						
GRAINSIZE-1	3/19/07	1530		G	SOIL	1		X										X						
GW-BASELINE-1	3/19/07	1530		G	WATER	1	X											X						
GW-BASELINE-2	3/19/07	1530		G	WATER	1	X											X						

CUSTODY TRANSFER

	DATE	TIME
SAMPLER: Dwight	3/19/0	16:00
RECEIVED:		
RELINQUISHED:		
RECEIVED:		
RELINQUISHED:		
RECEIVED: Josephine Lovell	3/20/07	12:00

TURNAROUND (INDICATE IN CALENDAR DAYS): Standard 14 days ____ FAX X HARD COPY X E-MAIL

EXPEDITED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS (*) Please decant the water from the top; then mix the slurry to get a good composite and test.

Call / Check with Ron Wasila or Annette Lee for Question.

CONDITIONS UPON RECEIPT: (Check One)

☐ Cooled ☐ Ambient ____ °C Upon Receipt at Lab

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

PAGE ____ of ____

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

ANALYTICAL DATA REPORT

Report Number: E703F77
Project: Indian Head - Site 17

prepared for:

XDD, LLC
22 Marin Way #3
Stratham, NH 03885

Attn: Annette Lee

Received Date: 3/30/2007
Report Date: 4/13/2007

Premier Laboratory, LLC
Authorized Signature

Certifications:
CT (PH-0465), MA (M-CT008), ME (CT050), NH (2020), NJ (CT002), NY (11549), RI (RI246)

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

Report No: E703F77
Client: XDD
Project: Indian Head - Site 17

CASE NARRATIVE / METHOD CONFORMANCE SUMMARY

Premier Laboratory received seven samples from XDD on 03/30/2007. The samples were analyzed from the following list of analyses:

Moisture, Percent	Volatiles by 8260B in GW/SW 8260B

Variances:

SDG:

None reported.

Method:

None reported.

QA/QC:

None reported.

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 1

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/06/07 By: GP
Method: 8260B
QC Batch#: 53195
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 1 FB

Matrix: Solid
Percent Moisture: 28.1
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: M34300.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	140000
107-13-1	Acrylonitrile	ND	170000
71-43-2	Benzene	ND	35000
108-86-1	Bromobenzene	ND	35000
74-97-5	Bromochloromethane	ND	35000
75-27-4	Bromodichloromethane	ND	35000
75-25-2	Bromoform	ND	35000
74-83-9	Bromomethane	ND	35000
78-93-3	2-Butanone (MEK)	ND	70000
104-51-8	n-Butylbenzene	ND	35000
135-98-8	sec-Butylbenzene	ND	35000
98-06-6	tert-Butylbenzene	ND	35000
75-15-0	Carbon disulfide	ND	35000
56-23-5	Carbon tetrachloride	ND	35000
108-90-7	Chlorobenzene	ND	35000
75-00-3	Chloroethane	ND	35000
67-66-3	Chloroform	ND	35000
74-87-3	Chloromethane	ND	35000
95-49-8	2-Chlorotoluene	ND	35000
106-43-4	4-Chlorotoluene	ND	35000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	35000
124-48-1	Dibromochloromethane	ND	35000
106-93-4	1,2-Dibromoethane (EDB)	ND	35000
74-95-3	Dibromomethane	ND	35000
95-50-1	1,2-Dichlorobenzene	ND	35000
541-73-1	1,3-Dichlorobenzene	ND	35000
106-46-7	1,4-Dichlorobenzene	ND	35000
75-71-8	Dichlorodifluoromethane	ND	35000
75-34-3	1,1-Dichloroethane	ND	35000
107-06-2	1,2-Dichloroethane	ND	35000
75-35-4	1,1-Dichloroethene	ND	35000
156-59-2	cis-1,2-Dichloroethene	ND	35000
156-60-5	trans-1,2-Dichloroethene	ND	35000
78-87-5	1,2-Dichloropropane	ND	35000
142-28-9	1,3-Dichloropropane	ND	35000
590-20-7	2,2-Dichloropropane	ND	35000
563-58-6	1,1-Dichloropropene	ND	35000
10061-01-5	cis-1,3-Dichloropropene	ND	35000
10061-02-6	trans-1,3-Dichloropropene	ND	35000
100-41-4	Ethylbenzene	ND	35000
87-68-3	Hexachlorobutadiene	ND	35000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 1 (continued)

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/06/07 By: GP
Method: 8260B
QC Batch#: 53195
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 1 FB

Matrix: Solid
Percent Moisture: 28.1
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: M34300.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	70000
98-82-8	Isopropylbenzene	ND	35000
99-87-6	4-Isopropyltoluene	ND	35000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	35000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	70000
75-09-2	Methylene chloride	ND	35000
91-20-3	Naphthalene	ND	35000
103-65-1	n-Propylbenzene	ND	35000
100-42-5	Styrene	ND	35000
96-18-4	1,2,3-Trichloropropane	ND	35000
630-20-6	1,1,1,2-Tetrachloroethane	ND	35000
79-34-5	1,1,2,2-Tetrachloroethane	25000	3500
127-18-4	Tetrachloroethene (PCE)	ND	35000
108-88-3	Toluene	ND	35000
87-61-6	1,2,3-Trichlorobenzene	ND	35000
120-82-1	1,2,4-Trichlorobenzene	ND	35000
71-55-6	1,1,1-Trichloroethane	ND	35000
79-00-5	1,1,2-Trichloroethane	ND	35000
79-01-6	Trichloroethene (TCE)	590000	35000
75-69-4	Trichlorofluoromethane	ND	35000
95-63-6	1,2,4-Trimethylbenzene	ND	35000
108-67-8	1,3,5-Trimethylbenzene	ND	35000
75-01-4	Vinyl chloride	ND	35000
95-47-6	o-Xylene	ND	35000
	m,p-Xylenes	ND	35000

Surrogate	Recovery	Limits
Bromofluorobenzene	96%	63%-113%
1,2-Dichloroethane-d4	98%	85%-116%
Toluene-d8	96%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 2

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/04/07 By: GP
Method: 8260B
QC Batch#: 53120
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 1 FCB

Matrix: Solid
Percent Moisture: 30.6
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: M34262.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	290000
107-13-1	Acrylonitrile	ND	360000
71-43-2	Benzene	ND	72000
108-86-1	Bromobenzene	ND	72000
74-97-5	Bromochloromethane	ND	72000
75-27-4	Bromodichloromethane	ND	72000
75-25-2	Bromoform	ND	72000
74-83-9	Bromomethane	ND	72000
78-93-3	2-Butanone (MEK)	ND	140000
104-51-8	n-Butylbenzene	ND	72000
135-98-8	sec-Butylbenzene	ND	72000
98-06-6	tert-Butylbenzene	ND	72000
75-15-0	Carbon disulfide	ND	72000
56-23-5	Carbon tetrachloride	ND	72000
108-90-7	Chlorobenzene	ND	72000
75-00-3	Chloroethane	ND	72000
67-66-3	Chloroform	ND	72000
74-87-3	Chloromethane	ND	72000
95-49-8	2-Chlorotoluene	ND	72000
106-43-4	4-Chlorotoluene	ND	72000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	72000
124-48-1	Dibromochloromethane	ND	72000
106-93-4	1,2-Dibromoethane (EDB)	ND	72000
74-95-3	Dibromomethane	ND	72000
95-50-1	1,2-Dichlorobenzene	ND	72000
541-73-1	1,3-Dichlorobenzene	ND	72000
106-46-7	1,4-Dichlorobenzene	ND	72000
75-71-8	Dichlorodifluoromethane	ND	72000
75-34-3	1,1-Dichloroethane	ND	72000
107-06-2	1,2-Dichloroethane	ND	72000
75-35-4	1,1-Dichloroethene	ND	72000
156-59-2	cis-1,2-Dichloroethene	ND	72000
156-60-5	trans-1,2-Dichloroethene	ND	72000
78-87-5	1,2-Dichloropropane	ND	72000
142-28-9	1,3-Dichloropropane	ND	72000
590-20-7	2,2-Dichloropropane	ND	72000
563-58-6	1,1-Dichloropropene	ND	72000
10061-01-5	cis-1,3-Dichloropropene	ND	72000
10061-02-6	trans-1,3-Dichloropropene	ND	72000
100-41-4	Ethylbenzene	ND	72000
87-68-3	Hexachlorobutadiene	ND	72000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 2 (continued)

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/04/07 By: GP
Method: 8260B
QC Batch#: 53120
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 1 FCB

Matrix: Solid
Percent Moisture: 30.6
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: M34262.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	140000
98-82-8	Isopropylbenzene	ND	72000
99-87-6	4-Isopropyltoluene	ND	72000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	72000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	140000
75-09-2	Methylene chloride	ND	72000
91-20-3	Naphthalene	ND	72000
103-65-1	n-Propylbenzene	ND	72000
100-42-5	Styrene	ND	72000
96-18-4	1,2,3-Trichloropropane	ND	72000
630-20-6	1,1,1,2-Tetrachloroethane	ND	72000
79-34-5	1,1,2,2-Tetrachloroethane	ND	7200
127-18-4	Tetrachloroethene (PCE)	ND	72000
108-88-3	Toluene	ND	72000
87-61-6	1,2,3-Trichlorobenzene	ND	72000
120-82-1	1,2,4-Trichlorobenzene	ND	72000
71-55-6	1,1,1-Trichloroethane	ND	72000
79-00-5	1,1,2-Trichloroethane	ND	72000
79-01-6	Trichloroethene (TCE)	2300000	72000
75-69-4	Trichlorofluoromethane	ND	72000
95-63-6	1,2,4-Trimethylbenzene	ND	72000
108-67-8	1,3,5-Trimethylbenzene	ND	72000
75-01-4	Vinyl chloride	ND	72000
95-47-6	o-Xylene	ND	72000
	m,p-Xylenes	ND	72000

Surrogate	Recovery	Limits
Bromofluorobenzene	94%	83%-107%
1,2-Dichloroethane-d4	102%	86%-113%
Toluene-d8	99%	88%-108%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 3

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/06/07 By: GP
Method: 8260B
QC Batch#: 53195
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 2 UB

Matrix: Solid
Percent Moisture: 27.1
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M34301.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	55000
107-13-1	Acrylonitrile	ND	68000
71-43-2	Benzene	ND	14000
108-86-1	Bromobenzene	ND	14000
74-97-5	Bromochloromethane	ND	14000
75-27-4	Bromodichloromethane	ND	14000
75-25-2	Bromoform	ND	14000
74-83-9	Bromomethane	ND	14000
78-93-3	2-Butanone (MEK)	ND	27000
104-51-8	n-Butylbenzene	ND	14000
135-98-8	sec-Butylbenzene	ND	14000
98-06-6	tert-Butylbenzene	ND	14000
75-15-0	Carbon disulfide	ND	14000
56-23-5	Carbon tetrachloride	ND	14000
108-90-7	Chlorobenzene	ND	14000
75-00-3	Chloroethane	ND	14000
67-66-3	Chloroform	ND	14000
74-87-3	Chloromethane	ND	14000
95-49-8	2-Chlorotoluene	ND	14000
106-43-4	4-Chlorotoluene	ND	14000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	14000
124-48-1	Dibromochloromethane	ND	14000
106-93-4	1,2-Dibromoethane (EDB)	ND	14000
74-95-3	Dibromomethane	ND	14000
95-50-1	1,2-Dichlorobenzene	ND	14000
541-73-1	1,3-Dichlorobenzene	ND	14000
106-46-7	1,4-Dichlorobenzene	ND	14000
75-71-8	Dichlorodifluoromethane	ND	14000
75-34-3	1,1-Dichloroethane	ND	14000
107-06-2	1,2-Dichloroethane	ND	14000
75-35-4	1,1-Dichloroethene	ND	14000
156-59-2	cis-1,2-Dichloroethene	ND	14000
156-60-5	trans-1,2-Dichloroethene	ND	14000
78-87-5	1,2-Dichloropropane	ND	14000
142-28-9	1,3-Dichloropropane	ND	14000
590-20-7	2,2-Dichloropropane	ND	14000
563-58-6	1,1-Dichloropropene	ND	14000
10061-01-5	cis-1,3-Dichloropropene	ND	14000
10061-02-6	trans-1,3-Dichloropropene	ND	14000
100-41-4	Ethylbenzene	ND	14000
87-68-3	Hexachlorobutadiene	ND	14000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 3 (continued)

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/06/07 By: GP
Method: 8260B
QC Batch#: 53195
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 2 UB

Matrix: Solid
Percent Moisture: 27.1
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M34301.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	27000
98-82-8	Isopropylbenzene	ND	14000
99-87-6	4-Isopropyltoluene	ND	14000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	14000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	27000
75-09-2	Methylene chloride	ND	14000
91-20-3	Naphthalene	ND	14000
103-65-1	n-Propylbenzene	ND	14000
100-42-5	Styrene	ND	14000
96-18-4	1,2,3-Trichloropropane	ND	14000
630-20-6	1,1,1,2-Tetrachloroethane	ND	14000
79-34-5	1,1,2,2-Tetrachloroethane	35000	1400
127-18-4	Tetrachloroethene (PCE)	ND	14000
108-88-3	Toluene	ND	14000
87-61-6	1,2,3-Trichlorobenzene	ND	14000
120-82-1	1,2,4-Trichlorobenzene	ND	14000
71-55-6	1,1,1-Trichloroethane	ND	14000
79-00-5	1,1,2-Trichloroethane	ND	14000
79-01-6	Trichloroethene (TCE)	420000	14000
75-69-4	Trichlorofluoromethane	ND	14000
95-63-6	1,2,4-Trimethylbenzene	ND	14000
108-67-8	1,3,5-Trimethylbenzene	ND	14000
75-01-4	Vinyl chloride	ND	14000
95-47-6	o-Xylene	ND	14000
	m,p-Xylenes	ND	14000

Surrogate	Recovery	Limits
Bromofluorobenzene	97%	63%-113%
1,2-Dichloroethane-d4	99%	85%-116%
Toluene-d8	94%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 4

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/04/07 By: GP
Method: 8260B
QC Batch#: 53120
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 2 UCB

Matrix: Solid
Percent Moisture: 34.5
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: M34264.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	300000
107-13-1	Acrylonitrile	ND	380000
71-43-2	Benzene	ND	76000
108-86-1	Bromobenzene	ND	76000
74-97-5	Bromochloromethane	ND	76000
75-27-4	Bromodichloromethane	ND	76000
75-25-2	Bromoform	ND	76000
74-83-9	Bromomethane	ND	76000
78-93-3	2-Butanone (MEK)	ND	150000
104-51-8	n-Butylbenzene	ND	76000
135-98-8	sec-Butylbenzene	ND	76000
98-06-6	tert-Butylbenzene	ND	76000
75-15-0	Carbon disulfide	ND	76000
56-23-5	Carbon tetrachloride	ND	76000
108-90-7	Chlorobenzene	ND	76000
75-00-3	Chloroethane	ND	76000
67-66-3	Chloroform	ND	76000
74-87-3	Chloromethane	ND	76000
95-49-8	2-Chlorotoluene	ND	76000
106-43-4	4-Chlorotoluene	ND	76000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	76000
124-48-1	Dibromochloromethane	ND	76000
106-93-4	1,2-Dibromoethane (EDB)	ND	76000
74-95-3	Dibromomethane	ND	76000
95-50-1	1,2-Dichlorobenzene	ND	76000
541-73-1	1,3-Dichlorobenzene	ND	76000
106-46-7	1,4-Dichlorobenzene	ND	76000
75-71-8	Dichlorodifluoromethane	ND	76000
75-34-3	1,1-Dichloroethane	ND	76000
107-06-2	1,2-Dichloroethane	ND	76000
75-35-4	1,1-Dichloroethene	ND	76000
156-59-2	cis-1,2-Dichloroethene	ND	76000
156-60-5	trans-1,2-Dichloroethene	ND	76000
78-87-5	1,2-Dichloropropane	ND	76000
142-28-9	1,3-Dichloropropane	ND	76000
590-20-7	2,2-Dichloropropane	ND	76000
563-58-6	1,1-Dichloropropene	ND	76000
10061-01-5	cis-1,3-Dichloropropene	ND	76000
10061-02-6	trans-1,3-Dichloropropene	ND	76000
100-41-4	Ethylbenzene	ND	76000
87-68-3	Hexachlorobutadiene	ND	76000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 4 (continued)

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/04/07 By: GP
Method: 8260B
QC Batch#: 53120
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 2 UCB

Matrix: Solid
Percent Moisture: 34.5
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: M34264.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	150000
98-82-8	Isopropylbenzene	ND	76000
99-87-6	4-Isopropyltoluene	ND	76000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	76000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	150000
75-09-2	Methylene chloride	ND	76000
91-20-3	Naphthalene	ND	76000
103-65-1	n-Propylbenzene	ND	76000
100-42-5	Styrene	ND	76000
96-18-4	1,2,3-Trichloropropane	ND	76000
630-20-6	1,1,1,2-Tetrachloroethane	ND	76000
79-34-5	1,1,2,2-Tetrachloroethane	ND	7600
127-18-4	Tetrachloroethene (PCE)	ND	76000
108-88-3	Toluene	ND	76000
87-61-6	1,2,3-Trichlorobenzene	ND	76000
120-82-1	1,2,4-Trichlorobenzene	ND	76000
71-55-6	1,1,1-Trichloroethane	ND	76000
79-00-5	1,1,2-Trichloroethane	ND	76000
79-01-6	Trichloroethene (TCE)	2300000	76000
75-69-4	Trichlorofluoromethane	ND	76000
95-63-6	1,2,4-Trimethylbenzene	ND	76000
108-67-8	1,3,5-Trimethylbenzene	ND	76000
75-01-4	Vinyl chloride	ND	76000
95-47-6	o-Xylene	ND	76000
	m,p-Xylenes	ND	76000

Surrogate	Recovery	Limits
Bromofluorobenzene	92%	83%-107%
1,2-Dichloroethane-d4	101%	86%-113%
Toluene-d8	100%	88%-108%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 5

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/04/07 By: GP
Method: 8260B
QC Batch#: 53120
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 3 APB

Matrix: Solid
Percent Moisture: 28.1
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: M34265.D;M34259.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	140000
107-13-1	Acrylonitrile	ND	170000
71-43-2	Benzene	ND	35000
108-86-1	Bromobenzene	ND	35000
74-97-5	Bromochloromethane	ND	35000
75-27-4	Bromodichloromethane	ND	35000
75-25-2	Bromoform	ND	35000
74-83-9	Bromomethane	ND	35000
78-93-3	2-Butanone (MEK)	ND	70000
104-51-8	n-Butylbenzene	ND	35000
135-98-8	sec-Butylbenzene	ND	35000
98-06-6	tert-Butylbenzene	ND	35000
75-15-0	Carbon disulfide	ND	35000
56-23-5	Carbon tetrachloride	ND	35000
108-90-7	Chlorobenzene	ND	35000
75-00-3	Chloroethane	ND	35000
67-66-3	Chloroform	ND	35000
74-87-3	Chloromethane	ND	35000
95-49-8	2-Chlorotoluene	ND	35000
106-43-4	4-Chlorotoluene	ND	35000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	35000
124-48-1	Dibromochloromethane	ND	35000
106-93-4	1,2-Dibromoethane (EDB)	ND	35000
74-95-3	Dibromomethane	ND	35000
95-50-1	1,2-Dichlorobenzene	ND	35000
541-73-1	1,3-Dichlorobenzene	ND	35000
106-46-7	1,4-Dichlorobenzene	ND	35000
75-71-8	Dichlorodifluoromethane	ND	35000
75-34-3	1,1-Dichloroethane	ND	35000
107-06-2	1,2-Dichloroethane	ND	35000
75-35-4	1,1-Dichloroethene	ND	35000
156-59-2	cis-1,2-Dichloroethene	ND	35000
156-60-5	trans-1,2-Dichloroethene	ND	35000
78-87-5	1,2-Dichloropropane	ND	35000
142-28-9	1,3-Dichloropropane	ND	35000
590-20-7	2,2-Dichloropropane	ND	35000
563-58-6	1,1-Dichloropropene	ND	35000
10061-01-5	cis-1,3-Dichloropropene	ND	35000
10061-02-6	trans-1,3-Dichloropropene	ND	35000
100-41-4	Ethylbenzene	ND	35000
87-68-3	Hexachlorobutadiene	ND	35000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 5 (continued)

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/04/07 By: GP
Method: 8260B
QC Batch#: 53120
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 3 APB

Matrix: Solid
Percent Moisture: 28.1
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: M34265.D;M34259.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	70000
98-82-8	Isopropylbenzene	ND	35000
99-87-6	4-Isopropyltoluene	ND	35000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	35000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	70000
75-09-2	Methylene chloride	ND	35000
91-20-3	Naphthalene	ND	35000
103-65-1	n-Propylbenzene	ND	35000
100-42-5	Styrene	ND	35000
96-18-4	1,2,3-Trichloropropane	ND	35000
630-20-6	1,1,1,2-Tetrachloroethane	ND	35000
79-34-5	1,1,2,2-Tetrachloroethane	4200	3500
127-18-4	Tetrachloroethene (PCE)	ND	35000
108-88-3	Toluene	ND	35000
87-61-6	1,2,3-Trichlorobenzene	ND	35000
120-82-1	1,2,4-Trichlorobenzene	ND	35000
71-55-6	1,1,1-Trichloroethane	ND	35000
79-00-5	1,1,2-Trichloroethane	ND	35000
79-01-6	Trichloroethene (TCE)	540000	35000
75-69-4	Trichlorofluoromethane	ND	35000
95-63-6	1,2,4-Trimethylbenzene	ND	35000
108-67-8	1,3,5-Trimethylbenzene	ND	35000
75-01-4	Vinyl chloride	ND	35000
95-47-6	o-Xylene	ND	35000
	m,p-Xylenes	ND	35000

Surrogate	Recovery	Limits
Bromofluorobenzene	90%	83%-107%
1,2-Dichloroethane-d4	100%	86%-113%
Toluene-d8	98%	88%-108%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 6

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/04/07 By: GP
Method: 8260B
QC Batch#: 53120
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 3 APCB

Matrix: Solid
Percent Moisture: 30.0
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: M34266.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	280000
107-13-1	Acrylonitrile	ND	360000
71-43-2	Benzene	ND	71000
108-86-1	Bromobenzene	ND	71000
74-97-5	Bromochloromethane	ND	71000
75-27-4	Bromodichloromethane	ND	71000
75-25-2	Bromoform	ND	71000
74-83-9	Bromomethane	ND	71000
78-93-3	2-Butanone (MEK)	ND	140000
104-51-8	n-Butylbenzene	ND	71000
135-98-8	sec-Butylbenzene	ND	71000
98-06-6	tert-Butylbenzene	ND	71000
75-15-0	Carbon disulfide	ND	71000
56-23-5	Carbon tetrachloride	ND	71000
108-90-7	Chlorobenzene	ND	71000
75-00-3	Chloroethane	ND	71000
67-66-3	Chloroform	ND	71000
74-87-3	Chloromethane	ND	71000
95-49-8	2-Chlorotoluene	ND	71000
106-43-4	4-Chlorotoluene	ND	71000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	71000
124-48-1	Dibromochloromethane	ND	71000
106-93-4	1,2-Dibromoethane (EDB)	ND	71000
74-95-3	Dibromomethane	ND	71000
95-50-1	1,2-Dichlorobenzene	ND	71000
541-73-1	1,3-Dichlorobenzene	ND	71000
106-46-7	1,4-Dichlorobenzene	ND	71000
75-71-8	Dichlorodifluoromethane	ND	71000
75-34-3	1,1-Dichloroethane	ND	71000
107-06-2	1,2-Dichloroethane	ND	71000
75-35-4	1,1-Dichloroethene	ND	71000
156-59-2	cis-1,2-Dichloroethene	ND	71000
156-60-5	trans-1,2-Dichloroethene	ND	71000
78-87-5	1,2-Dichloropropane	ND	71000
142-28-9	1,3-Dichloropropane	ND	71000
590-20-7	2,2-Dichloropropane	ND	71000
563-58-6	1,1-Dichloropropene	ND	71000
10061-01-5	cis-1,3-Dichloropropene	ND	71000
10061-02-6	trans-1,3-Dichloropropene	ND	71000
100-41-4	Ethylbenzene	ND	71000
87-68-3	Hexachlorobutadiene	ND	71000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 6 (continued)

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/04/07 By: GP
Method: 8260B
QC Batch#: 53120
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Reactor 3 APCB

Matrix: Solid
Percent Moisture: 30.0
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: M34266.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	140000
98-82-8	Isopropylbenzene	ND	71000
99-87-6	4-Isopropyltoluene	ND	71000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	71000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	140000
75-09-2	Methylene chloride	ND	71000
91-20-3	Naphthalene	ND	71000
103-65-1	n-Propylbenzene	ND	71000
100-42-5	Styrene	ND	71000
96-18-4	1,2,3-Trichloropropane	ND	71000
630-20-6	1,1,1,2-Tetrachloroethane	ND	71000
79-34-5	1,1,2,2-Tetrachloroethane	ND	7100
127-18-4	Tetrachloroethene (PCE)	ND	71000
108-88-3	Toluene	ND	71000
87-61-6	1,2,3-Trichlorobenzene	ND	71000
120-82-1	1,2,4-Trichlorobenzene	ND	71000
71-55-6	1,1,1-Trichloroethane	ND	71000
79-00-5	1,1,2-Trichloroethane	ND	71000
79-01-6	Trichloroethene (TCE)	1500000	71000
75-69-4	Trichlorofluoromethane	ND	71000
95-63-6	1,2,4-Trimethylbenzene	ND	71000
108-67-8	1,3,5-Trimethylbenzene	ND	71000
75-01-4	Vinyl chloride	ND	71000
95-47-6	o-Xylene	ND	71000
	m,p-Xylenes	ND	71000

Surrogate	Recovery	Limits
Bromofluorobenzene	94%	83%-107%
1,2-Dichloroethane-d4	99%	86%-113%
Toluene-d8	101%	88%-108%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 7

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/02/07 By: GP
Method: 8260B
QC Batch#:
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Trip Blank

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: M34195.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	20
107-13-1	Acrylonitrile	ND	25
71-43-2	Benzene	ND	5.0
108-86-1	Bromobenzene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
75-27-4	Bromodichloromethane	ND	5.0
75-25-2	Bromoform	ND	5.0
74-83-9	Bromomethane	ND	5.0
78-93-3	2-Butanone (MEK)	ND	10
104-51-8	n-Butylbenzene	ND	5.0
135-98-8	sec-Butylbenzene	ND	5.0
98-06-6	tert-Butylbenzene	ND	5.0
75-15-0	Carbon disulfide	ND	5.0
56-23-5	Carbon tetrachloride	ND	5.0
108-90-7	Chlorobenzene	ND	5.0
75-00-3	Chloroethane	ND	5.0
67-66-3	Chloroform	ND	5.0
74-87-3	Chloromethane	ND	5.0
95-49-8	2-Chlorotoluene	ND	5.0
106-43-4	4-Chlorotoluene	ND	5.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
106-93-4	1,2-Dibromoethane (EDB)	ND	5.0
74-95-3	Dibromomethane	ND	5.0
95-50-1	1,2-Dichlorobenzene	ND	5.0
541-73-1	1,3-Dichlorobenzene	ND	5.0
106-46-7	1,4-Dichlorobenzene	ND	5.0
75-71-8	Dichlorodifluoromethane	ND	5.0
75-34-3	1,1-Dichloroethane	ND	5.0
107-06-2	1,2-Dichloroethane	ND	5.0
75-35-4	1,1-Dichloroethene	ND	5.0
156-59-2	cis-1,2-Dichloroethene	ND	5.0
156-60-5	trans-1,2-Dichloroethene	ND	5.0
78-87-5	1,2-Dichloropropane	ND	5.0
142-28-9	1,3-Dichloropropane	ND	5.0
590-20-7	2,2-Dichloropropane	ND	5.0
563-58-6	1,1-Dichloropropene	ND	5.0
10061-01-5	cis-1,3-Dichloropropene	ND	5.0
10061-02-6	trans-1,3-Dichloropropene	ND	5.0
100-41-4	Ethylbenzene	ND	5.0
87-68-3	Hexachlorobutadiene	ND	5.0

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E703F77
PL Sample No: 7 (continued)

Date Collected: 3/29/2007
Date Received: 3/30/2007
Date Extracted: By:
Date Analyzed: 04/02/07 By: GP
Method: 8260B
QC Batch#:
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Trip Blank

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: M34195.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	10
98-82-8	Isopropylbenzene	ND	5.0
99-87-6	4-Isopropyltoluene	ND	5.0
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10
75-09-2	Methylene chloride	ND	5.0
91-20-3	Naphthalene	ND	5.0
103-65-1	n-Propylbenzene	ND	5.0
100-42-5	Styrene	ND	5.0
96-18-4	1,2,3-Trichloropropane	ND	5.0
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50
127-18-4	Tetrachloroethene (PCE)	ND	5.0
108-88-3	Toluene	ND	5.0
87-61-6	1,2,3-Trichlorobenzene	ND	5.0
120-82-1	1,2,4-Trichlorobenzene	ND	5.0
71-55-6	1,1,1-Trichloroethane	ND	5.0
79-00-5	1,1,2-Trichloroethane	ND	5.0
79-01-6	Trichloroethene (TCE)	ND	5.0
75-69-4	Trichlorofluoromethane	ND	5.0
95-63-6	1,2,4-Trimethylbenzene	ND	5.0
108-67-8	1,3,5-Trimethylbenzene	ND	5.0
75-01-4	Vinyl chloride	ND	5.0
95-47-6	o-Xylene	ND	5.0
	m,p-Xylenes	ND	5.0

Surrogate	Recovery	Limits
Bromofluorobenzene	96%	83%-107%
1,2-Dichloroethane-d4	110%	86%-113%
Toluene-d8	97%	88%-108%

Premier Laboratory, LLC

CHAIN OF CUSTODY www.PremierLaboratory.com

SHADED AREAS FOR LAB USE ONLY — Lab WO#: E703F77 (AP) — Project Manager:

COPY OF REPORT TO

CUSTOMER: ANNETTE LEE
ADDRESS: 22 MARIN WAY #3
STRATHAM NH 03885
ATTENTION: ANNETTE LEE
E-MAIL: lee@xdd-llc.com
PHONE: 603-778-1100 FAX: 603-778-2121

BILLING INFORMATION

BILL TO: XDD-LLC
ADDRESS: 22 MARIN WAY #3
STRATHAM, NH 03885
ATTENTION: ANNETTE LEE
TELEPHONE: 603-778-1100
PURCHASE ORDER #: 80

PROJECT INFORMATION

PROJECT: INDIAN HEAD SITE 17
PROJECT LOCATION: INDIAN HEAD STATE: MD
PROJECT MANAGER: ANNETTE LEE
IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:
E-MAIL: lee@xdd-llc.com
TELEPHONE: 603-778-1100.
FAX: 603-778-2121.

SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX	# OF BOTTLES	ANALYSIS: VOC 8260	PRESERVATIVES: NONE	H2SO4	HCL	HNO3	NAOH	NON-PRES	MeOH
Reactor 1 FB	3/29/07	12:00		G	SOIL	1	X (*)	X						
Reactor 1 FCB	↓	↓		G	↓	1	X (*)	X						
Reactor 2 UB				G		1	X (*)	X						
Reactor 2 UCB				G		1	X (*)	X						
Reactor 3 APB				G		1	X (*)	X						
Reactor 3 APCB				G		1	X (*)	X						
Trip Blank	3/29/07	12:00	—		WATER	1	X	X						

CUSTODY TRANSFER

	DATE	TIME
SAMPLER: Deepti	3/29/07	15:00
RECEIVED:		
RELINQUISHED:		
RECEIVED:		
RELINQUISHED:		
RECEIVED:	3/30/07	1146

TURNAROUND (INDICATE IN CALENDAR DAYS): Standard 14 days ____ FAX X HARD COPY X E-MAIL
EXPEDITED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS (*) Please decant the water from the top, then mix the slurry to get a good composite and test for soil VOCs. Call/Check with Ron Warila or Annette Lee for Questions.

CONDITIONS UPON RECEIPT: (Check One) ☑ Cooled ☐ Ambient 2.8° C Upon Receipt at Lab

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

Injection Simulation Test Laboratory Reports

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

ANALYTICAL DATA REPORT

Report Number: E706012
Project: Indian Head - Site 17

prepared for:

XDD, LLC
22 Marin Way #3
Stratham, NH 03885

Attn: Annette Lee

Received Date: 6/1/2007
Report Date: 6/15/2007

Premier Laboratory, LLC
Authorized Signature

Certifications:
CT (PH-0465), MA (M-CT008), ME (CT050), NH (2020), NJ (CT002), NY (11549), RI (RI246)

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

Report No: E706012
Client: XDD
Project: Indian Head - Site 17

CASE NARRATIVE / METHOD CONFORMANCE SUMMARY

Premier Laboratory received four samples from XDD on 06/01/2007. The samples were analyzed from the following list of analyses:

Moisture, Percent	Volatiles by 8260B in GW/SW 8260B

Variances:

SDG:

None reported.

Method:

None reported.

QA/QC:

None reported.

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706012
PL Sample No: 1

Date Collected: 5/31/2007
Date Received: 6/1/2007
Date Extracted: By:
Date Analyzed: 06/07/07 By: GP
Method: 8260B
QC Batch#: 54317
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: IS Baseline 1 [Soil]

Matrix: Solid
Percent Moisture: 27.3
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: M35554.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	280000
107-13-1	Acrylonitrile	ND	340000
71-43-2	Benzene	ND	69000
108-86-1	Bromobenzene	ND	69000
74-97-5	Bromochloromethane	ND	69000
75-27-4	Bromodichloromethane	ND	69000
75-25-2	Bromoform	ND	69000
74-83-9	Bromomethane	ND	69000
78-93-3	2-Butanone (MEK)	ND	140000
104-51-8	n-Butylbenzene	ND	69000
135-98-8	sec-Butylbenzene	ND	69000
98-06-6	tert-Butylbenzene	ND	69000
75-15-0	Carbon disulfide	ND	69000
56-23-5	Carbon tetrachloride	ND	69000
108-90-7	Chlorobenzene	ND	69000
75-00-3	Chloroethane	ND	69000
67-66-3	Chloroform	ND	69000
74-87-3	Chloromethane	ND	69000
95-49-8	2-Chlorotoluene	ND	69000
106-43-4	4-Chlorotoluene	ND	69000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	69000
124-48-1	Dibromochloromethane	ND	69000
106-93-4	1,2-Dibromoethane (EDB)	ND	69000
74-95-3	Dibromomethane	ND	69000
95-50-1	1,2-Dichlorobenzene	ND	69000
541-73-1	1,3-Dichlorobenzene	ND	69000
106-46-7	1,4-Dichlorobenzene	ND	69000
75-71-8	Dichlorodifluoromethane	ND	69000
75-34-3	1,1-Dichloroethane	ND	69000
107-06-2	1,2-Dichloroethane	ND	69000
75-35-4	1,1-Dichloroethene	ND	69000
156-59-2	cis-1,2-Dichloroethene	16000	69000
156-60-5	trans-1,2-Dichloroethene	ND	69000
78-87-5	1,2-Dichloropropane	ND	69000
142-28-9	1,3-Dichloropropane	ND	69000
590-20-7	2,2-Dichloropropane	ND	69000
563-58-6	1,1-Dichloropropene	ND	69000
10061-01-5	cis-1,3-Dichloropropene	ND	69000
10061-02-6	trans-1,3-Dichloropropene	ND	69000
100-41-4	Ethylbenzene	ND	69000
87-68-3	Hexachlorobutadiene	ND	69000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706012
PL Sample No: 1 (continued)

Date Collected: 5/31/2007
Date Received: 6/1/2007
Date Extracted: By:
Date Analyzed: 06/07/07 By: GP
Method: 8260B
QC Batch#: 54317
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: IS Baseline 1 [Soil]

Matrix: Solid
Percent Moisture: 27.3
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: M35554.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	140000
98-82-8	Isopropylbenzene	ND	69000
99-87-6	4-Isopropyltoluene	ND	69000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	69000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	140000
75-09-2	Methylene chloride	ND	69000
91-20-3	Naphthalene	ND	69000
103-65-1	n-Propylbenzene	ND	69000
100-42-5	Styrene	ND	69000
96-18-4	1,2,3-Trichloropropane	ND	69000
630-20-6	1,1,1,2-Tetrachloroethane	ND	69000
79-34-5	1,1,2,2-Tetrachloroethane	ND	69000
127-18-4	Tetrachloroethene (PCE)	ND	69000
108-88-3	Toluene	ND	69000
87-61-6	1,2,3-Trichlorobenzene	ND	69000
120-82-1	1,2,4-Trichlorobenzene	ND	69000
71-55-6	1,1,1-Trichloroethane	ND	69000
79-00-5	1,1,2-Trichloroethane	ND	69000
79-01-6	Trichloroethene (TCE)	1600000	69000
75-69-4	Trichlorofluoromethane	ND	69000
95-63-6	1,2,4-Trimethylbenzene	ND	69000
108-67-8	1,3,5-Trimethylbenzene	ND	69000
75-01-4	Vinyl chloride	ND	69000
95-47-6	o-Xylene	ND	69000
	m,p-Xylenes	ND	69000
123-91-1	1,4-Dioxane	ND	690000

Surrogate	Recovery	Limits
Bromofluorobenzene	93%	63%-113%
1,2-Dichloroethane-d4	91%	85%-116%
Toluene-d8	96%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706012
PL Sample No: 2

Date Collected: 5/31/2007
Date Received: 6/1/2007
Date Extracted: By:
Date Analyzed: 06/07/07 By: GP
Method: 8260B
QC Batch#: 54317
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: IS Baseline 2 [Soil]

Matrix: Solid
Percent Moisture: 26.6
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: M35555.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	140000
107-13-1	Acrylonitrile	ND	170000
71-43-2	Benzene	ND	34000
108-86-1	Bromobenzene	ND	34000
74-97-5	Bromochloromethane	ND	34000
75-27-4	Bromodichloromethane	ND	34000
75-25-2	Bromoform	ND	34000
74-83-9	Bromomethane	ND	34000
78-93-3	2-Butanone (MEK)	ND	68000
104-51-8	n-Butylbenzene	ND	34000
135-98-8	sec-Butylbenzene	ND	34000
98-06-6	tert-Butylbenzene	ND	34000
75-15-0	Carbon disulfide	ND	34000
56-23-5	Carbon tetrachloride	ND	34000
108-90-7	Chlorobenzene	ND	34000
75-00-3	Chloroethane	ND	34000
67-66-3	Chloroform	ND	34000
74-87-3	Chloromethane	ND	34000
95-49-8	2-Chlorotoluene	ND	34000
106-43-4	4-Chlorotoluene	ND	34000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	34000
124-48-1	Dibromochloromethane	ND	34000
106-93-4	1,2-Dibromoethane (EDB)	ND	34000
74-95-3	Dibromomethane	ND	34000
95-50-1	1,2-Dichlorobenzene	ND	34000
541-73-1	1,3-Dichlorobenzene	ND	34000
106-46-7	1,4-Dichlorobenzene	ND	34000
75-71-8	Dichlorodifluoromethane	ND	34000
75-34-3	1,1-Dichloroethane	ND	34000
107-06-2	1,2-Dichloroethane	ND	34000
75-35-4	1,1-Dichloroethene	ND	34000
156-59-2	cis-1,2-Dichloroethene	16000	34000
156-60-5	trans-1,2-Dichloroethene	ND	34000
78-87-5	1,2-Dichloropropane	ND	34000
142-28-9	1,3-Dichloropropane	ND	34000
590-20-7	2,2-Dichloropropane	ND	34000
563-58-6	1,1-Dichloropropene	ND	34000
10061-01-5	cis-1,3-Dichloropropene	ND	34000
10061-02-6	trans-1,3-Dichloropropene	ND	34000
100-41-4	Ethylbenzene	ND	34000
87-68-3	Hexachlorobutadiene	ND	34000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706012
PL Sample No: 2 (continued)

Date Collected: 5/31/2007
Date Received: 6/1/2007
Date Extracted: By:
Date Analyzed: 06/07/07 By: GP
Method: 8260B
QC Batch#: 54317
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: IS Baseline 2 [Soil]

Matrix: Solid
Percent Moisture: 26.6
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: M35555.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	68000
98-82-8	Isopropylbenzene	ND	34000
99-87-6	4-Isopropyltoluene	ND	34000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	34000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	68000
75-09-2	Methylene chloride	ND	34000
91-20-3	Naphthalene	ND	34000
103-65-1	n-Propylbenzene	ND	34000
100-42-5	Styrene	ND	34000
96-18-4	1,2,3-Trichloropropane	ND	34000
630-20-6	1,1,1,2-Tetrachloroethane	ND	34000
79-34-5	1,1,2,2-Tetrachloroethane	ND	34000
127-18-4	Tetrachloroethene (PCE)	ND	34000
108-88-3	Toluene	ND	34000
87-61-6	1,2,3-Trichlorobenzene	ND	34000
120-82-1	1,2,4-Trichlorobenzene	ND	34000
71-55-6	1,1,1-Trichloroethane	ND	34000
79-00-5	1,1,2-Trichloroethane	ND	34000
79-01-6	Trichloroethene (TCE)	1700000	34000
75-69-4	Trichlorofluoromethane	ND	34000
95-63-6	1,2,4-Trimethylbenzene	ND	34000
108-67-8	1,3,5-Trimethylbenzene	ND	34000
75-01-4	Vinyl chloride	ND	34000
95-47-6	o-Xylene	ND	34000
	m,p-Xylenes	ND	34000
123-91-1	1,4-Dioxane	ND	340000

Surrogate	Recovery	Limits
Bromofluorobenzene	97%	63%-113%
1,2-Dichloroethane-d4	92%	85%-116%
Toluene-d8	98%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706012
PL Sample No: 3

Date Collected: 5/31/2007
Date Received: 6/1/2007
Date Extracted: By:
Date Analyzed: 06/04/07 By: GP
Method: 8260B
QC Batch#: 54263
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Trip Blank

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: M35485.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	20
107-13-1	Acrylonitrile	ND	25
71-43-2	Benzene	ND	5.0
108-86-1	Bromobenzene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
75-27-4	Bromodichloromethane	ND	5.0
75-25-2	Bromoform	ND	5.0
74-83-9	Bromomethane	ND	5.0
78-93-3	2-Butanone (MEK)	ND	10
104-51-8	n-Butylbenzene	ND	5.0
135-98-8	sec-Butylbenzene	ND	5.0
98-06-6	tert-Butylbenzene	ND	5.0
75-15-0	Carbon disulfide	ND	5.0
56-23-5	Carbon tetrachloride	ND	5.0
108-90-7	Chlorobenzene	ND	5.0
75-00-3	Chloroethane	ND	5.0
67-66-3	Chloroform	ND	5.0
74-87-3	Chloromethane	ND	5.0
95-49-8	2-Chlorotoluene	ND	5.0
106-43-4	4-Chlorotoluene	ND	5.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
106-93-4	1,2-Dibromoethane (EDB)	ND	5.0
74-95-3	Dibromomethane	ND	5.0
95-50-1	1,2-Dichlorobenzene	ND	5.0
541-73-1	1,3-Dichlorobenzene	ND	5.0
106-46-7	1,4-Dichlorobenzene	ND	5.0
75-71-8	Dichlorodifluoromethane	ND	5.0
75-34-3	1,1-Dichloroethane	ND	5.0
107-06-2	1,2-Dichloroethane	ND	5.0
75-35-4	1,1-Dichloroethene	ND	5.0
156-59-2	cis-1,2-Dichloroethene	ND	5.0
156-60-5	trans-1,2-Dichloroethene	ND	5.0
78-87-5	1,2-Dichloropropane	ND	5.0
142-28-9	1,3-Dichloropropane	ND	5.0
590-20-7	2,2-Dichloropropane	ND	5.0
563-58-6	1,1-Dichloropropene	ND	5.0
10061-01-5	cis-1,3-Dichloropropene	ND	5.0
10061-02-6	trans-1,3-Dichloropropene	ND	5.0
100-41-4	Ethylbenzene	ND	5.0
87-68-3	Hexachlorobutadiene	ND	5.0

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706012
PL Sample No: 3 (continued)

Date Collected: 5/31/2007
Date Received: 6/1/2007
Date Extracted: By:
Date Analyzed: 06/04/07 By: GP
Method: 8260B
QC Batch#: 54263
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Trip Blank

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: M35485.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	10
98-82-8	Isopropylbenzene	ND	5.0
99-87-6	4-Isopropyltoluene	ND	5.0
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10
75-09-2	Methylene chloride	ND	5.0
91-20-3	Naphthalene	ND	5.0
103-65-1	n-Propylbenzene	ND	5.0
100-42-5	Styrene	ND	5.0
96-18-4	1,2,3-Trichloropropane	ND	5.0
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0
127-18-4	Tetrachloroethene (PCE)	ND	5.0
108-88-3	Toluene	ND	5.0
87-61-6	1,2,3-Trichlorobenzene	ND	5.0
120-82-1	1,2,4-Trichlorobenzene	ND	5.0
71-55-6	1,1,1-Trichloroethane	ND	5.0
79-00-5	1,1,2-Trichloroethane	ND	5.0
79-01-6	Trichloroethene (TCE)	ND	5.0
75-69-4	Trichlorofluoromethane	ND	5.0
95-63-6	1,2,4-Trimethylbenzene	ND	5.0
108-67-8	1,3,5-Trimethylbenzene	ND	5.0
75-01-4	Vinyl chloride	ND	5.0
95-47-6	o-Xylene	ND	5.0
	m,p-Xylenes	ND	5.0

Surrogate	Recovery	Limits
Bromofluorobenzene	99%	83%-107%
1,2-Dichloroethane-d4	106%	86%-113%
Toluene-d8	89%	88%-108%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706012
PL Sample No: 4

Date Collected: 5/31/2007
Date Received: 6/1/2007
Date Extracted: By:
Date Analyzed: 06/07/07 By: GP
Method: 8260B
QC Batch#: 54317
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: IS Baseline 1 [Aqueous]

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: M35556.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	100000
107-13-1	Acrylonitrile	ND	120000
71-43-2	Benzene	ND	25000
108-86-1	Bromobenzene	ND	25000
74-97-5	Bromochloromethane	ND	25000
75-27-4	Bromodichloromethane	ND	25000
75-25-2	Bromoform	ND	25000
74-83-9	Bromomethane	ND	25000
78-93-3	2-Butanone (MEK)	ND	50000
104-51-8	n-Butylbenzene	ND	25000
135-98-8	sec-Butylbenzene	ND	25000
98-06-6	tert-Butylbenzene	ND	25000
75-15-0	Carbon disulfide	ND	25000
56-23-5	Carbon tetrachloride	ND	25000
108-90-7	Chlorobenzene	ND	25000
75-00-3	Chloroethane	ND	25000
67-66-3	Chloroform	ND	25000
74-87-3	Chloromethane	ND	25000
95-49-8	2-Chlorotoluene	ND	25000
106-43-4	4-Chlorotoluene	ND	25000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	25000
124-48-1	Dibromochloromethane	ND	25000
106-93-4	1,2-Dibromoethane (EDB)	ND	25000
74-95-3	Dibromomethane	ND	25000
95-50-1	1,2-Dichlorobenzene	ND	25000
541-73-1	1,3-Dichlorobenzene	ND	25000
106-46-7	1,4-Dichlorobenzene	ND	25000
75-71-8	Dichlorodifluoromethane	ND	25000
75-34-3	1,1-Dichloroethane	ND	25000
107-06-2	1,2-Dichloroethane	ND	25000
75-35-4	1,1-Dichloroethene	ND	25000
156-59-2	cis-1,2-Dichloroethene	30000	25000
156-60-5	trans-1,2-Dichloroethene	ND	25000
78-87-5	1,2-Dichloropropane	ND	25000
142-28-9	1,3-Dichloropropane	ND	25000
590-20-7	2,2-Dichloropropane	ND	25000
563-58-6	1,1-Dichloropropene	ND	25000
10061-01-5	cis-1,3-Dichloropropene	ND	25000
10061-02-6	trans-1,3-Dichloropropene	ND	25000
100-41-4	Ethylbenzene	ND	25000
87-68-3	Hexachlorobutadiene	ND	25000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706012
PL Sample No: 4 (continued)

Date Collected: 5/31/2007
Date Received: 6/1/2007
Date Extracted: By:
Date Analyzed: 06/07/07 By: GP
Method: 8260B
QC Batch#: 54317
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: IS Baseline 1 [Aqueous]

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: M35556.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	50000
98-82-8	Isopropylbenzene	ND	25000
99-87-6	4-Isopropyltoluene	ND	25000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	25000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	50000
75-09-2	Methylene chloride	ND	25000
91-20-3	Naphthalene	ND	25000
103-65-1	n-Propylbenzene	ND	25000
100-42-5	Styrene	ND	25000
96-18-4	1,2,3-Trichloropropane	ND	25000
630-20-6	1,1,1,2-Tetrachloroethane	ND	25000
79-34-5	1,1,2,2-Tetrachloroethane	ND	25000
127-18-4	Tetrachloroethene (PCE)	ND	25000
108-88-3	Toluene	ND	25000
87-61-6	1,2,3-Trichlorobenzene	ND	25000
120-82-1	1,2,4-Trichlorobenzene	ND	25000
71-55-6	1,1,1-Trichloroethane	ND	25000
79-00-5	1,1,2-Trichloroethane	ND	25000
79-01-6	Trichloroethene (TCE)	640000	25000
75-69-4	Trichlorofluoromethane	ND	25000
95-63-6	1,2,4-Trimethylbenzene	ND	25000
108-67-8	1,3,5-Trimethylbenzene	ND	25000
75-01-4	Vinyl chloride	ND	25000
95-47-6	o-Xylene	ND	25000
	m,p-Xylenes	ND	25000
123-91-1	1,4-Dioxane	ND	250000

Surrogate	Recovery	Limits
Bromofluorobenzene	96%	83%-107%
1,2-Dichloroethane-d4	91%	86%-113%
Toluene-d8	98%	88%-108%

Premier Laboratory, LLC

CHAIN OF CUSTODY www.PremierLaboratory.com

SHADED AREAS FOR LAB USE ONLY — Lab WO#: E706012 (AD) — Project Manager:

COPY OF REPORT TO

CUSTOMER: ANNETTE LEE
ADDRESS: 22 Marin Way Unit 3
Stratham, NH 03885
ATTENTION: A Lee
E-MAIL: Lee@xdd-LLC.com
PHONE: 603-778-1100 FAX: 603-778-2121

BILLING INFORMATION

BILL TO: XDD-LLC
ADDRESS: 22 Marin Way #3
Stratham, NH 03885
ATTENTION: Annette Lee
TELEPHONE: 603-778-1100
PURCHASE ORDER #: 80

PROJECT INFORMATION

PROJECT: Indian Head Site 17
PROJECT LOCATION: Indian Head STATE: MD
PROJECT MANAGER: Annette Lee
IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:
E-MAIL: Lee@xdd-LLC.com
TELEPHONE: 603-778-1100
FAX: 603-778-2121

SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX	# OF BOTTLES	ANALYSIS: VOC 8260 in soil	ANALYSIS: VOC 8260 in water	PRESERVATIVES: NONE	PRESERVATIVES: H2SO4	PRESERVATIVES: HCL	PRESERVATIVES: HNO3	PRESERVATIVES: NAOH	PRESERVATIVES: NON-PRES	PRESERVATIVES: MeOH
IS Baseline 1	5/31/07	1500		G	Soil	1	X	X	X						
IS Baseline 2	5/31/07	↓		↓	Soil	1	X		X						
Trip Blank	↓	↓		↓	water	1	X	X							

CUSTODY TRANSFER

	DATE	TIME
SAMPLER: [signature]	5/31/07	1500
RECEIVED:		
RELINQUISHED:		
RECEIVED:		
RELINQUISHED:		
RECEIVED: [signature]	6/1/07	1154

TURNAROUND (INDICATE IN CALENDAR DAYS): ____ FAX ✓ HARD COPY X E-MAIL (Standard 7 Day)
EXPEDITED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS: Please decant the water from the top the mix the slurry to get a good composite and test for soil VOCs. Call/check with Ron Wanda or Annette Lee for questions.

CONDITIONS UPON RECEIPT: (Check One) ☑ Cooled ☐ Ambient 8°C ☐ Upon Receipt at Lab

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

PAGE ____ of ____

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

ANALYTICAL DATA REPORT

Report Number: E706A29
Project: Indian Head - Site 17

prepared for:

XDD, LLC
22 Marin Way #3
Stratham, NH 03885

Attn: Annette Lee

Received Date: 6/15/2007
Report Date: 6/25/2007

Premier Laboratory, LLC
Authorized Signature

Certifications:
CT (PH-0465), MA (M-CT008), ME (CT050), NH (2020), NJ (CT002), NY (11549), RI (RI246)

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

Report No: E706A29
Client: XDD
Project: Indian Head - Site 17

CASE NARRATIVE / METHOD CONFORMANCE SUMMARY

Premier Laboratory received 11 samples from XDD on 06/15/2007. The samples were analyzed from the following list of analyses:

Moisture, Percent	Volatiles by 8260B in GW/SW 8260B

Variances:

SDG:

None reported.

Method:

None reported.

QA/QC:

None reported.

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 1

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPH-1

Matrix: Solid
Percent Moisture: 24.9
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30485.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	130000
107-13-1	Acrylonitrile	ND	170000
71-43-2	Benzene	ND	33000
108-86-1	Bromobenzene	ND	33000
74-97-5	Bromochloromethane	ND	33000
75-27-4	Bromodichloromethane	ND	33000
75-25-2	Bromoform	ND	33000
74-83-9	Bromomethane	ND	33000
78-93-3	2-Butanone (MEK)	ND	66000
104-51-8	n-Butylbenzene	ND	33000
135-98-8	sec-Butylbenzene	ND	33000
98-06-6	tert-Butylbenzene	ND	33000
75-15-0	Carbon disulfide	ND	33000
56-23-5	Carbon tetrachloride	ND	33000
108-90-7	Chlorobenzene	ND	33000
75-00-3	Chloroethane	ND	33000
67-66-3	Chloroform	ND	33000
74-87-3	Chloromethane	ND	33000
95-49-8	2-Chlorotoluene	ND	33000
106-43-4	4-Chlorotoluene	ND	33000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	33000
124-48-1	Dibromochloromethane	ND	33000
106-93-4	1,2-Dibromoethane (EDB)	ND	33000
74-95-3	Dibromomethane	ND	33000
95-50-1	1,2-Dichlorobenzene	ND	33000
541-73-1	1,3-Dichlorobenzene	ND	33000
106-46-7	1,4-Dichlorobenzene	ND	33000
75-71-8	Dichlorodifluoromethane	ND	33000
75-34-3	1,1-Dichloroethane	ND	33000
107-06-2	1,2-Dichloroethane	ND	33000
75-35-4	1,1-Dichloroethene	ND	33000
156-59-2	cis-1,2-Dichloroethene	ND	33000
156-60-5	trans-1,2-Dichloroethene	ND	33000
78-87-5	1,2-Dichloropropane	ND	33000
142-28-9	1,3-Dichloropropane	ND	33000
590-20-7	2,2-Dichloropropane	ND	33000
563-58-6	1,1-Dichloropropene	ND	33000
10061-01-5	cis-1,3-Dichloropropene	ND	33000
10061-02-6	trans-1,3-Dichloropropene	ND	33000
100-41-4	Ethylbenzene	ND	33000
87-68-3	Hexachlorobutadiene	ND	33000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 1 (continued)

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPH-1

Matrix: Solid
Percent Moisture: 24.9
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30485.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	66000
98-82-8	Isopropylbenzene	ND	33000
99-87-6	4-Isopropyltoluene	ND	33000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	33000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	66000
75-09-2	Methylene chloride	ND	33000
91-20-3	Naphthalene	ND	33000
103-65-1	n-Propylbenzene	ND	33000
100-42-5	Styrene	ND	33000
96-18-4	1,2,3-Trichloropropane	ND	33000
630-20-6	1,1,1,2-Tetrachloroethane	ND	33000
79-34-5	1,1,2,2-Tetrachloroethane	ND	33000
127-18-4	Tetrachloroethene (PCE)	ND	33000
108-88-3	Toluene	ND	33000
87-61-6	1,2,3-Trichlorobenzene	ND	33000
120-82-1	1,2,4-Trichlorobenzene	ND	33000
71-55-6	1,1,1-Trichloroethane	ND	33000
79-00-5	1,1,2-Trichloroethane	ND	33000
79-01-6	Trichloroethene (TCE)	1600000	33000
75-69-4	Trichlorofluoromethane	ND	33000
95-63-6	1,2,4-Trimethylbenzene	ND	33000
108-67-8	1,3,5-Trimethylbenzene	ND	33000
75-01-4	Vinyl chloride	ND	33000
95-47-6	o-Xylene	ND	33000
	m,p-Xylenes	ND	33000
123-91-1	1,4-Dioxane	ND	330000

Surrogate	Recovery	Limits
Bromofluorobenzene	88%	63%-113%
1,2-Dichloroethane-d4	102%	85%-116%
Toluene-d8	94%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 2

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/21/07 By: DDD
Method: 8260B
QC Batch#: 54564
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPH-2

Matrix: Solid
Percent Moisture: 26.3
Sample Weight/Volume:
Dilution Factor: 20000
Soil Extract Volume:
Lab Data File: J30504.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	540000
107-13-1	Acrylonitrile	ND	680000
71-43-2	Benzene	ND	140000
108-86-1	Bromobenzene	ND	140000
74-97-5	Bromochloromethane	ND	140000
75-27-4	Bromodichloromethane	ND	140000
75-25-2	Bromoform	ND	140000
74-83-9	Bromomethane	ND	140000
78-93-3	2-Butanone (MEK)	ND	270000
104-51-8	n-Butylbenzene	ND	140000
135-98-8	sec-Butylbenzene	ND	140000
98-06-6	tert-Butylbenzene	ND	140000
75-15-0	Carbon disulfide	ND	140000
56-23-5	Carbon tetrachloride	ND	140000
108-90-7	Chlorobenzene	ND	140000
75-00-3	Chloroethane	ND	140000
67-66-3	Chloroform	ND	140000
74-87-3	Chloromethane	ND	140000
95-49-8	2-Chlorotoluene	ND	140000
106-43-4	4-Chlorotoluene	ND	140000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	140000
124-48-1	Dibromochloromethane	ND	140000
106-93-4	1,2-Dibromoethane (EDB)	ND	140000
74-95-3	Dibromomethane	ND	140000
95-50-1	1,2-Dichlorobenzene	ND	140000
541-73-1	1,3-Dichlorobenzene	ND	140000
106-46-7	1,4-Dichlorobenzene	ND	140000
75-71-8	Dichlorodifluoromethane	ND	140000
75-34-3	1,1-Dichloroethane	ND	140000
107-06-2	1,2-Dichloroethane	ND	140000
75-35-4	1,1-Dichloroethene	ND	140000
156-59-2	cis-1,2-Dichloroethene	ND	140000
156-60-5	trans-1,2-Dichloroethene	ND	140000
78-87-5	1,2-Dichloropropane	ND	140000
142-28-9	1,3-Dichloropropane	ND	140000
590-20-7	2,2-Dichloropropane	ND	140000
563-58-6	1,1-Dichloropropene	ND	140000
10061-01-5	cis-1,3-Dichloropropene	ND	140000
10061-02-6	trans-1,3-Dichloropropene	ND	140000
100-41-4	Ethylbenzene	ND	140000
87-68-3	Hexachlorobutadiene	ND	140000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 2 (continued)

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/21/07 By: DDD
Method: 8260B
QC Batch#: 54564
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPH-2

Matrix: Solid
Percent Moisture: 26.3
Sample Weight/Volume:
Dilution Factor: 20000
Soil Extract Volume:
Lab Data File: J30504.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	270000
98-82-8	Isopropylbenzene	ND	140000
99-87-6	4-Isopropyltoluene	ND	140000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	140000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	270000
75-09-2	Methylene chloride	ND	140000
91-20-3	Naphthalene	ND	140000
103-65-1	n-Propylbenzene	ND	140000
100-42-5	Styrene	ND	140000
96-18-4	1,2,3-Trichloropropane	ND	140000
630-20-6	1,1,1,2-Tetrachloroethane	ND	140000
79-34-5	1,1,2,2-Tetrachloroethane	ND	140000
127-18-4	Tetrachloroethene (PCE)	ND	140000
108-88-3	Toluene	ND	140000
87-61-6	1,2,3-Trichlorobenzene	ND	140000
120-82-1	1,2,4-Trichlorobenzene	ND	140000
71-55-6	1,1,1-Trichloroethane	ND	140000
79-00-5	1,1,2-Trichloroethane	ND	140000
79-01-6	Trichloroethene (TCE)	2800000	140000
75-69-4	Trichlorofluoromethane	ND	140000
95-63-6	1,2,4-Trimethylbenzene	ND	140000
108-67-8	1,3,5-Trimethylbenzene	ND	140000
75-01-4	Vinyl chloride	ND	140000
95-47-6	o-Xylene	ND	140000
	m,p-Xylenes	ND	140000
123-91-1	1,4-Dioxane	ND	1400000

Surrogate	Recovery	Limits
Bromofluorobenzene	88%	63%-113%
1,2-Dichloroethane-d4	105%	85%-116%
Toluene-d8	94%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 3

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPL-1

Matrix: Solid
Percent Moisture: 23.6
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30487.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	130000
107-13-1	Acrylonitrile	ND	160000
71-43-2	Benzene	ND	33000
108-86-1	Bromobenzene	ND	33000
74-97-5	Bromochloromethane	ND	33000
75-27-4	Bromodichloromethane	ND	33000
75-25-2	Bromoform	ND	33000
74-83-9	Bromomethane	ND	33000
78-93-3	2-Butanone (MEK)	ND	65000
104-51-8	n-Butylbenzene	ND	33000
135-98-8	sec-Butylbenzene	ND	33000
98-06-6	tert-Butylbenzene	ND	33000
75-15-0	Carbon disulfide	ND	33000
56-23-5	Carbon tetrachloride	ND	33000
108-90-7	Chlorobenzene	ND	33000
75-00-3	Chloroethane	ND	33000
67-66-3	Chloroform	ND	33000
74-87-3	Chloromethane	ND	33000
95-49-8	2-Chlorotoluene	ND	33000
106-43-4	4-Chlorotoluene	ND	33000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	33000
124-48-1	Dibromochloromethane	ND	33000
106-93-4	1,2-Dibromoethane (EDB)	ND	33000
74-95-3	Dibromomethane	ND	33000
95-50-1	1,2-Dichlorobenzene	ND	33000
541-73-1	1,3-Dichlorobenzene	ND	33000
106-46-7	1,4-Dichlorobenzene	ND	33000
75-71-8	Dichlorodifluoromethane	ND	33000
75-34-3	1,1-Dichloroethane	ND	33000
107-06-2	1,2-Dichloroethane	ND	33000
75-35-4	1,1-Dichloroethene	ND	33000
156-59-2	cis-1,2-Dichloroethene	ND	33000
156-60-5	trans-1,2-Dichloroethene	ND	33000
78-87-5	1,2-Dichloropropane	ND	33000
142-28-9	1,3-Dichloropropane	ND	33000
590-20-7	2,2-Dichloropropane	ND	33000
563-58-6	1,1-Dichloropropene	ND	33000
10061-01-5	cis-1,3-Dichloropropene	ND	33000
10061-02-6	trans-1,3-Dichloropropene	ND	33000
100-41-4	Ethylbenzene	ND	33000
87-68-3	Hexachlorobutadiene	ND	33000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 3 (continued)

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPL-1

Matrix: Solid
Percent Moisture: 23.6
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30487.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	65000
98-82-8	Isopropylbenzene	ND	33000
99-87-6	4-Isopropyltoluene	ND	33000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	33000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	65000
75-09-2	Methylene chloride	ND	33000
91-20-3	Naphthalene	ND	33000
103-65-1	n-Propylbenzene	ND	33000
100-42-5	Styrene	ND	33000
96-18-4	1,2,3-Trichloropropane	ND	33000
630-20-6	1,1,1,2-Tetrachloroethane	ND	33000
79-34-5	1,1,2,2-Tetrachloroethane	ND	33000
127-18-4	Tetrachloroethene (PCE)	ND	33000
108-88-3	Toluene	ND	33000
87-61-6	1,2,3-Trichlorobenzene	ND	33000
120-82-1	1,2,4-Trichlorobenzene	ND	33000
71-55-6	1,1,1-Trichloroethane	ND	33000
79-00-5	1,1,2-Trichloroethane	ND	33000
79-01-6	Trichloroethene (TCE)	1300000	33000
75-69-4	Trichlorofluoromethane	ND	33000
95-63-6	1,2,4-Trimethylbenzene	ND	33000
108-67-8	1,3,5-Trimethylbenzene	ND	33000
75-01-4	Vinyl chloride	ND	33000
95-47-6	o-Xylene	ND	33000
	m,p-Xylenes	ND	33000
123-91-1	1,4-Dioxane	ND	330000

Surrogate	Recovery	Limits
Bromofluorobenzene	89%	63%-113%
1,2-Dichloroethane-d4	102%	85%-116%
Toluene-d8	94%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 4

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/21/07 By: DDD
Method: 8260B
QC Batch#: 54564
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPL-2

Matrix: Solid
Percent Moisture: 25.9
Sample Weight/Volume:
Dilution Factor: 20000
Soil Extract Volume:
Lab Data File: J30505.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	540000
107-13-1	Acrylonitrile	ND	670000
71-43-2	Benzene	ND	130000
108-86-1	Bromobenzene	ND	130000
74-97-5	Bromochloromethane	ND	130000
75-27-4	Bromodichloromethane	ND	130000
75-25-2	Bromoform	ND	130000
74-83-9	Bromomethane	ND	130000
78-93-3	2-Butanone (MEK)	ND	270000
104-51-8	n-Butylbenzene	ND	130000
135-98-8	sec-Butylbenzene	ND	130000
98-06-6	tert-Butylbenzene	ND	130000
75-15-0	Carbon disulfide	ND	130000
56-23-5	Carbon tetrachloride	ND	130000
108-90-7	Chlorobenzene	ND	130000
75-00-3	Chloroethane	ND	130000
67-66-3	Chloroform	ND	130000
74-87-3	Chloromethane	ND	130000
95-49-8	2-Chlorotoluene	ND	130000
106-43-4	4-Chlorotoluene	ND	130000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	130000
124-48-1	Dibromochloromethane	ND	130000
106-93-4	1,2-Dibromoethane (EDB)	ND	130000
74-95-3	Dibromomethane	ND	130000
95-50-1	1,2-Dichlorobenzene	ND	130000
541-73-1	1,3-Dichlorobenzene	ND	130000
106-46-7	1,4-Dichlorobenzene	ND	130000
75-71-8	Dichlorodifluoromethane	ND	130000
75-34-3	1,1-Dichloroethane	ND	130000
107-06-2	1,2-Dichloroethane	ND	130000
75-35-4	1,1-Dichloroethene	ND	130000
156-59-2	cis-1,2-Dichloroethene	ND	130000
156-60-5	trans-1,2-Dichloroethene	ND	130000
78-87-5	1,2-Dichloropropane	ND	130000
142-28-9	1,3-Dichloropropane	ND	130000
590-20-7	2,2-Dichloropropane	ND	130000
563-58-6	1,1-Dichloropropene	ND	130000
10061-01-5	cis-1,3-Dichloropropene	ND	130000
10061-02-6	trans-1,3-Dichloropropene	ND	130000
100-41-4	Ethylbenzene	ND	130000
87-68-3	Hexachlorobutadiene	ND	130000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 4 (continued)

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/21/07 By: DDD
Method: 8260B
QC Batch#: 54564
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPL-2

Matrix: Solid
Percent Moisture: 25.9
Sample Weight/Volume:
Dilution Factor: 20000
Soil Extract Volume:
Lab Data File: J30505.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	270000
98-82-8	Isopropylbenzene	ND	130000
99-87-6	4-Isopropyltoluene	ND	130000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	130000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	270000
75-09-2	Methylene chloride	ND	130000
91-20-3	Naphthalene	ND	130000
103-65-1	n-Propylbenzene	ND	130000
100-42-5	Styrene	ND	130000
96-18-4	1,2,3-Trichloropropane	ND	130000
630-20-6	1,1,1,2-Tetrachloroethane	ND	130000
79-34-5	1,1,2,2-Tetrachloroethane	ND	130000
127-18-4	Tetrachloroethene (PCE)	ND	130000
108-88-3	Toluene	ND	130000
87-61-6	1,2,3-Trichlorobenzene	ND	130000
120-82-1	1,2,4-Trichlorobenzene	ND	130000
71-55-6	1,1,1-Trichloroethane	ND	130000
79-00-5	1,1,2-Trichloroethane	ND	130000
79-01-6	Trichloroethene (TCE)	2800000	130000
75-69-4	Trichlorofluoromethane	ND	130000
95-63-6	1,2,4-Trimethylbenzene	ND	130000
108-67-8	1,3,5-Trimethylbenzene	ND	130000
75-01-4	Vinyl chloride	ND	130000
95-47-6	o-Xylene	ND	130000
	m,p-Xylenes	ND	130000
123-91-1	1,4-Dioxane	ND	1300000

Surrogate	Recovery	Limits
Bromofluorobenzene	87%	63%-113%
1,2-Dichloroethane-d4	103%	85%-116%
Toluene-d8	96%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 5

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPH-1

Matrix: Solid
Percent Moisture: 23.9
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30489.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	130000
107-13-1	Acrylonitrile	ND	160000
71-43-2	Benzene	ND	33000
108-86-1	Bromobenzene	ND	33000
74-97-5	Bromochloromethane	ND	33000
75-27-4	Bromodichloromethane	ND	33000
75-25-2	Bromoform	ND	33000
74-83-9	Bromomethane	ND	33000
78-93-3	2-Butanone (MEK)	ND	66000
104-51-8	n-Butylbenzene	ND	33000
135-98-8	sec-Butylbenzene	ND	33000
98-06-6	tert-Butylbenzene	ND	33000
75-15-0	Carbon disulfide	ND	33000
56-23-5	Carbon tetrachloride	ND	33000
108-90-7	Chlorobenzene	ND	33000
75-00-3	Chloroethane	ND	33000
67-66-3	Chloroform	ND	33000
74-87-3	Chloromethane	ND	33000
95-49-8	2-Chlorotoluene	ND	33000
106-43-4	4-Chlorotoluene	ND	33000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	33000
124-48-1	Dibromochloromethane	ND	33000
106-93-4	1,2-Dibromoethane (EDB)	ND	33000
74-95-3	Dibromomethane	ND	33000
95-50-1	1,2-Dichlorobenzene	ND	33000
541-73-1	1,3-Dichlorobenzene	ND	33000
106-46-7	1,4-Dichlorobenzene	ND	33000
75-71-8	Dichlorodifluoromethane	ND	33000
75-34-3	1,1-Dichloroethane	ND	33000
107-06-2	1,2-Dichloroethane	ND	33000
75-35-4	1,1-Dichloroethene	ND	33000
156-59-2	cis-1,2-Dichloroethene	ND	33000
156-60-5	trans-1,2-Dichloroethene	ND	33000
78-87-5	1,2-Dichloropropane	ND	33000
142-28-9	1,3-Dichloropropane	ND	33000
590-20-7	2,2-Dichloropropane	ND	33000
563-58-6	1,1-Dichloropropene	ND	33000
10061-01-5	cis-1,3-Dichloropropene	ND	33000
10061-02-6	trans-1,3-Dichloropropene	ND	33000
100-41-4	Ethylbenzene	ND	33000
87-68-3	Hexachlorobutadiene	ND	33000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 5 (continued)

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPH-1

Matrix: Solid
Percent Moisture: 23.9
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30489.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	66000
98-82-8	Isopropylbenzene	ND	33000
99-87-6	4-Isopropyltoluene	ND	33000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	33000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	66000
75-09-2	Methylene chloride	ND	33000
91-20-3	Naphthalene	ND	33000
103-65-1	n-Propylbenzene	ND	33000
100-42-5	Styrene	ND	33000
96-18-4	1,2,3-Trichloropropane	ND	33000
630-20-6	1,1,1,2-Tetrachloroethane	ND	33000
79-34-5	1,1,2,2-Tetrachloroethane	36000	33000
127-18-4	Tetrachloroethene (PCE)	ND	33000
108-88-3	Toluene	ND	33000
87-61-6	1,2,3-Trichlorobenzene	ND	33000
120-82-1	1,2,4-Trichlorobenzene	ND	33000
71-55-6	1,1,1-Trichloroethane	ND	33000
79-00-5	1,1,2-Trichloroethane	ND	33000
79-01-6	Trichloroethene (TCE)	1700000	33000
75-69-4	Trichlorofluoromethane	ND	33000
95-63-6	1,2,4-Trimethylbenzene	ND	33000
108-67-8	1,3,5-Trimethylbenzene	ND	33000
75-01-4	Vinyl chloride	ND	33000
95-47-6	o-Xylene	ND	33000
	m,p-Xylenes	ND	33000
123-91-1	1,4-Dioxane	ND	330000

Surrogate	Recovery	Limits
Bromofluorobenzene	90%	63%-113%
1,2-Dichloroethane-d4	104%	85%-116%
Toluene-d8	95%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 6

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPH-2

Matrix: Solid
Percent Moisture: 25.3
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30490.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	130000
107-13-1	Acrylonitrile	ND	170000
71-43-2	Benzene	ND	33000
108-86-1	Bromobenzene	ND	33000
74-97-5	Bromochloromethane	ND	33000
75-27-4	Bromodichloromethane	ND	33000
75-25-2	Bromoform	ND	33000
74-83-9	Bromomethane	ND	33000
78-93-3	2-Butanone (MEK)	ND	67000
104-51-8	n-Butylbenzene	ND	33000
135-98-8	sec-Butylbenzene	ND	33000
98-06-6	tert-Butylbenzene	ND	33000
75-15-0	Carbon disulfide	ND	33000
56-23-5	Carbon tetrachloride	ND	33000
108-90-7	Chlorobenzene	ND	33000
75-00-3	Chloroethane	ND	33000
67-66-3	Chloroform	ND	33000
74-87-3	Chloromethane	ND	33000
95-49-8	2-Chlorotoluene	ND	33000
106-43-4	4-Chlorotoluene	ND	33000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	33000
124-48-1	Dibromochloromethane	ND	33000
106-93-4	1,2-Dibromoethane (EDB)	ND	33000
74-95-3	Dibromomethane	ND	33000
95-50-1	1,2-Dichlorobenzene	ND	33000
541-73-1	1,3-Dichlorobenzene	ND	33000
106-46-7	1,4-Dichlorobenzene	ND	33000
75-71-8	Dichlorodifluoromethane	ND	33000
75-34-3	1,1-Dichloroethane	ND	33000
107-06-2	1,2-Dichloroethane	ND	33000
75-35-4	1,1-Dichloroethene	ND	33000
156-59-2	cis-1,2-Dichloroethene	ND	33000
156-60-5	trans-1,2-Dichloroethene	ND	33000
78-87-5	1,2-Dichloropropane	ND	33000
142-28-9	1,3-Dichloropropane	ND	33000
590-20-7	2,2-Dichloropropane	ND	33000
563-58-6	1,1-Dichloropropene	ND	33000
10061-01-5	cis-1,3-Dichloropropene	ND	33000
10061-02-6	trans-1,3-Dichloropropene	ND	33000
100-41-4	Ethylbenzene	ND	33000
87-68-3	Hexachlorobutadiene	ND	33000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 6 (continued)

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPH-2

Matrix: Solid
Percent Moisture: 25.3
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30490.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	67000
98-82-8	Isopropylbenzene	ND	33000
99-87-6	4-Isopropyltoluene	ND	33000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	33000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	67000
75-09-2	Methylene chloride	ND	33000
91-20-3	Naphthalene	ND	33000
103-65-1	n-Propylbenzene	ND	33000
100-42-5	Styrene	ND	33000
96-18-4	1,2,3-Trichloropropane	ND	33000
630-20-6	1,1,1,2-Tetrachloroethane	ND	33000
79-34-5	1,1,2,2-Tetrachloroethane	ND	33000
127-18-4	Tetrachloroethene (PCE)	ND	33000
108-88-3	Toluene	ND	33000
87-61-6	1,2,3-Trichlorobenzene	ND	33000
120-82-1	1,2,4-Trichlorobenzene	ND	33000
71-55-6	1,1,1-Trichloroethane	ND	33000
79-00-5	1,1,2-Trichloroethane	ND	33000
79-01-6	Trichloroethene (TCE)	1200000	33000
75-69-4	Trichlorofluoromethane	ND	33000
95-63-6	1,2,4-Trimethylbenzene	ND	33000
108-67-8	1,3,5-Trimethylbenzene	ND	33000
75-01-4	Vinyl chloride	ND	33000
95-47-6	o-Xylene	ND	33000
	m,p-Xylenes	ND	33000
123-91-1	1,4-Dioxane	ND	330000

Surrogate	Recovery	Limits
Bromofluorobenzene	88%	63%-113%
1,2-Dichloroethane-d4	101%	85%-116%
Toluene-d8	93%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 7

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPL-1

Matrix: Solid
Percent Moisture: 27.0
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30491.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	140000
107-13-1	Acrylonitrile	ND	170000
71-43-2	Benzene	ND	34000
108-86-1	Bromobenzene	ND	34000
74-97-5	Bromochloromethane	ND	34000
75-27-4	Bromodichloromethane	ND	34000
75-25-2	Bromoform	ND	34000
74-83-9	Bromomethane	ND	34000
78-93-3	2-Butanone (MEK)	ND	68000
104-51-8	n-Butylbenzene	ND	34000
135-98-8	sec-Butylbenzene	ND	34000
98-06-6	tert-Butylbenzene	ND	34000
75-15-0	Carbon disulfide	ND	34000
56-23-5	Carbon tetrachloride	ND	34000
108-90-7	Chlorobenzene	ND	34000
75-00-3	Chloroethane	ND	34000
67-66-3	Chloroform	ND	34000
74-87-3	Chloromethane	ND	34000
95-49-8	2-Chlorotoluene	ND	34000
106-43-4	4-Chlorotoluene	ND	34000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	34000
124-48-1	Dibromochloromethane	ND	34000
106-93-4	1,2-Dibromoethane (EDB)	ND	34000
74-95-3	Dibromomethane	ND	34000
95-50-1	1,2-Dichlorobenzene	ND	34000
541-73-1	1,3-Dichlorobenzene	ND	34000
106-46-7	1,4-Dichlorobenzene	ND	34000
75-71-8	Dichlorodifluoromethane	ND	34000
75-34-3	1,1-Dichloroethane	ND	34000
107-06-2	1,2-Dichloroethane	ND	34000
75-35-4	1,1-Dichloroethene	ND	34000
156-59-2	cis-1,2-Dichloroethene	ND	34000
156-60-5	trans-1,2-Dichloroethene	ND	34000
78-87-5	1,2-Dichloropropane	ND	34000
142-28-9	1,3-Dichloropropane	ND	34000
590-20-7	2,2-Dichloropropane	ND	34000
563-58-6	1,1-Dichloropropene	ND	34000
10061-01-5	cis-1,3-Dichloropropene	ND	34000
10061-02-6	trans-1,3-Dichloropropene	ND	34000
100-41-4	Ethylbenzene	ND	34000
87-68-3	Hexachlorobutadiene	ND	34000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 7 (continued)

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPL-1

Matrix: Solid
Percent Moisture: 27.0
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30491.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	68000
98-82-8	Isopropylbenzene	ND	34000
99-87-6	4-Isopropyltoluene	ND	34000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	34000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	68000
75-09-2	Methylene chloride	ND	34000
91-20-3	Naphthalene	ND	34000
103-65-1	n-Propylbenzene	ND	34000
100-42-5	Styrene	ND	34000
96-18-4	1,2,3-Trichloropropane	ND	34000
630-20-6	1,1,1,2-Tetrachloroethane	ND	34000
79-34-5	1,1,2,2-Tetrachloroethane	ND	34000
127-18-4	Tetrachloroethene (PCE)	ND	34000
108-88-3	Toluene	ND	34000
87-61-6	1,2,3-Trichlorobenzene	ND	34000
120-82-1	1,2,4-Trichlorobenzene	ND	34000
71-55-6	1,1,1-Trichloroethane	ND	34000
79-00-5	1,1,2-Trichloroethane	ND	34000
79-01-6	Trichloroethene (TCE)	1400000	34000
75-69-4	Trichlorofluoromethane	ND	34000
95-63-6	1,2,4-Trimethylbenzene	ND	34000
108-67-8	1,3,5-Trimethylbenzene	ND	34000
75-01-4	Vinyl chloride	ND	34000
95-47-6	o-Xylene	ND	34000
	m,p-Xylenes	ND	34000
123-91-1	1,4-Dioxane	ND	340000

Surrogate	Recovery	Limits
Bromofluorobenzene	88%	63%-113%
1,2-Dichloroethane-d4	100%	85%-116%
Toluene-d8	93%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 8

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/21/07 By: DDD
Method: 8260B
QC Batch#: 54564
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPL-2

Matrix: Solid
Percent Moisture: 26.5
Sample Weight/Volume:
Dilution Factor: 15000
Soil Extract Volume:
Lab Data File: J30506.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	410000
107-13-1	Acrylonitrile	ND	510000
71-43-2	Benzene	ND	100000
108-86-1	Bromobenzene	ND	100000
74-97-5	Bromochloromethane	ND	100000
75-27-4	Bromodichloromethane	ND	100000
75-25-2	Bromoform	ND	100000
74-83-9	Bromomethane	ND	100000
78-93-3	2-Butanone (MEK)	ND	200000
104-51-8	n-Butylbenzene	ND	100000
135-98-8	sec-Butylbenzene	ND	100000
98-06-6	tert-Butylbenzene	ND	100000
75-15-0	Carbon disulfide	ND	100000
56-23-5	Carbon tetrachloride	ND	100000
108-90-7	Chlorobenzene	ND	100000
75-00-3	Chloroethane	ND	100000
67-66-3	Chloroform	ND	100000
74-87-3	Chloromethane	ND	100000
95-49-8	2-Chlorotoluene	ND	100000
106-43-4	4-Chlorotoluene	ND	100000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	100000
124-48-1	Dibromochloromethane	ND	100000
106-93-4	1,2-Dibromoethane (EDB)	ND	100000
74-95-3	Dibromomethane	ND	100000
95-50-1	1,2-Dichlorobenzene	ND	100000
541-73-1	1,3-Dichlorobenzene	ND	100000
106-46-7	1,4-Dichlorobenzene	ND	100000
75-71-8	Dichlorodifluoromethane	ND	100000
75-34-3	1,1-Dichloroethane	ND	100000
107-06-2	1,2-Dichloroethane	ND	100000
75-35-4	1,1-Dichloroethene	ND	100000
156-59-2	cis-1,2-Dichloroethene	ND	100000
156-60-5	trans-1,2-Dichloroethene	ND	100000
78-87-5	1,2-Dichloropropane	ND	100000
142-28-9	1,3-Dichloropropane	ND	100000
590-20-7	2,2-Dichloropropane	ND	100000
563-58-6	1,1-Dichloropropene	ND	100000
10061-01-5	cis-1,3-Dichloropropene	ND	100000
10061-02-6	trans-1,3-Dichloropropene	ND	100000
100-41-4	Ethylbenzene	ND	100000
87-68-3	Hexachlorobutadiene	ND	100000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 8 (continued)

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/21/07 By: DDD
Method: 8260B
QC Batch#: 54564
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPL-2

Matrix: Solid
Percent Moisture: 26.5
Sample Weight/Volume:
Dilution Factor: 15000
Soil Extract Volume:
Lab Data File: J30506.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	200000
98-82-8	Isopropylbenzene	ND	100000
99-87-6	4-Isopropyltoluene	ND	100000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	100000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	200000
75-09-2	Methylene chloride	ND	100000
91-20-3	Naphthalene	ND	100000
103-65-1	n-Propylbenzene	ND	100000
100-42-5	Styrene	ND	100000
96-18-4	1,2,3-Trichloropropane	ND	100000
630-20-6	1,1,1,2-Tetrachloroethane	ND	100000
79-34-5	1,1,2,2-Tetrachloroethane	ND	100000
127-18-4	Tetrachloroethene (PCE)	ND	100000
108-88-3	Toluene	ND	100000
87-61-6	1,2,3-Trichlorobenzene	ND	100000
120-82-1	1,2,4-Trichlorobenzene	ND	100000
71-55-6	1,1,1-Trichloroethane	ND	100000
79-00-5	1,1,2-Trichloroethane	ND	100000
79-01-6	Trichloroethene (TCE)	2000000	100000
75-69-4	Trichlorofluoromethane	ND	100000
95-63-6	1,2,4-Trimethylbenzene	ND	100000
108-67-8	1,3,5-Trimethylbenzene	ND	100000
75-01-4	Vinyl chloride	ND	100000
95-47-6	o-Xylene	ND	100000
	m,p-Xylenes	ND	100000
123-91-1	1,4-Dioxane	ND	1000000

Surrogate	Recovery	Limits
Bromofluorobenzene	88%	63%-113%
1,2-Dichloroethane-d4	105%	85%-116%
Toluene-d8	94%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 9

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/21/07 By: DDD
Method: 8260B
QC Batch#: 54564
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: C1

Matrix: Solid
Percent Moisture: 28.6
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: J30507.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	280000
107-13-1	Acrylonitrile	ND	350000
71-43-2	Benzene	ND	70000
108-86-1	Bromobenzene	ND	70000
74-97-5	Bromochloromethane	ND	70000
75-27-4	Bromodichloromethane	ND	70000
75-25-2	Bromoform	ND	70000
74-83-9	Bromomethane	ND	70000
78-93-3	2-Butanone (MEK)	ND	140000
104-51-8	n-Butylbenzene	ND	70000
135-98-8	sec-Butylbenzene	ND	70000
98-06-6	tert-Butylbenzene	ND	70000
75-15-0	Carbon disulfide	ND	70000
56-23-5	Carbon tetrachloride	ND	70000
108-90-7	Chlorobenzene	ND	70000
75-00-3	Chloroethane	ND	70000
67-66-3	Chloroform	ND	70000
74-87-3	Chloromethane	ND	70000
95-49-8	2-Chlorotoluene	ND	70000
106-43-4	4-Chlorotoluene	ND	70000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	70000
124-48-1	Dibromochloromethane	ND	70000
106-93-4	1,2-Dibromoethane (EDB)	ND	70000
74-95-3	Dibromomethane	ND	70000
95-50-1	1,2-Dichlorobenzene	ND	70000
541-73-1	1,3-Dichlorobenzene	ND	70000
106-46-7	1,4-Dichlorobenzene	ND	70000
75-71-8	Dichlorodifluoromethane	ND	70000
75-34-3	1,1-Dichloroethane	ND	70000
107-06-2	1,2-Dichloroethane	ND	70000
75-35-4	1,1-Dichloroethene	ND	70000
156-59-2	cis-1,2-Dichloroethene	ND	70000
156-60-5	trans-1,2-Dichloroethene	ND	70000
78-87-5	1,2-Dichloropropane	ND	70000
142-28-9	1,3-Dichloropropane	ND	70000
590-20-7	2,2-Dichloropropane	ND	70000
563-58-6	1,1-Dichloropropene	ND	70000
10061-01-5	cis-1,3-Dichloropropene	ND	70000
10061-02-6	trans-1,3-Dichloropropene	ND	70000
100-41-4	Ethylbenzene	ND	70000
87-68-3	Hexachlorobutadiene	ND	70000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 9 (continued)

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/21/07 By: DDD
Method: 8260B
QC Batch#: 54564
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: C1

Matrix: Solid
Percent Moisture: 28.6
Sample Weight/Volume:
Dilution Factor: 10000
Soil Extract Volume:
Lab Data File: J30507.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	140000
98-82-8	Isopropylbenzene	ND	70000
99-87-6	4-Isopropyltoluene	ND	70000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	70000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	140000
75-09-2	Methylene chloride	ND	70000
91-20-3	Naphthalene	ND	70000
103-65-1	n-Propylbenzene	ND	70000
100-42-5	Styrene	ND	70000
96-18-4	1,2,3-Trichloropropane	ND	70000
630-20-6	1,1,1,2-Tetrachloroethane	ND	70000
79-34-5	1,1,2,2-Tetrachloroethane	ND	70000
127-18-4	Tetrachloroethene (PCE)	ND	70000
108-88-3	Toluene	ND	70000
87-61-6	1,2,3-Trichlorobenzene	ND	70000
120-82-1	1,2,4-Trichlorobenzene	ND	70000
71-55-6	1,1,1-Trichloroethane	ND	70000
79-00-5	1,1,2-Trichloroethane	ND	70000
79-01-6	Trichloroethene (TCE)	2500000	70000
75-69-4	Trichlorofluoromethane	ND	70000
95-63-6	1,2,4-Trimethylbenzene	ND	70000
108-67-8	1,3,5-Trimethylbenzene	ND	70000
75-01-4	Vinyl chloride	ND	70000
95-47-6	o-Xylene	ND	70000
	m,p-Xylenes	ND	70000
123-91-1	1,4-Dioxane	ND	700000

Surrogate	Recovery	Limits
Bromofluorobenzene	87%	63%-113%
1,2-Dichloroethane-d4	104%	85%-116%
Toluene-d8	95%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 10

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: C2

Matrix: Solid
Percent Moisture: 21.1
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30494.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	130000
107-13-1	Acrylonitrile	ND	160000
71-43-2	Benzene	ND	32000
108-86-1	Bromobenzene	ND	32000
74-97-5	Bromochloromethane	ND	32000
75-27-4	Bromodichloromethane	ND	32000
75-25-2	Bromoform	ND	32000
74-83-9	Bromomethane	ND	32000
78-93-3	2-Butanone (MEK)	ND	63000
104-51-8	n-Butylbenzene	ND	32000
135-98-8	sec-Butylbenzene	ND	32000
98-06-6	tert-Butylbenzene	ND	32000
75-15-0	Carbon disulfide	ND	32000
56-23-5	Carbon tetrachloride	ND	32000
108-90-7	Chlorobenzene	ND	32000
75-00-3	Chloroethane	ND	32000
67-66-3	Chloroform	ND	32000
74-87-3	Chloromethane	ND	32000
95-49-8	2-Chlorotoluene	ND	32000
106-43-4	4-Chlorotoluene	ND	32000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	32000
124-48-1	Dibromochloromethane	ND	32000
106-93-4	1,2-Dibromoethane (EDB)	ND	32000
74-95-3	Dibromomethane	ND	32000
95-50-1	1,2-Dichlorobenzene	ND	32000
541-73-1	1,3-Dichlorobenzene	ND	32000
106-46-7	1,4-Dichlorobenzene	ND	32000
75-71-8	Dichlorodifluoromethane	ND	32000
75-34-3	1,1-Dichloroethane	ND	32000
107-06-2	1,2-Dichloroethane	ND	32000
75-35-4	1,1-Dichloroethene	ND	32000
156-59-2	cis-1,2-Dichloroethene	ND	32000
156-60-5	trans-1,2-Dichloroethene	ND	32000
78-87-5	1,2-Dichloropropane	ND	32000
142-28-9	1,3-Dichloropropane	ND	32000
590-20-7	2,2-Dichloropropane	ND	32000
563-58-6	1,1-Dichloropropene	ND	32000
10061-01-5	cis-1,3-Dichloropropene	ND	32000
10061-02-6	trans-1,3-Dichloropropene	ND	32000
100-41-4	Ethylbenzene	ND	32000
87-68-3	Hexachlorobutadiene	ND	32000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 10 (continued)

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/20/07 By: DDD
Method: 8260B
QC Batch#: 54565
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: C2

Matrix: Solid
Percent Moisture: 21.1
Sample Weight/Volume:
Dilution Factor: 5000
Soil Extract Volume:
Lab Data File: J30494.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	63000
98-82-8	Isopropylbenzene	ND	32000
99-87-6	4-Isopropyltoluene	ND	32000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	32000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	63000
75-09-2	Methylene chloride	ND	32000
91-20-3	Naphthalene	ND	32000
103-65-1	n-Propylbenzene	ND	32000
100-42-5	Styrene	ND	32000
96-18-4	1,2,3-Trichloropropane	ND	32000
630-20-6	1,1,1,2-Tetrachloroethane	ND	32000
79-34-5	1,1,2,2-Tetrachloroethane	ND	32000
127-18-4	Tetrachloroethene (PCE)	ND	32000
108-88-3	Toluene	ND	32000
87-61-6	1,2,3-Trichlorobenzene	ND	32000
120-82-1	1,2,4-Trichlorobenzene	ND	32000
71-55-6	1,1,1-Trichloroethane	ND	32000
79-00-5	1,1,2-Trichloroethane	ND	32000
79-01-6	Trichloroethene (TCE)	1900000	32000
75-69-4	Trichlorofluoromethane	ND	32000
95-63-6	1,2,4-Trimethylbenzene	ND	32000
108-67-8	1,3,5-Trimethylbenzene	ND	32000
75-01-4	Vinyl chloride	ND	32000
95-47-6	o-Xylene	ND	32000
	m,p-Xylenes	ND	32000
123-91-1	1,4-Dioxane	ND	320000

Surrogate	Recovery	Limits
Bromofluorobenzene	88%	63%-113%
1,2-Dichloroethane-d4	101%	85%-116%
Toluene-d8	95%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 11

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/19/07 By: DDD
Method: 8260B
QC Batch#: 54519
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Trip Blank

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: M35716.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	20
107-13-1	Acrylonitrile	ND	25
71-43-2	Benzene	ND	5.0
108-86-1	Bromobenzene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
75-27-4	Bromodichloromethane	ND	5.0
75-25-2	Bromoform	ND	5.0
74-83-9	Bromomethane	ND	5.0
78-93-3	2-Butanone (MEK)	ND	10
104-51-8	n-Butylbenzene	ND	5.0
135-98-8	sec-Butylbenzene	ND	5.0
98-06-6	tert-Butylbenzene	ND	5.0
75-15-0	Carbon disulfide	ND	5.0
56-23-5	Carbon tetrachloride	ND	5.0
108-90-7	Chlorobenzene	ND	5.0
75-00-3	Chloroethane	ND	5.0
67-66-3	Chloroform	ND	5.0
74-87-3	Chloromethane	ND	5.0
95-49-8	2-Chlorotoluene	ND	5.0
106-43-4	4-Chlorotoluene	ND	5.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
106-93-4	1,2-Dibromoethane (EDB)	ND	5.0
74-95-3	Dibromomethane	ND	5.0
95-50-1	1,2-Dichlorobenzene	ND	5.0
541-73-1	1,3-Dichlorobenzene	ND	5.0
106-46-7	1,4-Dichlorobenzene	ND	5.0
75-71-8	Dichlorodifluoromethane	ND	5.0
75-34-3	1,1-Dichloroethane	ND	5.0
107-06-2	1,2-Dichloroethane	ND	5.0
75-35-4	1,1-Dichloroethene	ND	5.0
156-59-2	cis-1,2-Dichloroethene	ND	5.0
156-60-5	trans-1,2-Dichloroethene	ND	5.0
78-87-5	1,2-Dichloropropane	ND	5.0
142-28-9	1,3-Dichloropropane	ND	5.0
590-20-7	2,2-Dichloropropane	ND	5.0
563-58-6	1,1-Dichloropropene	ND	5.0
10061-01-5	cis-1,3-Dichloropropene	ND	5.0
10061-02-6	trans-1,3-Dichloropropene	ND	5.0
100-41-4	Ethylbenzene	ND	5.0
87-68-3	Hexachlorobutadiene	ND	5.0

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E706A29
PL Sample No: 11 (continued)

Date Collected: 6/14/2007
Date Received: 6/15/2007
Date Extracted: By:
Date Analyzed: 06/19/07 By: DDD
Method: 8260B
QC Batch#: 54519
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Trip Blank

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: M35716.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	10
98-82-8	Isopropylbenzene	ND	5.0
99-87-6	4-Isopropyltoluene	ND	5.0
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10
75-09-2	Methylene chloride	ND	5.0
91-20-3	Naphthalene	ND	5.0
103-65-1	n-Propylbenzene	ND	5.0
100-42-5	Styrene	ND	5.0
96-18-4	1,2,3-Trichloropropane	ND	5.0
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0
127-18-4	Tetrachloroethene (PCE)	ND	5.0
108-88-3	Toluene	ND	5.0
87-61-6	1,2,3-Trichlorobenzene	ND	5.0
120-82-1	1,2,4-Trichlorobenzene	ND	5.0
71-55-6	1,1,1-Trichloroethane	ND	5.0
79-00-5	1,1,2-Trichloroethane	ND	5.0
79-01-6	Trichloroethene (TCE)	ND	5.0
75-69-4	Trichlorofluoromethane	ND	5.0
95-63-6	1,2,4-Trimethylbenzene	ND	5.0
108-67-8	1,3,5-Trimethylbenzene	ND	5.0
75-01-4	Vinyl chloride	ND	5.0
95-47-6	o-Xylene	ND	5.0
	m,p-Xylenes	ND	5.0
123-91-1	1,4-Dioxane	ND	50

Surrogate	Recovery	Limits
Bromofluorobenzene	95%	83%-107%
1,2-Dichloroethane-d4	103%	86%-113%
Toluene-d8	94%	88%-108%

Premier Laboratory, LLC

CHAIN OF CUSTODY www.PremierLaboratory.com

SHADED AREAS FOR LAB USE ONLY — Lab WO#: E70GA29 — Project Manager:

COPY OF REPORT TO

CUSTOMER: XDD
ADDRESS: 22 Marin Way #3
Stratham NH 03885
ATTENTION: Annette Lee
E-MAIL: Lee @ xDD-llc.com
PHONE: 603-778-1100 FAX: 603-778-2121

BILLING INFORMATION

BILL TO: XDD-LLC.
ADDRESS: 22 Marin Way #3
Stratham NH 03885
ATTENTION: Annette Lee
TELEPHONE: 603-778-1100
PURCHASE ORDER #: 80

PROJECT INFORMATION

PROJECT: INDIAN HEAD SITE 17
PROJECT LOCATION: Indianhead STATE: MD.
PROJECT MANAGER: Annette Lee
IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:
E-MAIL: lee@xdd-llc.com.
TELEPHONE: 603-778-1100
FAX: 603-778-2121

SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX	# OF BOTTLES	8260B										NONE	H2SO4	HCL	HNO3	NAOH	NON-PRES	MeOH
FPH-1	6/14/07	1500		✓	Soil	2	✓										✓						
FPH-2	↓	↓		↓		↓	↓										↓						
FPL-1	↓	↓		↓		↓	↓										↓						
FPL-2	↓	↓		↓		↓	↓										↓						
UPH-1	↓	↓		↓		↓	↓										↓						
UPH-2	↓	↓		↓		↓	↓										↓						
UPL-1	↓	↓		↓		↓	↓										↓						
UPL-2	↓	↓		↓		↓	↓										↓						
C1	↓	↓		↓		↓	↓										↓						
C2	↓	↓		↓		↓	↓										↓						

CUSTODY TRANSFER

	DATE	TIME
SAMPLER: [signature]	6/14/07	1500
RECEIVED:		
RELINQUISHED:		
RECEIVED:		
RELINQUISHED:		
RECEIVED: [signature]	6/15/07	1346

TURNAROUND (INDICATE IN CALENDAR DAYS): ____ FAX ✓ HARD COPY ✓ E-MAIL (Standard 7 Day)
EXPEDITED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS: Please decant the water from the top & mix the slurry to get a good composite & test for soil VOC. Call/Check w/ Ron Warick or Annette Lee for questions. Run C2 per Dept.

CONDITIONS UPON RECEIPT (Check One): ☑ Cooled ☐ Ambient 4.2 °C Upon Receipt at Lab

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

Premier Laboratory, LLC

CHAIN OF CUSTODY www.PremierLaboratory.com

SHADED AREAS FOR LAB USE ONLY — Lab WO#: E706A29 (AW) — Project Manager:

COPY OF REPORT TO

CUSTOMER: Annette Lee (XDD)
ADDRESS: 22 Marin Way #3
Stratham, NH 03885
ATTENTION: Annette Lee
E-MAIL: Lee@XDD-LLC.com
PHONE: 603-778-1100 FAX: 603-778-2121

BILLING INFORMATION

BILL TO: XDD-LLC
ADDRESS: 22 Marin Way #3
Stratham, NH 03885
ATTENTION: Annette Lee
TELEPHONE: 603-778-1100
PURCHASE ORDER #: 80

PROJECT INFORMATION

PROJECT: Indian Head Site 17
PROJECT LOCATION: Indianhead STATE: MD
PROJECT MANAGER: Annette Lee
IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:
E-MAIL: Lee@XDD-LLC.com
TELEPHONE: 603-778-1100
FAX: 603-778-2121

SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX	# OF BOTTLES	8260B										None	PRESERVATIVES: H2SO4	HCL	HNO3	NAOH	NON-PRES	MeOH
TRIP Blank	6/14/07	1500		✓	Water	2	✓										✓		✓				

CUSTODY TRANSFER

	DATE	TIME
SAMPLER: [signature]	6/14/07	1500
RECEIVED:		
RELINQUISHED:		
RECEIVED:		
RELINQUISHED:		
RECEIVED: [signature]	6/15/07	1346

TURNAROUND (INDICATE IN CALENDAR DAYS): ____ FAX ✓ (Standard 7 Day) HARD COPY ✓ E-MAIL
EXPEDITED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS: Please decant the water from the top & mix the slurry to get a good composite & test for soil VOC. Call or Check w/ Ron Wirth or Annette Lee for questions.

CONDITIONS UPON RECEIPT (Check One): ☑ Cooled ☐ Ambient ____ ☐ Upon Receipt at Lab

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

ANALYTICAL DATA REPORT

Report Number: E707931
Project: Indian Head - Site 17

prepared for:

XDD, LLC
22 Marin Way #3
Stratham, NH 03885

Attn: Annette Lee

Received Date: 7/17/2007
Report Date: 7/26/2007

Premier Laboratory, LLC
Authorized Signature

Certifications:
CT (PH-0465), MA (M-CT008), ME (CT050), NH (2020), NJ (CT002), NY (11549), RI (RI246)

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

Report No: E707931
Client: XDD
Project: Indian Head - Site 17

CASE NARRATIVE / METHOD CONFORMANCE SUMMARY

Premier Laboratory received 16 samples from XDD on 07/17/2007. The samples were analyzed from the following list of analyses:

Moisture, Percent	Volatiles by 8260B in GW/SW 8260B

Variances:

SDG:

None reported.

Method:

Sample 2, FPL-3 (Water), Volatiles by 8260B: Reported analyte result exceeds calibration curve and is estimated.

QA/QC:

None reported.

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 1

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55102
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPL-3 (Soil)

Matrix: Solid
Percent Moisture: 28.6
Sample Weight/Volume:
Dilution Factor: 1000
Soil Extract Volume:
Lab Data File: M36414.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	28000
107-13-1	Acrylonitrile	ND	35000
71-43-2	Benzene	ND	7000
108-86-1	Bromobenzene	ND	7000
74-97-5	Bromochloromethane	ND	7000
75-27-4	Bromodichloromethane	ND	7000
75-25-2	Bromoform	ND	7000
74-83-9	Bromomethane	ND	7000
78-93-3	2-Butanone (MEK)	ND	14000
104-51-8	n-Butylbenzene	ND	7000
135-98-8	sec-Butylbenzene	ND	7000
98-06-6	tert-Butylbenzene	ND	7000
75-15-0	Carbon disulfide	ND	7000
56-23-5	Carbon tetrachloride	ND	7000
108-90-7	Chlorobenzene	ND	7000
75-00-3	Chloroethane	ND	7000
67-66-3	Chloroform	ND	7000
74-87-3	Chloromethane	ND	7000
95-49-8	2-Chlorotoluene	ND	7000
106-43-4	4-Chlorotoluene	ND	7000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	7000
124-48-1	Dibromochloromethane	ND	7000
106-93-4	1,2-Dibromoethane (EDB)	ND	7000
74-95-3	Dibromomethane	ND	7000
95-50-1	1,2-Dichlorobenzene	ND	7000
541-73-1	1,3-Dichlorobenzene	ND	7000
106-46-7	1,4-Dichlorobenzene	ND	7000
75-71-8	Dichlorodifluoromethane	ND	7000
75-34-3	1,1-Dichloroethane	ND	7000
107-06-2	1,2-Dichloroethane	ND	7000
75-35-4	1,1-Dichloroethene	ND	7000
156-59-2	cis-1,2-Dichloroethene	ND	7000
156-60-5	trans-1,2-Dichloroethene	ND	7000
78-87-5	1,2-Dichloropropane	ND	7000
142-28-9	1,3-Dichloropropane	ND	7000
590-20-7	2,2-Dichloropropane	ND	7000
563-58-6	1,1-Dichloropropene	ND	7000
10061-01-5	cis-1,3-Dichloropropene	ND	7000
10061-02-6	trans-1,3-Dichloropropene	ND	7000
100-41-4	Ethylbenzene	ND	7000
87-68-3	Hexachlorobutadiene	ND	7000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 1 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55102
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPL-3 (Soil)

Matrix: Solid
Percent Moisture: 28.6
Sample Weight/Volume:
Dilution Factor: 1000
Soil Extract Volume:
Lab Data File: M36414.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	14000
98-82-8	Isopropylbenzene	ND	7000
99-87-6	4-Isopropyltoluene	ND	7000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	7000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	14000
75-09-2	Methylene chloride	ND	7000
91-20-3	Naphthalene	ND	7000
103-65-1	n-Propylbenzene	ND	7000
100-42-5	Styrene	ND	7000
96-18-4	1,2,3-Trichloropropane	ND	7000
630-20-6	1,1,1,2-Tetrachloroethane	ND	7000
79-34-5	1,1,2,2-Tetrachloroethane	100000	7000
127-18-4	Tetrachloroethene (PCE)	ND	7000
108-88-3	Toluene	ND	7000
87-61-6	1,2,3-Trichlorobenzene	ND	7000
120-82-1	1,2,4-Trichlorobenzene	ND	7000
71-55-6	1,1,1-Trichloroethane	ND	7000
79-00-5	1,1,2-Trichloroethane	ND	7000
79-01-6	Trichloroethene (TCE)	160000	7000
75-69-4	Trichlorofluoromethane	ND	7000
95-63-6	1,2,4-Trimethylbenzene	ND	7000
108-67-8	1,3,5-Trimethylbenzene	ND	7000
75-01-4	Vinyl chloride	ND	7000
95-47-6	o-Xylene	ND	7000
108-38-3	m,p-Xylenes	ND	7000
123-91-1	1,4-Dioxane	ND	70000

Surrogate	Recovery	Limits
Bromofluorobenzene	94%	63%-113%
1,2-Dichloroethane-d4	95%	85%-116%
Toluene-d8	100%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 2

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55102
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPL-3 (Water)

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 80
Soil Extract Volume:
Lab Data File: M36409.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	35000	1600
107-13-1	Acrylonitrile	ND	2000
71-43-2	Benzene	ND	400
108-86-1	Bromobenzene	ND	400
74-97-5	Bromochloromethane	ND	400
75-27-4	Bromodichloromethane	ND	400
75-25-2	Bromoform	ND	400
74-83-9	Bromomethane	ND	400
78-93-3	2-Butanone (MEK)	ND	800
104-51-8	n-Butylbenzene	ND	400
135-98-8	sec-Butylbenzene	ND	400
98-06-6	tert-Butylbenzene	ND	400
75-15-0	Carbon disulfide	ND	400
56-23-5	Carbon tetrachloride	ND	400
108-90-7	Chlorobenzene	ND	400
75-00-3	Chloroethane	ND	400
67-66-3	Chloroform	ND	400
74-87-3	Chloromethane	ND	400
95-49-8	2-Chlorotoluene	ND	400
106-43-4	4-Chlorotoluene	ND	400
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	400
124-48-1	Dibromochloromethane	ND	400
106-93-4	1,2-Dibromoethane (EDB)	ND	400
74-95-3	Dibromomethane	ND	400
95-50-1	1,2-Dichlorobenzene	ND	400
541-73-1	1,3-Dichlorobenzene	ND	400
106-46-7	1,4-Dichlorobenzene	ND	400
75-71-8	Dichlorodifluoromethane	ND	400
75-34-3	1,1-Dichloroethane	ND	400
107-06-2	1,2-Dichloroethane	ND	400
75-35-4	1,1-Dichloroethene	ND	400
156-59-2	cis-1,2-Dichloroethene	ND	400
156-60-5	trans-1,2-Dichloroethene	ND	400
78-87-5	1,2-Dichloropropane	ND	400
142-28-9	1,3-Dichloropropane	ND	400
590-20-7	2,2-Dichloropropane	ND	400
563-58-6	1,1-Dichloropropene	ND	400
10061-01-5	cis-1,3-Dichloropropene	ND	400
10061-02-6	trans-1,3-Dichloropropene	ND	400
100-41-4	Ethylbenzene	ND	400
87-68-3	Hexachlorobutadiene	ND	400

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 2 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55102
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPL-3 (Water)

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 80
Soil Extract Volume:
Lab Data File: M36409.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	800
98-82-8	Isopropylbenzene	ND	400
99-87-6	4-Isopropyltoluene	ND	400
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	400
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	800
75-09-2	Methylene chloride	ND	400
91-20-3	Naphthalene	ND	400
103-65-1	n-Propylbenzene	ND	400
100-42-5	Styrene	ND	400
96-18-4	1,2,3-Trichloropropane	ND	400
630-20-6	1,1,1,2-Tetrachloroethane	ND	400
79-34-5	1,1,2,2-Tetrachloroethane	28000	400
127-18-4	Tetrachloroethene (PCE)	ND	400
108-88-3	Toluene	ND	400
87-61-6	1,2,3-Trichlorobenzene	ND	400
120-82-1	1,2,4-Trichlorobenzene	ND	400
71-55-6	1,1,1-Trichloroethane	ND	400
79-00-5	1,1,2-Trichloroethane	ND	400
79-01-6	Trichloroethene (TCE)	4600	400
75-69-4	Trichlorofluoromethane	ND	400
95-63-6	1,2,4-Trimethylbenzene	ND	400
108-67-8	1,3,5-Trimethylbenzene	ND	400
75-01-4	Vinyl chloride	ND	400
95-47-6	o-Xylene	ND	400
108-38-3	m,p-Xylenes	ND	400
123-91-1	1,4-Dioxane	ND	4000

Surrogate	Recovery	Limits
Bromofluorobenzene	95%	83%-107%
1,2-Dichloroethane-d4	96%	86%-113%
Toluene-d8	100%	88%-108%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 3

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPL-4 (Soil)

Matrix: Solid
Percent Moisture: 27.7
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36386.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	55000
107-13-1	Acrylonitrile	ND	69000
71-43-2	Benzene	ND	14000
108-86-1	Bromobenzene	ND	14000
74-97-5	Bromochloromethane	ND	14000
75-27-4	Bromodichloromethane	ND	14000
75-25-2	Bromoform	ND	14000
74-83-9	Bromomethane	ND	14000
78-93-3	2-Butanone (MEK)	ND	28000
104-51-8	n-Butylbenzene	ND	14000
135-98-8	sec-Butylbenzene	ND	14000
98-06-6	tert-Butylbenzene	ND	14000
75-15-0	Carbon disulfide	ND	14000
56-23-5	Carbon tetrachloride	ND	14000
108-90-7	Chlorobenzene	ND	14000
75-00-3	Chloroethane	ND	14000
67-66-3	Chloroform	ND	14000
74-87-3	Chloromethane	ND	14000
95-49-8	2-Chlorotoluene	ND	14000
106-43-4	4-Chlorotoluene	ND	14000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	14000
124-48-1	Dibromochloromethane	ND	14000
106-93-4	1,2-Dibromoethane (EDB)	ND	14000
74-95-3	Dibromomethane	ND	14000
95-50-1	1,2-Dichlorobenzene	ND	14000
541-73-1	1,3-Dichlorobenzene	ND	14000
106-46-7	1,4-Dichlorobenzene	ND	14000
75-71-8	Dichlorodifluoromethane	ND	14000
75-34-3	1,1-Dichloroethane	ND	14000
107-06-2	1,2-Dichloroethane	ND	14000
75-35-4	1,1-Dichloroethene	ND	14000
156-59-2	cis-1,2-Dichloroethene	ND	14000
156-60-5	trans-1,2-Dichloroethene	ND	14000
78-87-5	1,2-Dichloropropane	ND	14000
142-28-9	1,3-Dichloropropane	ND	14000
590-20-7	2,2-Dichloropropane	ND	14000
563-58-6	1,1-Dichloropropene	ND	14000
10061-01-5	cis-1,3-Dichloropropene	ND	14000
10061-02-6	trans-1,3-Dichloropropene	ND	14000
100-41-4	Ethylbenzene	ND	14000
87-68-3	Hexachlorobutadiene	ND	14000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 3 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPL-4 (Soil)

Matrix: Solid
Percent Moisture: 27.7
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36386.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	28000
98-82-8	Isopropylbenzene	ND	14000
99-87-6	4-Isopropyltoluene	ND	14000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	14000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	28000
75-09-2	Methylene chloride	ND	14000
91-20-3	Naphthalene	ND	14000
103-65-1	n-Propylbenzene	ND	14000
100-42-5	Styrene	ND	14000
96-18-4	1,2,3-Trichloropropane	ND	14000
630-20-6	1,1,1,2-Tetrachloroethane	ND	14000
79-34-5	1,1,2,2-Tetrachloroethane	120000	14000
127-18-4	Tetrachloroethene (PCE)	14000	14000
108-88-3	Toluene	ND	14000
87-61-6	1,2,3-Trichlorobenzene	ND	14000
120-82-1	1,2,4-Trichlorobenzene	ND	14000
71-55-6	1,1,1-Trichloroethane	ND	14000
79-00-5	1,1,2-Trichloroethane	ND	14000
79-01-6	Trichloroethene (TCE)	570000	14000
75-69-4	Trichlorofluoromethane	ND	14000
95-63-6	1,2,4-Trimethylbenzene	ND	14000
108-67-8	1,3,5-Trimethylbenzene	ND	14000
75-01-4	Vinyl chloride	ND	14000
95-47-6	o-Xylene	ND	14000
108-38-3	m,p-Xylenes	ND	14000
123-91-1	1,4-Dioxane	ND	140000

Surrogate	Recovery	Limits
Bromofluorobenzene	95%	63%-113%
1,2-Dichloroethane-d4	97%	85%-116%
Toluene-d8	96%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 4

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPH-3 (Soil)

Matrix: Solid
Percent Moisture: 28.0
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36387.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	56000
107-13-1	Acrylonitrile	ND	69000
71-43-2	Benzene	ND	14000
108-86-1	Bromobenzene	ND	14000
74-97-5	Bromochloromethane	ND	14000
75-27-4	Bromodichloromethane	ND	14000
75-25-2	Bromoform	ND	14000
74-83-9	Bromomethane	ND	14000
78-93-3	2-Butanone (MEK)	ND	28000
104-51-8	n-Butylbenzene	ND	14000
135-98-8	sec-Butylbenzene	ND	14000
98-06-6	tert-Butylbenzene	ND	14000
75-15-0	Carbon disulfide	ND	14000
56-23-5	Carbon tetrachloride	ND	14000
108-90-7	Chlorobenzene	ND	14000
75-00-3	Chloroethane	ND	14000
67-66-3	Chloroform	ND	14000
74-87-3	Chloromethane	ND	14000
95-49-8	2-Chlorotoluene	ND	14000
106-43-4	4-Chlorotoluene	ND	14000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	14000
124-48-1	Dibromochloromethane	ND	14000
106-93-4	1,2-Dibromoethane (EDB)	ND	14000
74-95-3	Dibromomethane	ND	14000
95-50-1	1,2-Dichlorobenzene	ND	14000
541-73-1	1,3-Dichlorobenzene	ND	14000
106-46-7	1,4-Dichlorobenzene	ND	14000
75-71-8	Dichlorodifluoromethane	ND	14000
75-34-3	1,1-Dichloroethane	ND	14000
107-06-2	1,2-Dichloroethane	ND	14000
75-35-4	1,1-Dichloroethene	ND	14000
156-59-2	cis-1,2-Dichloroethene	ND	14000
156-60-5	trans-1,2-Dichloroethene	ND	14000
78-87-5	1,2-Dichloropropane	ND	14000
142-28-9	1,3-Dichloropropane	ND	14000
590-20-7	2,2-Dichloropropane	ND	14000
563-58-6	1,1-Dichloropropene	ND	14000
10061-01-5	cis-1,3-Dichloropropene	ND	14000
10061-02-6	trans-1,3-Dichloropropene	ND	14000
100-41-4	Ethylbenzene	ND	14000
87-68-3	Hexachlorobutadiene	ND	14000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 4 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPH-3 (Soil)

Matrix: Solid
Percent Moisture: 28.0
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36387.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	28000
98-82-8	Isopropylbenzene	ND	14000
99-87-6	4-Isopropyltoluene	ND	14000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	14000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	28000
75-09-2	Methylene chloride	ND	14000
91-20-3	Naphthalene	ND	14000
103-65-1	n-Propylbenzene	ND	14000
100-42-5	Styrene	ND	14000
96-18-4	1,2,3-Trichloropropane	ND	14000
630-20-6	1,1,1,2-Tetrachloroethane	ND	14000
79-34-5	1,1,2,2-Tetrachloroethane	120000	14000
127-18-4	Tetrachloroethene (PCE)	20000	14000
108-88-3	Toluene	ND	14000
87-61-6	1,2,3-Trichlorobenzene	ND	14000
120-82-1	1,2,4-Trichlorobenzene	ND	14000
71-55-6	1,1,1-Trichloroethane	ND	14000
79-00-5	1,1,2-Trichloroethane	ND	14000
79-01-6	Trichloroethene (TCE)	710000	14000
75-69-4	Trichlorofluoromethane	ND	14000
95-63-6	1,2,4-Trimethylbenzene	ND	14000
108-67-8	1,3,5-Trimethylbenzene	ND	14000
75-01-4	Vinyl chloride	ND	14000
95-47-6	o-Xylene	ND	14000
108-38-3	m,p-Xylenes	ND	14000
123-91-1	1,4-Dioxane	ND	140000

Surrogate	Recovery	Limits
Bromofluorobenzene	96%	63%-113%
1,2-Dichloroethane-d4	97%	85%-116%
Toluene-d8	96%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 5

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55102
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPH-3 (Water)

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 400
Soil Extract Volume:
Lab Data File: M36410.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	8000
107-13-1	Acrylonitrile	ND	10000
71-43-2	Benzene	ND	2000
108-86-1	Bromobenzene	ND	2000
74-97-5	Bromochloromethane	ND	2000
75-27-4	Bromodichloromethane	ND	2000
75-25-2	Bromoform	ND	2000
74-83-9	Bromomethane	ND	2000
78-93-3	2-Butanone (MEK)	ND	4000
104-51-8	n-Butylbenzene	ND	2000
135-98-8	sec-Butylbenzene	ND	2000
98-06-6	tert-Butylbenzene	ND	2000
75-15-0	Carbon disulfide	ND	2000
56-23-5	Carbon tetrachloride	ND	2000
108-90-7	Chlorobenzene	ND	2000
75-00-3	Chloroethane	ND	2000
67-66-3	Chloroform	ND	2000
74-87-3	Chloromethane	ND	2000
95-49-8	2-Chlorotoluene	ND	2000
106-43-4	4-Chlorotoluene	ND	2000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	2000
124-48-1	Dibromochloromethane	ND	2000
106-93-4	1,2-Dibromoethane (EDB)	ND	2000
74-95-3	Dibromomethane	ND	2000
95-50-1	1,2-Dichlorobenzene	ND	2000
541-73-1	1,3-Dichlorobenzene	ND	2000
106-46-7	1,4-Dichlorobenzene	ND	2000
75-71-8	Dichlorodifluoromethane	ND	2000
75-34-3	1,1-Dichloroethane	ND	2000
107-06-2	1,2-Dichloroethane	ND	2000
75-35-4	1,1-Dichloroethene	ND	2000
156-59-2	cis-1,2-Dichloroethene	ND	2000
156-60-5	trans-1,2-Dichloroethene	ND	2000
78-87-5	1,2-Dichloropropane	ND	2000
142-28-9	1,3-Dichloropropane	ND	2000
590-20-7	2,2-Dichloropropane	ND	2000
563-58-6	1,1-Dichloropropene	ND	2000
10061-01-5	cis-1,3-Dichloropropene	ND	2000
10061-02-6	trans-1,3-Dichloropropene	ND	2000
100-41-4	Ethylbenzene	ND	2000
87-68-3	Hexachlorobutadiene	ND	2000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 5 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55102
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPH-3 (Water)

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 400
Soil Extract Volume:
Lab Data File: M36410.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	4000
98-82-8	Isopropylbenzene	ND	2000
99-87-6	4-Isopropyltoluene	ND	2000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	2000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4000
75-09-2	Methylene chloride	ND	2000
91-20-3	Naphthalene	ND	2000
103-65-1	n-Propylbenzene	ND	2000
100-42-5	Styrene	ND	2000
96-18-4	1,2,3-Trichloropropane	ND	2000
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000
79-34-5	1,1,2,2-Tetrachloroethane	39000	2000
127-18-4	Tetrachloroethene (PCE)	ND	2000
108-88-3	Toluene	ND	2000
87-61-6	1,2,3-Trichlorobenzene	ND	2000
120-82-1	1,2,4-Trichlorobenzene	ND	2000
71-55-6	1,1,1-Trichloroethane	ND	2000
79-00-5	1,1,2-Trichloroethane	140	2000
79-01-6	Trichloroethene (TCE)	25000	2000
75-69-4	Trichlorofluoromethane	ND	2000
95-63-6	1,2,4-Trimethylbenzene	ND	2000
108-67-8	1,3,5-Trimethylbenzene	ND	2000
75-01-4	Vinyl chloride	ND	2000
95-47-6	o-Xylene	ND	2000
108-38-3	m,p-Xylenes	ND	2000
123-91-1	1,4-Dioxane	ND	20000

Surrogate	Recovery	Limits
Bromofluorobenzene	93%	83%-107%
1,2-Dichloroethane-d4	97%	86%-113%
Toluene-d8	98%	88%-108%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 6

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPH-4 (Soil)

Matrix: Solid
Percent Moisture: 26.7
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36388.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	54000
107-13-1	Acrylonitrile	ND	68000
71-43-2	Benzene	ND	14000
108-86-1	Bromobenzene	ND	14000
74-97-5	Bromochloromethane	ND	14000
75-27-4	Bromodichloromethane	ND	14000
75-25-2	Bromoform	ND	14000
74-83-9	Bromomethane	ND	14000
78-93-3	2-Butanone (MEK)	ND	27000
104-51-8	n-Butylbenzene	ND	14000
135-98-8	sec-Butylbenzene	ND	14000
98-06-6	tert-Butylbenzene	ND	14000
75-15-0	Carbon disulfide	ND	14000
56-23-5	Carbon tetrachloride	ND	14000
108-90-7	Chlorobenzene	ND	14000
75-00-3	Chloroethane	ND	14000
67-66-3	Chloroform	ND	14000
74-87-3	Chloromethane	ND	14000
95-49-8	2-Chlorotoluene	ND	14000
106-43-4	4-Chlorotoluene	ND	14000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	14000
124-48-1	Dibromochloromethane	ND	14000
106-93-4	1,2-Dibromoethane (EDB)	ND	14000
74-95-3	Dibromomethane	ND	14000
95-50-1	1,2-Dichlorobenzene	ND	14000
541-73-1	1,3-Dichlorobenzene	ND	14000
106-46-7	1,4-Dichlorobenzene	ND	14000
75-71-8	Dichlorodifluoromethane	ND	14000
75-34-3	1,1-Dichloroethane	ND	14000
107-06-2	1,2-Dichloroethane	ND	14000
75-35-4	1,1-Dichloroethene	ND	14000
156-59-2	cis-1,2-Dichloroethene	ND	14000
156-60-5	trans-1,2-Dichloroethene	ND	14000
78-87-5	1,2-Dichloropropane	ND	14000
142-28-9	1,3-Dichloropropane	ND	14000
590-20-7	2,2-Dichloropropane	ND	14000
563-58-6	1,1-Dichloropropene	ND	14000
10061-01-5	cis-1,3-Dichloropropene	ND	14000
10061-02-6	trans-1,3-Dichloropropene	ND	14000
100-41-4	Ethylbenzene	ND	14000
87-68-3	Hexachlorobutadiene	ND	14000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 6 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPH-4 (Soil)

Matrix: Solid
Percent Moisture: 26.7
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36388.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	27000
98-82-8	Isopropylbenzene	ND	14000
99-87-6	4-Isopropyltoluene	ND	14000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	14000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	27000
75-09-2	Methylene chloride	ND	14000
91-20-3	Naphthalene	ND	14000
103-65-1	n-Propylbenzene	ND	14000
100-42-5	Styrene	ND	14000
96-18-4	1,2,3-Trichloropropane	ND	14000
630-20-6	1,1,1,2-Tetrachloroethane	ND	14000
79-34-5	1,1,2,2-Tetrachloroethane	140000	14000
127-18-4	Tetrachloroethene (PCE)	22000	14000
108-88-3	Toluene	ND	14000
87-61-6	1,2,3-Trichlorobenzene	ND	14000
120-82-1	1,2,4-Trichlorobenzene	ND	14000
71-55-6	1,1,1-Trichloroethane	ND	14000
79-00-5	1,1,2-Trichloroethane	ND	14000
79-01-6	Trichloroethene (TCE)	720000	14000
75-69-4	Trichlorofluoromethane	ND	14000
95-63-6	1,2,4-Trimethylbenzene	ND	14000
108-67-8	1,3,5-Trimethylbenzene	ND	14000
75-01-4	Vinyl chloride	ND	14000
95-47-6	o-Xylene	ND	14000
108-38-3	m,p-Xylenes	ND	14000
123-91-1	1,4-Dioxane	ND	140000

Surrogate	Recovery	Limits
Bromofluorobenzene	96%	63%-113%
1,2-Dichloroethane-d4	100%	85%-116%
Toluene-d8	97%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 7

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPH-3 (Soil)

Matrix: Solid
Percent Moisture: 25.9
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36389.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	54000
107-13-1	Acrylonitrile	ND	67000
71-43-2	Benzene	ND	13000
108-86-1	Bromobenzene	ND	13000
74-97-5	Bromochloromethane	ND	13000
75-27-4	Bromodichloromethane	ND	13000
75-25-2	Bromoform	ND	13000
74-83-9	Bromomethane	ND	13000
78-93-3	2-Butanone (MEK)	ND	27000
104-51-8	n-Butylbenzene	ND	13000
135-98-8	sec-Butylbenzene	ND	13000
98-06-6	tert-Butylbenzene	ND	13000
75-15-0	Carbon disulfide	ND	13000
56-23-5	Carbon tetrachloride	ND	13000
108-90-7	Chlorobenzene	ND	13000
75-00-3	Chloroethane	ND	13000
67-66-3	Chloroform	ND	13000
74-87-3	Chloromethane	ND	13000
95-49-8	2-Chlorotoluene	ND	13000
106-43-4	4-Chlorotoluene	ND	13000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	13000
124-48-1	Dibromochloromethane	ND	13000
106-93-4	1,2-Dibromoethane (EDB)	ND	13000
74-95-3	Dibromomethane	ND	13000
95-50-1	1,2-Dichlorobenzene	ND	13000
541-73-1	1,3-Dichlorobenzene	ND	13000
106-46-7	1,4-Dichlorobenzene	ND	13000
75-71-8	Dichlorodifluoromethane	ND	13000
75-34-3	1,1-Dichloroethane	ND	13000
107-06-2	1,2-Dichloroethane	ND	13000
75-35-4	1,1-Dichloroethene	ND	13000
156-59-2	cis-1,2-Dichloroethene	ND	13000
156-60-5	trans-1,2-Dichloroethene	ND	13000
78-87-5	1,2-Dichloropropane	ND	13000
142-28-9	1,3-Dichloropropane	ND	13000
590-20-7	2,2-Dichloropropane	ND	13000
563-58-6	1,1-Dichloropropene	ND	13000
10061-01-5	cis-1,3-Dichloropropene	ND	13000
10061-02-6	trans-1,3-Dichloropropene	ND	13000
100-41-4	Ethylbenzene	ND	13000
87-68-3	Hexachlorobutadiene	ND	13000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 7 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPH-3 (Soil)

Matrix: Solid
Percent Moisture: 25.9
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36389.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	27000
98-82-8	Isopropylbenzene	ND	13000
99-87-6	4-Isopropyltoluene	ND	13000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	13000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	27000
75-09-2	Methylene chloride	ND	13000
91-20-3	Naphthalene	ND	13000
103-65-1	n-Propylbenzene	ND	13000
100-42-5	Styrene	ND	13000
96-18-4	1,2,3-Trichloropropane	ND	13000
630-20-6	1,1,1,2-Tetrachloroethane	ND	13000
79-34-5	1,1,2,2-Tetrachloroethane	120000	13000
127-18-4	Tetrachloroethene (PCE)	17000	13000
108-88-3	Toluene	ND	13000
87-61-6	1,2,3-Trichlorobenzene	ND	13000
120-82-1	1,2,4-Trichlorobenzene	ND	13000
71-55-6	1,1,1-Trichloroethane	ND	13000
79-00-5	1,1,2-Trichloroethane	ND	13000
79-01-6	Trichloroethene (TCE)	480000	13000
75-69-4	Trichlorofluoromethane	ND	13000
95-63-6	1,2,4-Trimethylbenzene	ND	13000
108-67-8	1,3,5-Trimethylbenzene	ND	13000
75-01-4	Vinyl chloride	ND	13000
95-47-6	o-Xylene	ND	13000
108-38-3	m,p-Xylenes	ND	13000
123-91-1	1,4-Dioxane	ND	130000

Surrogate	Recovery	Limits
Bromofluorobenzene	96%	63%-113%
1,2-Dichloroethane-d4	97%	85%-116%
Toluene-d8	97%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 8

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55102
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPH-3 (Water)

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 400
Soil Extract Volume:
Lab Data File: M36411.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	48000	8000
107-13-1	Acrylonitrile	ND	10000
71-43-2	Benzene	ND	2000
108-86-1	Bromobenzene	ND	2000
74-97-5	Bromochloromethane	ND	2000
75-27-4	Bromodichloromethane	ND	2000
75-25-2	Bromoform	ND	2000
74-83-9	Bromomethane	ND	2000
78-93-3	2-Butanone (MEK)	ND	4000
104-51-8	n-Butylbenzene	ND	2000
135-98-8	sec-Butylbenzene	ND	2000
98-06-6	tert-Butylbenzene	ND	2000
75-15-0	Carbon disulfide	ND	2000
56-23-5	Carbon tetrachloride	ND	2000
108-90-7	Chlorobenzene	ND	2000
75-00-3	Chloroethane	ND	2000
67-66-3	Chloroform	ND	2000
74-87-3	Chloromethane	ND	2000
95-49-8	2-Chlorotoluene	ND	2000
106-43-4	4-Chlorotoluene	ND	2000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	2000
124-48-1	Dibromochloromethane	ND	2000
106-93-4	1,2-Dibromoethane (EDB)	ND	2000
74-95-3	Dibromomethane	ND	2000
95-50-1	1,2-Dichlorobenzene	ND	2000
541-73-1	1,3-Dichlorobenzene	ND	2000
106-46-7	1,4-Dichlorobenzene	ND	2000
75-71-8	Dichlorodifluoromethane	ND	2000
75-34-3	1,1-Dichloroethane	ND	2000
107-06-2	1,2-Dichloroethane	ND	2000
75-35-4	1,1-Dichloroethene	ND	2000
156-59-2	cis-1,2-Dichloroethene	ND	2000
156-60-5	trans-1,2-Dichloroethene	ND	2000
78-87-5	1,2-Dichloropropane	ND	2000
142-28-9	1,3-Dichloropropane	ND	2000
590-20-7	2,2-Dichloropropane	ND	2000
563-58-6	1,1-Dichloropropene	ND	2000
10061-01-5	cis-1,3-Dichloropropene	ND	2000
10061-02-6	trans-1,3-Dichloropropene	ND	2000
100-41-4	Ethylbenzene	ND	2000
87-68-3	Hexachlorobutadiene	ND	2000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 8 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55102
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPH-3 (Water)

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 400
Soil Extract Volume:
Lab Data File: M36411.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	4000
98-82-8	Isopropylbenzene	ND	2000
99-87-6	4-Isopropyltoluene	ND	2000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	2000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4000
75-09-2	Methylene chloride	ND	2000
91-20-3	Naphthalene	ND	2000
103-65-1	n-Propylbenzene	ND	2000
100-42-5	Styrene	ND	2000
96-18-4	1,2,3-Trichloropropane	ND	2000
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000
79-34-5	1,1,2,2-Tetrachloroethane	32000	2000
127-18-4	Tetrachloroethene (PCE)	ND	2000
108-88-3	Toluene	ND	2000
87-61-6	1,2,3-Trichlorobenzene	ND	2000
120-82-1	1,2,4-Trichlorobenzene	ND	2000
71-55-6	1,1,1-Trichloroethane	ND	2000
79-00-5	1,1,2-Trichloroethane	ND	2000
79-01-6	Trichloroethene (TCE)	2300	2000
75-69-4	Trichlorofluoromethane	ND	2000
95-63-6	1,2,4-Trimethylbenzene	ND	2000
108-67-8	1,3,5-Trimethylbenzene	ND	2000
75-01-4	Vinyl chloride	ND	2000
95-47-6	o-Xylene	ND	2000
108-38-3	m,p-Xylenes	ND	2000
123-91-1	1,4-Dioxane	ND	20000

Surrogate	Recovery	Limits
Bromofluorobenzene	94%	83%-107%
1,2-Dichloroethane-d4	96%	86%-113%
Toluene-d8	100%	88%-108%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 9

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPH-4 (Soil)

Matrix: Solid
Percent Moisture: 26.9
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36390.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	55000
107-13-1	Acrylonitrile	ND	68000
71-43-2	Benzene	ND	14000
108-86-1	Bromobenzene	ND	14000
74-97-5	Bromochloromethane	ND	14000
75-27-4	Bromodichloromethane	ND	14000
75-25-2	Bromoform	ND	14000
74-83-9	Bromomethane	ND	14000
78-93-3	2-Butanone (MEK)	ND	27000
104-51-8	n-Butylbenzene	ND	14000
135-98-8	sec-Butylbenzene	ND	14000
98-06-6	tert-Butylbenzene	ND	14000
75-15-0	Carbon disulfide	ND	14000
56-23-5	Carbon tetrachloride	ND	14000
108-90-7	Chlorobenzene	ND	14000
75-00-3	Chloroethane	ND	14000
67-66-3	Chloroform	ND	14000
74-87-3	Chloromethane	ND	14000
95-49-8	2-Chlorotoluene	ND	14000
106-43-4	4-Chlorotoluene	ND	14000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	14000
124-48-1	Dibromochloromethane	ND	14000
106-93-4	1,2-Dibromoethane (EDB)	ND	14000
74-95-3	Dibromomethane	ND	14000
95-50-1	1,2-Dichlorobenzene	ND	14000
541-73-1	1,3-Dichlorobenzene	ND	14000
106-46-7	1,4-Dichlorobenzene	ND	14000
75-71-8	Dichlorodifluoromethane	ND	14000
75-34-3	1,1-Dichloroethane	ND	14000
107-06-2	1,2-Dichloroethane	ND	14000
75-35-4	1,1-Dichloroethene	ND	14000
156-59-2	cis-1,2-Dichloroethene	ND	14000
156-60-5	trans-1,2-Dichloroethene	ND	14000
78-87-5	1,2-Dichloropropane	ND	14000
142-28-9	1,3-Dichloropropane	ND	14000
590-20-7	2,2-Dichloropropane	ND	14000
563-58-6	1,1-Dichloropropene	ND	14000
10061-01-5	cis-1,3-Dichloropropene	ND	14000
10061-02-6	trans-1,3-Dichloropropene	ND	14000
100-41-4	Ethylbenzene	ND	14000
87-68-3	Hexachlorobutadiene	ND	14000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 9 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: FPH-4 (Soil)

Matrix: Solid
Percent Moisture: 26.9
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36390.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	27000
98-82-8	Isopropylbenzene	ND	14000
99-87-6	4-Isopropyltoluene	ND	14000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	14000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	27000
75-09-2	Methylene chloride	ND	14000
91-20-3	Naphthalene	ND	14000
103-65-1	n-Propylbenzene	ND	14000
100-42-5	Styrene	ND	14000
96-18-4	1,2,3-Trichloropropane	ND	14000
630-20-6	1,1,1,2-Tetrachloroethane	ND	14000
79-34-5	1,1,2,2-Tetrachloroethane	100000	14000
127-18-4	Tetrachloroethene (PCE)	12000	14000
108-88-3	Toluene	ND	14000
87-61-6	1,2,3-Trichlorobenzene	ND	14000
120-82-1	1,2,4-Trichlorobenzene	ND	14000
71-55-6	1,1,1-Trichloroethane	ND	14000
79-00-5	1,1,2-Trichloroethane	ND	14000
79-01-6	Trichloroethene (TCE)	340000	14000
75-69-4	Trichlorofluoromethane	ND	14000
95-63-6	1,2,4-Trimethylbenzene	ND	14000
108-67-8	1,3,5-Trimethylbenzene	ND	14000
75-01-4	Vinyl chloride	ND	14000
95-47-6	o-Xylene	ND	14000
108-38-3	m,p-Xylenes	ND	14000
123-91-1	1,4-Dioxane	ND	140000

Surrogate	Recovery	Limits
Bromofluorobenzene	94%	63%-113%
1,2-Dichloroethane-d4	97%	85%-116%
Toluene-d8	98%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 10

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPL-3 (Soil)

Matrix: Solid
Percent Moisture: 27.6
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36391.D;M36415.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	55000
107-13-1	Acrylonitrile	ND	69000
71-43-2	Benzene	ND	14000
108-86-1	Bromobenzene	ND	14000
74-97-5	Bromochloromethane	ND	14000
75-27-4	Bromodichloromethane	ND	14000
75-25-2	Bromoform	ND	14000
74-83-9	Bromomethane	ND	14000
78-93-3	2-Butanone (MEK)	ND	28000
104-51-8	n-Butylbenzene	ND	14000
135-98-8	sec-Butylbenzene	ND	14000
98-06-6	tert-Butylbenzene	ND	14000
75-15-0	Carbon disulfide	ND	14000
56-23-5	Carbon tetrachloride	ND	14000
108-90-7	Chlorobenzene	ND	14000
75-00-3	Chloroethane	ND	14000
67-66-3	Chloroform	ND	14000
74-87-3	Chloromethane	ND	14000
95-49-8	2-Chlorotoluene	ND	14000
106-43-4	4-Chlorotoluene	ND	14000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	14000
124-48-1	Dibromochloromethane	ND	14000
106-93-4	1,2-Dibromoethane (EDB)	ND	14000
74-95-3	Dibromomethane	ND	14000
95-50-1	1,2-Dichlorobenzene	ND	14000
541-73-1	1,3-Dichlorobenzene	ND	14000
106-46-7	1,4-Dichlorobenzene	ND	14000
75-71-8	Dichlorodifluoromethane	ND	14000
75-34-3	1,1-Dichloroethane	ND	14000
107-06-2	1,2-Dichloroethane	ND	14000
75-35-4	1,1-Dichloroethene	ND	14000
156-59-2	cis-1,2-Dichloroethene	ND	14000
156-60-5	trans-1,2-Dichloroethene	ND	14000
78-87-5	1,2-Dichloropropane	ND	14000
142-28-9	1,3-Dichloropropane	ND	14000
590-20-7	2,2-Dichloropropane	ND	14000
563-58-6	1,1-Dichloropropene	ND	14000
10061-01-5	cis-1,3-Dichloropropene	ND	14000
10061-02-6	trans-1,3-Dichloropropene	ND	14000
100-41-4	Ethylbenzene	ND	14000
87-68-3	Hexachlorobutadiene	ND	14000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 10 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPL-3 (Soil)

Matrix: Solid
Percent Moisture: 27.6
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36391.D;M36415.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	28000
98-82-8	Isopropylbenzene	ND	14000
99-87-6	4-Isopropyltoluene	ND	14000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	14000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	28000
75-09-2	Methylene chloride	ND	14000
91-20-3	Naphthalene	ND	14000
103-65-1	n-Propylbenzene	ND	14000
100-42-5	Styrene	ND	14000
96-18-4	1,2,3-Trichloropropane	ND	14000
630-20-6	1,1,1,2-Tetrachloroethane	ND	14000
79-34-5	1,1,2,2-Tetrachloroethane	110000	14000
127-18-4	Tetrachloroethene (PCE)	16000	14000
108-88-3	Toluene	ND	14000
87-61-6	1,2,3-Trichlorobenzene	ND	14000
120-82-1	1,2,4-Trichlorobenzene	ND	14000
71-55-6	1,1,1-Trichloroethane	ND	14000
79-00-5	1,1,2-Trichloroethane	ND	14000
79-01-6	Trichloroethene (TCE)	270000	14000
75-69-4	Trichlorofluoromethane	ND	14000
95-63-6	1,2,4-Trimethylbenzene	ND	14000
108-67-8	1,3,5-Trimethylbenzene	ND	14000
75-01-4	Vinyl chloride	ND	14000
95-47-6	o-Xylene	ND	14000
108-38-3	m,p-Xylenes	ND	14000
123-91-1	1,4-Dioxane	ND	140000

Surrogate	Recovery	Limits
Bromofluorobenzene	95%	63%-113%
1,2-Dichloroethane-d4	96%	85%-116%
Toluene-d8	96%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 11

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55102
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPL-3 (Water)

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 400
Soil Extract Volume:
Lab Data File: M36412.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	8000
107-13-1	Acrylonitrile	ND	10000
71-43-2	Benzene	ND	2000
108-86-1	Bromobenzene	ND	2000
74-97-5	Bromochloromethane	ND	2000
75-27-4	Bromodichloromethane	ND	2000
75-25-2	Bromoform	ND	2000
74-83-9	Bromomethane	ND	2000
78-93-3	2-Butanone (MEK)	ND	4000
104-51-8	n-Butylbenzene	ND	2000
135-98-8	sec-Butylbenzene	ND	2000
98-06-6	tert-Butylbenzene	ND	2000
75-15-0	Carbon disulfide	ND	2000
56-23-5	Carbon tetrachloride	ND	2000
108-90-7	Chlorobenzene	ND	2000
75-00-3	Chloroethane	ND	2000
67-66-3	Chloroform	ND	2000
74-87-3	Chloromethane	ND	2000
95-49-8	2-Chlorotoluene	ND	2000
106-43-4	4-Chlorotoluene	ND	2000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	2000
124-48-1	Dibromochloromethane	ND	2000
106-93-4	1,2-Dibromoethane (EDB)	ND	2000
74-95-3	Dibromomethane	ND	2000
95-50-1	1,2-Dichlorobenzene	ND	2000
541-73-1	1,3-Dichlorobenzene	ND	2000
106-46-7	1,4-Dichlorobenzene	ND	2000
75-71-8	Dichlorodifluoromethane	ND	2000
75-34-3	1,1-Dichloroethane	ND	2000
107-06-2	1,2-Dichloroethane	ND	2000
75-35-4	1,1-Dichloroethene	ND	2000
156-59-2	cis-1,2-Dichloroethene	ND	2000
156-60-5	trans-1,2-Dichloroethene	ND	2000
78-87-5	1,2-Dichloropropane	ND	2000
142-28-9	1,3-Dichloropropane	ND	2000
590-20-7	2,2-Dichloropropane	ND	2000
563-58-6	1,1-Dichloropropene	ND	2000
10061-01-5	cis-1,3-Dichloropropene	ND	2000
10061-02-6	trans-1,3-Dichloropropene	ND	2000
100-41-4	Ethylbenzene	ND	2000
87-68-3	Hexachlorobutadiene	ND	2000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 11 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55102
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPL-3 (Water)

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 400
Soil Extract Volume:
Lab Data File: M36412.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	4000
98-82-8	Isopropylbenzene	ND	2000
99-87-6	4-Isopropyltoluene	ND	2000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	2000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4000
75-09-2	Methylene chloride	ND	2000
91-20-3	Naphthalene	ND	2000
103-65-1	n-Propylbenzene	ND	2000
100-42-5	Styrene	ND	2000
96-18-4	1,2,3-Trichloropropane	ND	2000
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000
79-34-5	1,1,2,2-Tetrachloroethane	43000	2000
127-18-4	Tetrachloroethene (PCE)	ND	2000
108-88-3	Toluene	ND	2000
87-61-6	1,2,3-Trichlorobenzene	ND	2000
120-82-1	1,2,4-Trichlorobenzene	ND	2000
71-55-6	1,1,1-Trichloroethane	ND	2000
79-00-5	1,1,2-Trichloroethane	200	2000
79-01-6	Trichloroethene (TCE)	27000	2000
75-69-4	Trichlorofluoromethane	ND	2000
95-63-6	1,2,4-Trimethylbenzene	ND	2000
108-67-8	1,3,5-Trimethylbenzene	ND	2000
75-01-4	Vinyl chloride	ND	2000
95-47-6	o-Xylene	ND	2000
108-38-3	m,p-Xylenes	ND	2000
123-91-1	1,4-Dioxane	ND	20000

Surrogate	Recovery	Limits
Bromofluorobenzene	95%	83%-107%
1,2-Dichloroethane-d4	96%	86%-113%
Toluene-d8	100%	88%-108%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 12

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPL-4 (Soil)

Matrix: Solid
Percent Moisture: 29.4
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36392.D;J31118.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	57000
107-13-1	Acrylonitrile	ND	71000
71-43-2	Benzene	ND	14000
108-86-1	Bromobenzene	ND	14000
74-97-5	Bromochloromethane	ND	14000
75-27-4	Bromodichloromethane	ND	14000
75-25-2	Bromoform	ND	14000
74-83-9	Bromomethane	ND	14000
78-93-3	2-Butanone (MEK)	ND	28000
104-51-8	n-Butylbenzene	ND	14000
135-98-8	sec-Butylbenzene	ND	14000
98-06-6	tert-Butylbenzene	ND	14000
75-15-0	Carbon disulfide	ND	14000
56-23-5	Carbon tetrachloride	ND	14000
108-90-7	Chlorobenzene	ND	14000
75-00-3	Chloroethane	ND	14000
67-66-3	Chloroform	ND	14000
74-87-3	Chloromethane	ND	14000
95-49-8	2-Chlorotoluene	ND	14000
106-43-4	4-Chlorotoluene	ND	14000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	14000
124-48-1	Dibromochloromethane	ND	14000
106-93-4	1,2-Dibromoethane (EDB)	ND	14000
74-95-3	Dibromomethane	ND	14000
95-50-1	1,2-Dichlorobenzene	ND	14000
541-73-1	1,3-Dichlorobenzene	ND	14000
106-46-7	1,4-Dichlorobenzene	ND	14000
75-71-8	Dichlorodifluoromethane	ND	14000
75-34-3	1,1-Dichloroethane	ND	14000
107-06-2	1,2-Dichloroethane	ND	14000
75-35-4	1,1-Dichloroethene	ND	14000
156-59-2	cis-1,2-Dichloroethene	23000	14000
156-60-5	trans-1,2-Dichloroethene	ND	14000
78-87-5	1,2-Dichloropropane	ND	14000
142-28-9	1,3-Dichloropropane	ND	14000
590-20-7	2,2-Dichloropropane	ND	14000
563-58-6	1,1-Dichloropropene	ND	14000
10061-01-5	cis-1,3-Dichloropropene	ND	14000
10061-02-6	trans-1,3-Dichloropropene	ND	14000
100-41-4	Ethylbenzene	ND	14000
87-68-3	Hexachlorobutadiene	ND	14000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 12 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: UPL-4 (Soil)

Matrix: Solid
Percent Moisture: 29.4
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36392.D;J31118.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	28000
98-82-8	Isopropylbenzene	ND	14000
99-87-6	4-Isopropyltoluene	ND	14000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	14000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	28000
75-09-2	Methylene chloride	ND	14000
91-20-3	Naphthalene	ND	14000
103-65-1	n-Propylbenzene	ND	14000
100-42-5	Styrene	ND	14000
96-18-4	1,2,3-Trichloropropane	ND	14000
630-20-6	1,1,1,2-Tetrachloroethane	ND	14000
79-34-5	1,1,2,2-Tetrachloroethane	ND	14000
127-18-4	Tetrachloroethene (PCE)	ND	14000
108-88-3	Toluene	ND	14000
87-61-6	1,2,3-Trichlorobenzene	ND	14000
120-82-1	1,2,4-Trichlorobenzene	ND	14000
71-55-6	1,1,1-Trichloroethane	ND	14000
79-00-5	1,1,2-Trichloroethane	ND	14000
79-01-6	Trichloroethene (TCE)	1900000	14000
75-69-4	Trichlorofluoromethane	ND	14000
95-63-6	1,2,4-Trimethylbenzene	ND	14000
108-67-8	1,3,5-Trimethylbenzene	ND	14000
75-01-4	Vinyl chloride	ND	14000
95-47-6	o-Xylene	ND	14000
108-38-3	m,p-Xylenes	ND	14000
123-91-1	1,4-Dioxane	ND	140000

Surrogate	Recovery	Limits
Bromofluorobenzene	95%	63%-113%
1,2-Dichloroethane-d4	96%	85%-116%
Toluene-d8	96%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 13

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Control-3 (Soil)

Matrix: Solid
Percent Moisture: 28.5
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36393.D;M36417.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	56000
107-13-1	Acrylonitrile	ND	70000
71-43-2	Benzene	ND	14000
108-86-1	Bromobenzene	ND	14000
74-97-5	Bromochloromethane	ND	14000
75-27-4	Bromodichloromethane	ND	14000
75-25-2	Bromoform	ND	14000
74-83-9	Bromomethane	ND	14000
78-93-3	2-Butanone (MEK)	ND	28000
104-51-8	n-Butylbenzene	ND	14000
135-98-8	sec-Butylbenzene	ND	14000
98-06-6	tert-Butylbenzene	ND	14000
75-15-0	Carbon disulfide	ND	14000
56-23-5	Carbon tetrachloride	ND	14000
108-90-7	Chlorobenzene	ND	14000
75-00-3	Chloroethane	ND	14000
67-66-3	Chloroform	ND	14000
74-87-3	Chloromethane	ND	14000
95-49-8	2-Chlorotoluene	ND	14000
106-43-4	4-Chlorotoluene	ND	14000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	14000
124-48-1	Dibromochloromethane	ND	14000
106-93-4	1,2-Dibromoethane (EDB)	ND	14000
74-95-3	Dibromomethane	ND	14000
95-50-1	1,2-Dichlorobenzene	ND	14000
541-73-1	1,3-Dichlorobenzene	ND	14000
106-46-7	1,4-Dichlorobenzene	ND	14000
75-71-8	Dichlorodifluoromethane	ND	14000
75-34-3	1,1-Dichloroethane	ND	14000
107-06-2	1,2-Dichloroethane	ND	14000
75-35-4	1,1-Dichloroethene	ND	14000
156-59-2	cis-1,2-Dichloroethene	23000	14000
156-60-5	trans-1,2-Dichloroethene	ND	14000
78-87-5	1,2-Dichloropropane	ND	14000
142-28-9	1,3-Dichloropropane	ND	14000
590-20-7	2,2-Dichloropropane	ND	14000
563-58-6	1,1-Dichloropropene	ND	14000
10061-01-5	cis-1,3-Dichloropropene	ND	14000
10061-02-6	trans-1,3-Dichloropropene	ND	14000
100-41-4	Ethylbenzene	ND	14000
87-68-3	Hexachlorobutadiene	ND	14000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 13 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Control-3 (Soil)

Matrix: Solid
Percent Moisture: 28.5
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36393.D;M36417.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	28000
98-82-8	Isopropylbenzene	ND	14000
99-87-6	4-Isopropyltoluene	ND	14000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	14000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	28000
75-09-2	Methylene chloride	ND	14000
91-20-3	Naphthalene	ND	14000
103-65-1	n-Propylbenzene	ND	14000
100-42-5	Styrene	ND	14000
96-18-4	1,2,3-Trichloropropane	ND	14000
630-20-6	1,1,1,2-Tetrachloroethane	ND	14000
79-34-5	1,1,2,2-Tetrachloroethane	ND	14000
127-18-4	Tetrachloroethene (PCE)	ND	14000
108-88-3	Toluene	ND	14000
87-61-6	1,2,3-Trichlorobenzene	ND	14000
120-82-1	1,2,4-Trichlorobenzene	ND	14000
71-55-6	1,1,1-Trichloroethane	ND	14000
79-00-5	1,1,2-Trichloroethane	ND	14000
79-01-6	Trichloroethene (TCE)	1300000	14000
75-69-4	Trichlorofluoromethane	ND	14000
95-63-6	1,2,4-Trimethylbenzene	ND	14000
108-67-8	1,3,5-Trimethylbenzene	ND	14000
75-01-4	Vinyl chloride	ND	14000
95-47-6	o-Xylene	ND	14000
108-38-3	m,p-Xylenes	ND	14000
123-91-1	1,4-Dioxane	ND	140000

Surrogate	Recovery	Limits
Bromofluorobenzene	95%	63%-113%
1,2-Dichloroethane-d4	95%	85%-116%
Toluene-d8	97%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 14

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Control-3 (Water)

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36384.D;M36413.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	40000
107-13-1	Acrylonitrile	ND	50000
71-43-2	Benzene	ND	10000
108-86-1	Bromobenzene	ND	10000
74-97-5	Bromochloromethane	ND	10000
75-27-4	Bromodichloromethane	ND	10000
75-25-2	Bromoform	ND	10000
74-83-9	Bromomethane	ND	10000
78-93-3	2-Butanone (MEK)	ND	20000
104-51-8	n-Butylbenzene	ND	10000
135-98-8	sec-Butylbenzene	ND	10000
98-06-6	tert-Butylbenzene	ND	10000
75-15-0	Carbon disulfide	ND	10000
56-23-5	Carbon tetrachloride	ND	10000
108-90-7	Chlorobenzene	ND	10000
75-00-3	Chloroethane	ND	10000
67-66-3	Chloroform	ND	10000
74-87-3	Chloromethane	ND	10000
95-49-8	2-Chlorotoluene	ND	10000
106-43-4	4-Chlorotoluene	ND	10000
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	10000
124-48-1	Dibromochloromethane	ND	10000
106-93-4	1,2-Dibromoethane (EDB)	ND	10000
74-95-3	Dibromomethane	ND	10000
95-50-1	1,2-Dichlorobenzene	ND	10000
541-73-1	1,3-Dichlorobenzene	ND	10000
106-46-7	1,4-Dichlorobenzene	ND	10000
75-71-8	Dichlorodifluoromethane	ND	10000
75-34-3	1,1-Dichloroethane	ND	10000
107-06-2	1,2-Dichloroethane	ND	10000
75-35-4	1,1-Dichloroethene	ND	10000
156-59-2	cis-1,2-Dichloroethene	15000	10000
156-60-5	trans-1,2-Dichloroethene	ND	10000
78-87-5	1,2-Dichloropropane	ND	10000
142-28-9	1,3-Dichloropropane	ND	10000
590-20-7	2,2-Dichloropropane	ND	10000
563-58-6	1,1-Dichloropropene	ND	10000
10061-01-5	cis-1,3-Dichloropropene	ND	10000
10061-02-6	trans-1,3-Dichloropropene	ND	10000
100-41-4	Ethylbenzene	ND	10000
87-68-3	Hexachlorobutadiene	ND	10000

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 14 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/24/07 By: DDD
Method: 8260B
QC Batch#: 55095
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Control-3 (Water)

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 2000
Soil Extract Volume:
Lab Data File: M36384.D;M36413.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	20000
98-82-8	Isopropylbenzene	ND	10000
99-87-6	4-Isopropyltoluene	ND	10000
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10000
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	20000
75-09-2	Methylene chloride	ND	10000
91-20-3	Naphthalene	ND	10000
103-65-1	n-Propylbenzene	ND	10000
100-42-5	Styrene	ND	10000
96-18-4	1,2,3-Trichloropropane	ND	10000
630-20-6	1,1,1,2-Tetrachloroethane	ND	10000
79-34-5	1,1,2,2-Tetrachloroethane	780	10000
127-18-4	Tetrachloroethene (PCE)	ND	10000
108-88-3	Toluene	ND	10000
87-61-6	1,2,3-Trichlorobenzene	ND	10000
120-82-1	1,2,4-Trichlorobenzene	ND	10000
71-55-6	1,1,1-Trichloroethane	ND	10000
79-00-5	1,1,2-Trichloroethane	ND	10000
79-01-6	Trichloroethene (TCE)	440000	10000
75-69-4	Trichlorofluoromethane	ND	10000
95-63-6	1,2,4-Trimethylbenzene	ND	10000
108-67-8	1,3,5-Trimethylbenzene	ND	10000
75-01-4	Vinyl chloride	ND	10000
95-47-6	o-Xylene	ND	10000
108-38-3	m,p-Xylenes	ND	10000
123-91-1	1,4-Dioxane	ND	100000

Surrogate	Recovery	Limits
Bromofluorobenzene	96%	83%-107%
1,2-Dichloroethane-d4	98%	86%-113%
Toluene-d8	98%	88%-108%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 15

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/25/07 By: DDD
Method: 8260B
QC Batch#: 55138
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Control-4 (Soil)

Matrix: Solid
Percent Moisture: 27.1
Sample Weight/Volume:
Dilution Factor: 100
Soil Extract Volume:
Lab Data File: J31117.D;J31134.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	2700
107-13-1	Acrylonitrile	ND	3400
71-43-2	Benzene	ND	680
108-86-1	Bromobenzene	ND	680
74-97-5	Bromochloromethane	ND	680
75-27-4	Bromodichloromethane	ND	680
75-25-2	Bromoform	ND	680
74-83-9	Bromomethane	ND	680
78-93-3	2-Butanone (MEK)	ND	1400
104-51-8	n-Butylbenzene	ND	680
135-98-8	sec-Butylbenzene	ND	680
98-06-6	tert-Butylbenzene	ND	680
75-15-0	Carbon disulfide	ND	680
56-23-5	Carbon tetrachloride	ND	680
108-90-7	Chlorobenzene	ND	680
75-00-3	Chloroethane	ND	680
67-66-3	Chloroform	ND	680
74-87-3	Chloromethane	ND	680
95-49-8	2-Chlorotoluene	ND	680
106-43-4	4-Chlorotoluene	ND	680
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	680
124-48-1	Dibromochloromethane	ND	680
106-93-4	1,2-Dibromoethane (EDB)	ND	680
74-95-3	Dibromomethane	ND	680
95-50-1	1,2-Dichlorobenzene	ND	680
541-73-1	1,3-Dichlorobenzene	ND	680
106-46-7	1,4-Dichlorobenzene	ND	680
75-71-8	Dichlorodifluoromethane	ND	680
75-34-3	1,1-Dichloroethane	ND	680
107-06-2	1,2-Dichloroethane	ND	680
75-35-4	1,1-Dichloroethene	ND	680
156-59-2	cis-1,2-Dichloroethene	19000	680
156-60-5	trans-1,2-Dichloroethene	160	680
78-87-5	1,2-Dichloropropane	ND	680
142-28-9	1,3-Dichloropropane	ND	680
590-20-7	2,2-Dichloropropane	ND	680
563-58-6	1,1-Dichloropropene	ND	680
10061-01-5	cis-1,3-Dichloropropene	ND	680
10061-02-6	trans-1,3-Dichloropropene	ND	680
100-41-4	Ethylbenzene	ND	680
87-68-3	Hexachlorobutadiene	ND	680

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 15 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/25/07 By: DDD
Method: 8260B
QC Batch#: 55138
Units: ug/kg

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Control-4 (Soil)

Matrix: Solid
Percent Moisture: 27.1
Sample Weight/Volume:
Dilution Factor: 100
Soil Extract Volume:
Lab Data File: J31117.D;J31134.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	1400
98-82-8	Isopropylbenzene	ND	680
99-87-6	4-Isopropyltoluene	ND	680
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	680
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	1400
75-09-2	Methylene chloride	ND	680
91-20-3	Naphthalene	ND	680
103-65-1	n-Propylbenzene	ND	680
100-42-5	Styrene	ND	680
96-18-4	1,2,3-Trichloropropane	ND	680
630-20-6	1,1,1,2-Tetrachloroethane	ND	680
79-34-5	1,1,2,2-Tetrachloroethane	ND	680
127-18-4	Tetrachloroethene (PCE)	ND	680
108-88-3	Toluene	ND	680
87-61-6	1,2,3-Trichlorobenzene	ND	680
120-82-1	1,2,4-Trichlorobenzene	ND	680
71-55-6	1,1,1-Trichloroethane	630	680
79-00-5	1,1,2-Trichloroethane	ND	680
79-01-6	Trichloroethene (TCE)	6100000	680
75-69-4	Trichlorofluoromethane	ND	680
95-63-6	1,2,4-Trimethylbenzene	ND	680
108-67-8	1,3,5-Trimethylbenzene	ND	680
75-01-4	Vinyl chloride	ND	680
95-47-6	o-Xylene	ND	680
108-38-3	m,p-Xylenes	ND	680
123-91-1	1,4-Dioxane	ND	6800

Surrogate	Recovery	Limits
Bromofluorobenzene	101%	63%-113%
1,2-Dichloroethane-d4	104%	85%-116%
Toluene-d8	92%	78%-128%

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 16

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/26/07 By: DDD
Method: 8260B
QC Batch#: 55179
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Trip Blank

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: J31130.D

CAS No.	Parameter	Result	DL
67-64-1	Acetone	ND	20
107-13-1	Acrylonitrile	ND	25
71-43-2	Benzene	ND	5.0
108-86-1	Bromobenzene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
75-27-4	Bromodichloromethane	ND	5.0
75-25-2	Bromoform	ND	5.0
74-83-9	Bromomethane	ND	5.0
78-93-3	2-Butanone (MEK)	ND	10
104-51-8	n-Butylbenzene	ND	5.0
135-98-8	sec-Butylbenzene	ND	5.0
98-06-6	tert-Butylbenzene	ND	5.0
75-15-0	Carbon disulfide	ND	5.0
56-23-5	Carbon tetrachloride	ND	5.0
108-90-7	Chlorobenzene	ND	5.0
75-00-3	Chloroethane	ND	5.0
67-66-3	Chloroform	ND	5.0
74-87-3	Chloromethane	ND	5.0
95-49-8	2-Chlorotoluene	ND	5.0
106-43-4	4-Chlorotoluene	ND	5.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
106-93-4	1,2-Dibromoethane (EDB)	ND	5.0
74-95-3	Dibromomethane	ND	5.0
95-50-1	1,2-Dichlorobenzene	ND	5.0
541-73-1	1,3-Dichlorobenzene	ND	5.0
106-46-7	1,4-Dichlorobenzene	ND	5.0
75-71-8	Dichlorodifluoromethane	ND	5.0
75-34-3	1,1-Dichloroethane	ND	5.0
107-06-2	1,2-Dichloroethane	ND	5.0
75-35-4	1,1-Dichloroethene	ND	5.0
156-59-2	cis-1,2-Dichloroethene	ND	5.0
156-60-5	trans-1,2-Dichloroethene	ND	5.0
78-87-5	1,2-Dichloropropane	ND	5.0
142-28-9	1,3-Dichloropropane	ND	5.0
590-20-7	2,2-Dichloropropane	ND	5.0
563-58-6	1,1-Dichloropropene	ND	5.0
10061-01-5	cis-1,3-Dichloropropene	ND	5.0
10061-02-6	trans-1,3-Dichloropropene	ND	5.0
100-41-4	Ethylbenzene	ND	5.0
87-68-3	Hexachlorobutadiene	ND	5.0

VOLATILE ORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC

PL Report No: E707931
PL Sample No: 16 (continued)

Date Collected: 7/16/2007
Date Received: 7/17/2007
Date Extracted: By:
Date Analyzed: 07/26/07 By: DDD
Method: 8260B
QC Batch#: 55179
Units: ug/L

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17
Sample Description: Trip Blank

Matrix: Aqueous
Percent Moisture: N/A
Sample Weight/Volume:
Dilution Factor: 1
Soil Extract Volume:
Lab Data File: J31130.D

CAS No.	Parameter	Result	DL
591-78-6	2-Hexanone	ND	10
98-82-8	Isopropylbenzene	ND	5.0
99-87-6	4-Isopropyltoluene	ND	5.0
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10
75-09-2	Methylene chloride	ND	10
91-20-3	Naphthalene	ND	5.0
103-65-1	n-Propylbenzene	ND	5.0
100-42-5	Styrene	ND	5.0
96-18-4	1,2,3-Trichloropropane	ND	5.0
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0
127-18-4	Tetrachloroethene (PCE)	ND	5.0
108-88-3	Toluene	ND	5.0
87-61-6	1,2,3-Trichlorobenzene	ND	5.0
120-82-1	1,2,4-Trichlorobenzene	ND	5.0
71-55-6	1,1,1-Trichloroethane	ND	5.0
79-00-5	1,1,2-Trichloroethane	ND	5.0
79-01-6	Trichloroethene (TCE)	ND	5.0
75-69-4	Trichlorofluoromethane	ND	5.0
95-63-6	1,2,4-Trimethylbenzene	ND	5.0
108-67-8	1,3,5-Trimethylbenzene	ND	5.0
75-01-4	Vinyl chloride	ND	5.0
95-47-6	o-Xylene	ND	5.0
108-38-3	m,p-Xylenes	ND	5.0
123-91-1	1,4-Dioxane	ND	50

Surrogate	Recovery	Limits
Bromofluorobenzene	87%	83%-107%
1,2-Dichloroethane-d4	106%	86%-113%
Toluene-d8	98%	88%-108%

Premier Laboratory, LLC

CHAIN OF CUSTODY www.PremierLaboratory.com

SHADED AREAS FOR LAB USE ONLY — Lab WO# E707931 — Project Manager:

COPY OF REPORT TO

CUSTOMER: ANNETTE LEE
ADDRESS: 22 MARIN WAY #3
STRATHAM NH 03885
ATTENTION: ANNETTE LEE
E-MAIL: lee@xdd-llc.com
PHONE: 603-778-1100 FAX: 603-778-2121

BILLING INFORMATION

BILL TO: XDD-LLC
ADDRESS: 22 MARIN WAY #3
STRATHAM NH 03885
ATTENTION: ANNETTE LEE
TELEPHONE: 603-778-1100
PURCHASE ORDER #: 80

PROJECT INFORMATION

PROJECT: SITE 17
PROJECT LOCATION: INDIANHEAD STATE: MD
PROJECT MANAGER: ANNETTE LEE
IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:
E-MAIL: lee@xdd-llc.com
TELEPHONE: 603-778-1100
FAX: 603-778-2121

SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX	# OF BOTTLES	ANALYSIS: WATER VOC 8260	ANALYSIS: ~~Water 8260~~	ANALYSIS: SOIL	PRESERVATIVES: NONE	H2SO4	HCL	HNO3	NAOH	NON-PRES	MeOH
FPL - 3	7/16/07	13:00		G	Soil+H_2O	1	X	X	(*)	X						
FPL - 4						1	~~X~~ DW	X	(*)	X						
UPH - 3						1	X	X	(*)	X						
UPH - 4						1	~~X~~ DW	X	(*)	X						
FPH - 3						1	X	X	(*)	X						
FPH - 4						1	~~X~~ DW	X	(*)	X						
UPL - 3						1	X	X	(*)	X						
UPL - 4						1	~~X~~ DW	X	(*)	X						
Control -3						1	X	X	(*)	X						
Control 4						1	~~X~~ DW	X	(*)	X						
Trip Blank					H_2O	1	X			X		X				

CUSTODY TRANSFER

	DATE	TIME
SAMPLER: Dwk	7/16/07	14:00
RECEIVED:		
RELINQUISHED:		
RECEIVED:		
RELINQUISHED:		
RECEIVED:	7/17/07	1201

TURNAROUND (INDICATE IN CALENDAR DAYS): 7 FAX ____ HARD COPY ____ E-MAIL
EXPEDITED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS * Please decant the water from the top then mix the slurry to get a good composite and test for soil VOCs.
Call/chk with Ron Wanila / Annette Lee for questions.

CONDITIONS UPON RECEIPT: (Check One) ☐ Cooled ☑ Ambient 20.2 °C Upon Receipt at Lab

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

PAGE ____ of ____

* Only every other sample analysed for aqueous 8260s.

Metals Mobilization Analytical Report

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

ANALYTICAL DATA REPORT

Report Number: E706D97
Project: Indian Head - Site 17

prepared for:

XDD, LLC
22 Marin Way #3
Stratham, NH 03885

Attn: Annette Lee

Received Date: 6/21/2007
Report Date: 6/29/2007

Premier Laboratory, LLC
Authorized Signature

Certifications:
CT (PH-0465), MA (M-CT008), ME (CT050), NH (2020), NJ (CT002), NY (11549), RI (RI246)

Premier
Laboratory, LLC

61 Louisa Viens Drive
Dayville, CT 06241
FAX: 860-774-2689
860-774-6814 800-932-1150

Report No: E706D97
Client: XDD
Project: Indian Head - Site 17

CASE NARRATIVE / METHOD CONFORMANCE SUMMARY

Premier Laboratory received 18 samples from XDD on 06/21/2007. The samples were analyzed from the following list of analyses:

Mercury by 7470 in GW
7470A[245.1]
Metals by ICP/MS 6020
6020[3000]
Mercury by 7471 in SW
7471[7471]
Moisture, Percent

Variances:

SDG:

None reported.

Method:

None reported.

QA/QC:

None reported.

INORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC
PL Report No: E706D97
Date Received: 6/21/2007

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17

Parameter	Result	DL	Units	Completed	By	Dilution
(1) C1						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020						
Arsenic	ND	0.0050	mg/L	06/28/07	K W	
Cadmium	0.011	0.0010	mg/L	06/28/07	K W	
Chromium	0.0047	0.0010	mg/L	06/28/07	K W	
Lead	0.012	0.0010	mg/L	06/28/07	K W	
Selenium	ND	0.0050	mg/L	06/28/07	K W	
Silver	ND	0.0010	mg/L	06/28/07	K W	
Zinc	0.66	0.0050	mg/L	06/28/07	K W	
Thallium	ND	0.0010	mg/L	06/28/07	K W	
Nickel	0.57	0.0010	mg/L	06/28/07	K W	
Copper	0.11	0.0010	mg/L	06/28/07	K W	
Beryllium	0.035	0.0010	mg/L	06/28/07	K W	
Antimony	0.0020	0.0010	mg/L	06/28/07	K W	
Mercury by SW-846 7470A in GW	ND	0.00020	mg/L	06/25/07	AKB	
(2) C2						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020						
Arsenic	ND	0.0050	mg/L	06/28/07	K W	
Cadmium	0.0098	0.0010	mg/L	06/28/07	K W	
Chromium	0.0045	0.0010	mg/L	06/28/07	K W	
Lead	0.0090	0.0010	mg/L	06/28/07	K W	
Selenium	ND	0.0050	mg/L	06/28/07	K W	
Silver	ND	0.0010	mg/L	06/28/07	K W	
Zinc	0.60	0.0050	mg/L	06/28/07	K W	
Thallium	ND	0.0010	mg/L	06/28/07	K W	
Nickel	0.51	0.0010	mg/L	06/28/07	K W	
Copper	0.090	0.0010	mg/L	06/28/07	K W	
Beryllium	0.029	0.0010	mg/L	06/28/07	K W	
Antimony	0.0010	0.0010	mg/L	06/28/07	K W	
Mercury by SW-846 7470A in GW	ND	0.00020	mg/L	06/25/07	AKB	

INORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC
PL Report No: E706D97
Date Received: 6/21/2007

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17

Parameter	Result	DL	Units	Completed	By	Dilution
(3) C1						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020, Dissolved						
Arsenic	ND	0.0050	mg/L	06/28/07	K W	
Cadmium	0.011	0.0010	mg/L	06/28/07	K W	
Chromium	0.0038	0.0010	mg/L	06/28/07	K W	
Lead	0.012	0.0010	mg/L	06/28/07	K W	
Selenium	ND	0.0050	mg/L	06/28/07	K W	
Silver	ND	0.0010	mg/L	06/28/07	K W	
Zinc	0.73	0.0050	mg/L	06/28/07	K W	
Thallium	ND	0.0010	mg/L	06/28/07	K W	
Nickel	0.57	0.0010	mg/L	06/28/07	K W	
Copper	0.10	0.0010	mg/L	06/28/07	K W	
Beryllium	0.032	0.0010	mg/L	06/28/07	K W	
Antimony	ND	0.0010	mg/L	06/28/07	K W	
Mercury by SW-846 7470A in GW	ND	0.00020	mg/L	06/25/07	AKB	
(4) C2						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020, Dissolved						
Arsenic	ND	0.0050	mg/L	06/28/07	K W	
Cadmium	0.012	0.0010	mg/L	06/28/07	K W	
Chromium	0.0034	0.0010	mg/L	06/28/07	K W	
Lead	0.010	0.0010	mg/L	06/28/07	K W	
Selenium	ND	0.0050	mg/L	06/28/07	K W	
Silver	ND	0.0010	mg/L	06/28/07	K W	
Zinc	0.75	0.0050	mg/L	06/28/07	K W	
Thallium	ND	0.0010	mg/L	06/28/07	K W	
Nickel	0.57	0.0010	mg/L	06/28/07	K W	
Copper	0.11	0.0010	mg/L	06/28/07	K W	
Beryllium	0.030	0.0010	mg/L	06/28/07	K W	
Antimony	ND	0.0010	mg/L	06/28/07	K W	
Mercury by SW-846 7470A in GW	ND	0.00020	mg/L	06/25/07	AKB	

INORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC
PL Report No: E706D97
Date Received: 6/21/2007

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17

Parameter	Result	DL	Units	Completed	By	Dilution
(5) FP-1						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020						
Arsenic	0.21	0.040	mg/L	06/28/07	K W	8
Cadmium	0.064	0.0080	mg/L	06/28/07	K W	8
Chromium	1.8	0.0080	mg/L	06/28/07	K W	8
Lead	1.3	0.0080	mg/L	06/28/07	K W	8
Selenium	ND	0.040	mg/L	06/28/07	K W	8
Silver	ND	0.0080	mg/L	06/28/07	K W	8
Zinc	7.0	0.040	mg/L	06/28/07	K W	8
Thallium	ND	0.0080	mg/L	06/28/07	K W	8
Nickel	2.8	0.0080	mg/L	06/28/07	K W	8
Copper	3.0	0.0080	mg/L	06/28/07	K W	8
Beryllium	0.24	0.0080	mg/L	06/28/07	K W	8
Antimony	0.039	0.0080	mg/L	06/28/07	K W	8
Mercury by SW-846 7470A in GW	0.00051	0.00020	mg/L	06/25/07	AKB	
(6) FP-2						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020						
Arsenic	0.19	0.040	mg/L	06/28/07	K W	8
Cadmium	0.067	0.0080	mg/L	06/28/07	K W	8
Chromium	1.8	0.0080	mg/L	06/28/07	K W	8
Lead	1.2	0.0080	mg/L	06/28/07	K W	8
Selenium	ND	0.040	mg/L	06/28/07	K W	8
Silver	ND	0.0080	mg/L	06/28/07	K W	8
Zinc	7.0	0.040	mg/L	06/28/07	K W	8
Thallium	ND	0.0080	mg/L	06/28/07	K W	8
Nickel	2.8	0.0080	mg/L	06/28/07	K W	8
Copper	2.9	0.0080	mg/L	06/28/07	K W	8
Beryllium	0.23	0.0080	mg/L	06/28/07	K W	8
Antimony	0.033	0.0080	mg/L	06/28/07	K W	8
Mercury by SW-846 7470A in GW	0.00029	0.00020	mg/L	06/25/07	AKB	

INORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC
PL Report No: E706D97
Date Received: 6/21/2007

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17

Parameter	Result	DL	Units	Completed	By	Dilution
(7) FP-1						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020, Dissolved						
Arsenic	0.23	0.040	mg/L	06/28/07	K W	8
Cadmium	0.064	0.0080	mg/L	06/28/07	K W	8
Chromium	1.8	0.0080	mg/L	06/28/07	K W	8
Lead	1.4	0.0080	mg/L	06/28/07	K W	8
Selenium	ND	0.040	mg/L	06/28/07	K W	8
Silver	ND	0.0080	mg/L	06/28/07	K W	8
Zinc	7.3	0.040	mg/L	06/28/07	K W	8
Thallium	ND	0.0080	mg/L	06/28/07	K W	8
Nickel	2.8	0.0080	mg/L	06/28/07	K W	8
Copper	3.1	0.0080	mg/L	06/28/07	K W	8
Beryllium	0.23	0.0080	mg/L	06/28/07	K W	8
Antimony	0.038	0.0080	mg/L	06/28/07	K W	8
Mercury by SW-846 7470A in GW	ND	0.00020	mg/L	06/25/07	AKB	
(8) FP-2						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020, Dissolved						
Arsenic	0.23	0.040	mg/L	06/28/07	K W	8
Cadmium	0.079	0.0080	mg/L	06/28/07	K W	8
Chromium	2.1	0.0080	mg/L	06/28/07	K W	8
Lead	1.4	0.0080	mg/L	06/28/07	K W	8
Selenium	ND	0.040	mg/L	06/28/07	K W	8
Silver	ND	0.0080	mg/L	06/28/07	K W	8
Zinc	8.2	0.040	mg/L	06/28/07	K W	8
Thallium	ND	0.0080	mg/L	06/28/07	K W	8
Nickel	3.2	0.0080	mg/L	06/28/07	K W	8
Copper	3.3	0.0080	mg/L	06/28/07	K W	8
Beryllium	0.27	0.0080	mg/L	06/28/07	K W	8
Antimony	0.037	0.0080	mg/L	06/28/07	K W	8
Mercury by SW-846 7470A in GW	ND	0.00020	mg/L	06/25/07	AKB	

INORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC
PL Report No: E706D97
Date Received: 6/21/2007

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17

Parameter	Result	DL	Units	Completed	By	Dilution
(9) UP1						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020						
Arsenic	ND	0.020	mg/L	06/28/07	K W	4
Cadmium	0.036	0.0040	mg/L	06/28/07	K W	4
Chromium	0.19	0.0040	mg/L	06/28/07	K W	4
Lead	0.22	0.0040	mg/L	06/28/07	K W	4
Selenium	ND	0.020	mg/L	06/28/07	K W	4
Silver	ND	0.0040	mg/L	06/28/07	K W	4
Zinc	1.9	0.020	mg/L	06/28/07	K W	4
Thallium	ND	0.0040	mg/L	06/28/07	K W	4
Nickel	1.5	0.0040	mg/L	06/28/07	K W	4
Copper	1.0	0.0040	mg/L	06/28/07	K W	4
Beryllium	0.17	0.0040	mg/L	06/28/07	K W	4
Antimony	ND	0.0040	mg/L	06/28/07	K W	4
Mercury by SW-846 7470A in GW	0.00038	0.00020	mg/L	06/25/07	AKB	
(10) UP2						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020						
Arsenic	ND	0.020	mg/L	06/28/07	K W	4
Cadmium	0.031	0.0040	mg/L	06/28/07	K W	4
Chromium	0.16	0.0040	mg/L	06/28/07	K W	4
Lead	0.18	0.0040	mg/L	06/28/07	K W	4
Selenium	ND	0.020	mg/L	06/28/07	K W	4
Silver	ND	0.0040	mg/L	06/28/07	K W	4
Zinc	1.7	0.020	mg/L	06/28/07	K W	4
Thallium	ND	0.0040	mg/L	06/28/07	K W	4
Nickel	1.3	0.0040	mg/L	06/28/07	K W	4
Copper	0.86	0.0040	mg/L	06/28/07	K W	4
Beryllium	0.15	0.0040	mg/L	06/28/07	K W	4
Antimony	ND	0.0040	mg/L	06/28/07	K W	4
Mercury by SW-846 7470A in GW	0.00029	0.00020	mg/L	06/25/07	AKB	

INORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC
PL Report No: E706D97
Date Received: 6/21/2007

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17

Parameter	Result	DL	Units	Completed	By	Dilution
(11) UP1						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020, Dissolved						
Arsenic	ND	0.020	mg/L	06/28/07	K W	4
Cadmium	0.038	0.0040	mg/L	06/28/07	K W	4
Chromium	0.20	0.0040	mg/L	06/28/07	K W	4
Lead	0.27	0.0040	mg/L	06/28/07	K W	4
Selenium	ND	0.020	mg/L	06/28/07	K W	4
Silver	ND	0.0040	mg/L	06/28/07	K W	4
Zinc	2.1	0.020	mg/L	06/28/07	K W	4
Thallium	ND	0.0040	mg/L	06/28/07	K W	4
Nickel	1.6	0.0040	mg/L	06/28/07	K W	4
Copper	1.2	0.0040	mg/L	06/28/07	K W	4
Beryllium	0.17	0.0040	mg/L	06/28/07	K W	4
Antimony	ND	0.0040	mg/L	06/28/07	K W	4
Mercury by SW-846 7470A in GW	0.00054	0.00020	mg/L	06/25/07	AKB	
(12) UP2						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020, Dissolved						
Arsenic	ND	0.020	mg/L	06/28/07	K W	4
Cadmium	0.033	0.0040	mg/L	06/28/07	K W	4
Chromium	0.17	0.0040	mg/L	06/28/07	K W	4
Lead	0.23	0.0040	mg/L	06/28/07	K W	4
Selenium	ND	0.020	mg/L	06/28/07	K W	4
Silver	ND	0.0040	mg/L	06/28/07	K W	4
Zinc	1.9	0.020	mg/L	06/28/07	K W	4
Thallium	ND	0.0040	mg/L	06/28/07	K W	4
Nickel	1.4	0.0040	mg/L	06/28/07	K W	4
Copper	1.0	0.0040	mg/L	06/28/07	K W	4
Beryllium	0.15	0.0040	mg/L	06/28/07	K W	4
Antimony	ND	0.0040	mg/L	06/28/07	K W	4
Mercury by SW-846 7470A in GW	0.00038	0.00020	mg/L	06/25/07	AKB	

INORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC
PL Report No: E706D97
Date Received: 6/21/2007

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17

Parameter	Result	DL	Units	Completed	By	Dilution
(13) Baseline 1						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020						
Arsenic	ND	0.0050	mg/L	06/28/07	K W	
Cadmium	ND	0.0010	mg/L	06/28/07	K W	
Chromium	ND	0.0010	mg/L	06/28/07	K W	
Lead	0.0012	0.0010	mg/L	06/28/07	K W	
Selenium	ND	0.0050	mg/L	06/28/07	K W	
Silver	ND	0.0010	mg/L	06/28/07	K W	
Zinc	0.022	0.0050	mg/L	06/28/07	K W	
Thallium	ND	0.0010	mg/L	06/28/07	K W	
Nickel	0.0049	0.0010	mg/L	06/28/07	K W	
Copper	0.022	0.0010	mg/L	06/28/07	K W	
Beryllium	ND	0.0010	mg/L	06/28/07	K W	
Antimony	ND	0.0010	mg/L	06/28/07	K W	
Mercury by SW-846 7470A in GW	ND	0.00020	mg/L	06/27/07	AKB	
(14) Baseline 2						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020						
Arsenic	ND	0.0050	mg/L	06/28/07	K W	
Cadmium	ND	0.0010	mg/L	06/28/07	K W	
Chromium	ND	0.0010	mg/L	06/28/07	K W	
Lead	ND	0.0010	mg/L	06/28/07	K W	
Selenium	ND	0.0050	mg/L	06/28/07	K W	
Silver	ND	0.0010	mg/L	06/28/07	K W	
Zinc	0.022	0.0050	mg/L	06/28/07	K W	
Thallium	ND	0.0010	mg/L	06/28/07	K W	
Nickel	0.0039	0.0010	mg/L	06/28/07	K W	
Copper	0.019	0.0010	mg/L	06/28/07	K W	
Beryllium	ND	0.0010	mg/L	06/28/07	K W	
Antimony	ND	0.0010	mg/L	06/28/07	K W	
Mercury by SW-846 7470A in GW	ND	0.00020	mg/L	06/27/07	AKB	

INORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC
PL Report No: E706D97
Date Received: 6/21/2007

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17

Parameter	Result	DL	Units	Completed	By	Dilution
(15) Baseline 1						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020, Dissolved						
Arsenic	ND	0.0050	mg/L	06/28/07	K W	
Cadmium	ND	0.0010	mg/L	06/28/07	K W	
Chromium	ND	0.0010	mg/L	06/28/07	K W	
Lead	ND	0.0010	mg/L	06/28/07	K W	
Selenium	ND	0.0050	mg/L	06/28/07	K W	
Silver	ND	0.0010	mg/L	06/28/07	K W	
Zinc	0.026	0.0050	mg/L	06/28/07	K W	
Thallium	ND	0.0010	mg/L	06/28/07	K W	
Nickel	0.0027	0.0010	mg/L	06/28/07	K W	
Copper	0.0095	0.0010	mg/L	06/28/07	K W	
Beryllium	ND	0.0010	mg/L	06/28/07	K W	
Antimony	ND	0.0010	mg/L	06/28/07	K W	
Mercury by SW-846 7470A in GW	ND	0.00020	mg/L	06/27/07	AKB	
(16) Baseline 2						
Date Collected: 6/20/2007 Matrix: Aqueous						
Metals by ICP/MS by 6020, Dissolved						
Arsenic	ND	0.0050	mg/L	06/28/07	K W	
Cadmium	ND	0.0010	mg/L	06/28/07	K W	
Chromium	0.0011	0.0010	mg/L	06/28/07	K W	
Lead	ND	0.0010	mg/L	06/28/07	K W	
Selenium	ND	0.0050	mg/L	06/28/07	K W	
Silver	ND	0.0010	mg/L	06/28/07	K W	
Zinc	0.037	0.0050	mg/L	06/28/07	K W	
Thallium	ND	0.0010	mg/L	06/28/07	K W	
Nickel	0.0036	0.0010	mg/L	06/28/07	K W	
Copper	0.0083	0.0010	mg/L	06/28/07	K W	
Beryllium	ND	0.0010	mg/L	06/28/07	K W	
Antimony	ND	0.0010	mg/L	06/28/07	K W	
Mercury by SW-846 7470A in GW	ND	0.00020	mg/L	06/27/07	AKB	

INORGANIC ANALYSIS DATA SHEET

Laboratory: Premier Laboratory, LLC
PL Report No: E706D97
Date Received: 6/21/2007

Customer: XDD
Location: Indianhead, MD
Project: Indian Head - Site 17

Parameter	Result	DL	Units	Completed	By	Dilution
(17) Baseline 1 SOIL						
Date Collected: 6/20/2007 Matrix: Solid						
Metals by ICP/MS by 6020						
Arsenic	1.6	0.29	mg/kg	06/29/07	K W	
Cadmium	ND	0.059	mg/kg	06/29/07	K W	
Chromium	6.9	0.059	mg/kg	06/29/07	K W	
Lead	6.7	0.059	mg/kg	06/29/07	K W	
Selenium	ND	0.29	mg/kg	06/29/07	K W	
Silver	0.065	0.059	mg/kg	06/29/07	K W	
Zinc	23	0.29	mg/kg	06/29/07	K W	
Thallium	0.067	0.059	mg/kg	06/29/07	K W	
Nickel	8.4	0.059	mg/kg	06/29/07	K W	
Copper	8.6	0.059	mg/kg	06/29/07	K W	
Beryllium	0.56	0.059	mg/kg	06/29/07	K W	
Antimony	0.078	0.059	mg/kg	06/29/07	K W	
Mercury by SW-846 7471 in SW	ND	0.024	mg/kg	06/26/07	AKB	
(18) Baseline 2 SOIL						
Date Collected: 6/20/2007 Matrix: Solid						
Metals by ICP/MS by 6020						
Arsenic	1.5	0.30	mg/kg	06/29/07	K W	
Cadmium	0.075	0.060	mg/kg	06/29/07	K W	
Chromium	7.7	0.060	mg/kg	06/29/07	K W	
Lead	7.4	0.060	mg/kg	06/29/07	K W	
Selenium	ND	0.30	mg/kg	06/29/07	K W	
Silver	ND	0.060	mg/kg	06/29/07	K W	
Zinc	28	0.30	mg/kg	06/29/07	K W	
Thallium	ND	0.060	mg/kg	06/29/07	K W	
Nickel	10	0.060	mg/kg	06/29/07	K W	
Copper	8.8	0.060	mg/kg	06/29/07	K W	
Beryllium	0.82	0.060	mg/kg	06/29/07	K W	
Antimony	ND	0.060	mg/kg	06/29/07	K W	
Mercury by SW-846 7471 in SW	ND	0.024	mg/kg	06/26/07	AKB	

Premier Laboratory, LLC

CHAIN OF CUSTODY www.PremierLaboratory.com

SHADED AREAS FOR LAB USE ONLY — Lab WO#: C706P97 — Project Manager:

COPY OF REPORT TO

CUSTOMER: XDD, LLC
ADDRESS: 22 Marin Way #3
Stratham, N.H. 03885
ATTENTION: Annette Lee
E-MAIL: Leea@xdd-llc.com
PHONE: 603-778-1100 FAX: 603-778-2121

BILLING INFORMATION

BILL TO: XDD
ADDRESS: Same
ATTENTION: Mary Scuderi
TELEPHONE: 603-778-1100
PURCHASE ORDER #:

PROJECT INFORMATION

PROJECT: Indian Head Site 17
PROJECT LOCATION: Indian Head STATE: MA
PROJECT MANAGER: Annette Lee
IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:
E-MAIL: Leea@xdd-llc.com
TELEPHONE: 603-778-1100
FAX: 603-778-2121

SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX	# OF BOTTLES	ANALYSIS: Total metals (CLP ILM05.3)	ANALYSIS: Dissolved metals (CLP ILM05.3)	PRESERVATIVES: H2SO4	HCL	HNO3	NAOH	NON-PRES	MeOH
C1	6-20-07	900	X		groundwater	1	X				X			
C2		920				1	X				X			
C1		1000				1		X			X			
C2		1020				1		X			X			
FP1		1030				1	X				X			
FP2		1040				1	X				X			
FP1		1100				1		X			X			
FP2		1130				1		X			X			
UP1		1200				1	X				X			
UP2		1220				1	X				X			

CUSTODY TRANSFER

		DATE	TIME
SAMPLER:	Jared Crawford	6-20-07	1600
RECEIVED:			
RELINQUISHED:	Jared Crawford	6-20-07	1600
RECEIVED:			
RELINQUISHED:			
RECEIVED:	[illegible]	6/21/07	1838

TURNAROUND (INDICATE IN CALENDAR DAYS): 7 days FAX ✓ HARD COPY ✓ E-MAIL
EXPEDITED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS: method CLP ILM 05.3
Dissolved metals samples have already been filtered

CONDITIONS UPON RECEIPT: (Check One) ☑ Cooled ☐ Ambient 4°C °C Upon Receipt at Lab

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

Premier Laboratory, LLC

CHAIN OF CUSTODY www.PremierLaboratory.com

SHADED AREAS FOR LAB USE ONLY — Lab WO#: E706D917 — Project Manager: [illegible]

COPY OF REPORT TO

CUSTOMER: XDD

ADDRESS:

ATTENTION:

E-MAIL:

PHONE: FAX:

BILLING INFORMATION

BILL TO: XDD

ADDRESS:

ATTENTION:

TELEPHONE:

PURCHASE ORDER #:

PROJECT INFORMATION

PROJECT: Indray Head Site 17

PROJECT LOCATION: STATE:

PROJECT MANAGER:

IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:

E-MAIL:

TELEPHONE:

FAX:

CLP ZM 05.3

SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX	# OF BOTTLES	ANALYSIS: Total Metals	ANALYSIS: Dissolved Metals	PRESERVATIVES: H2SO4	HCL	HNO3	NAOH	NON-PRES	MeOH
UP 1	6-20-07	1320	X		groundwater	1		X			X			
UP2	6-20-07	1400				1		X			X			
Baseline 1		1445				1	X				X			
Baseline 2		1450				1	X				X			
Baseline 1		1510				1		X			X			
Baseline 2		1520				1		X			X			
Baseline 1 Soil		1530			Soil	1	X					X		
Baseline 2 Soil		1540			Soil	1	X					X		

CUSTODY TRANSFER

		DATE	TIME
SAMPLER:	[illegible]	6-20-07	1600
RECEIVED:			
RELINQUISHED:	[illegible]	6-20-07	1600
RECEIVED:			
RELINQUISHED:			
RECEIVED:	[illegible]	6/21/07	1138

TURNAROUND (INDICATE IN CALENDAR DAYS): 7 days FAX ✓ HARD COPY ✓ E-MAIL

EXPEDITED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS Method CLP ZM 05.3

Dissolved metals samples have already been filtered

CONDITIONS UPON RECEIPT: (Check One) ☑ Cooled ☐ Ambient 4.4 °C Upon Receipt at Lab

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

Angela Brodeur

From: Laurel Crawford [lcrawford@xdd-llc.com]
Sent: Thursday, June 21, 2007 2:12 PM
To: AngelaB@PremierLaboratory.com
Subject: RE: metals analysis

Hi Angela,

If method 6020 includes the 13, then can we go with that for the lower detection limits?

Thanks!

Laurel Crawford
XDD
22 Marin Way, Unit 3
Stratham, NH 03885
Office: 603-778-1100
Cell: 603-321-7738
www.xdd-llc.com

From: Angela Brodeur [mailto:AngelaB@PremierLaboratory.com]
Sent: Thursday, June 21, 2007 2:10 PM
To: Laurel Crawford
Subject: RE: metals analysis

Hi Laurel:
The difference is the detection limits. Method 6020 can achieve the lowest limits. Based on the PP13 metals list, we can run either method, depending on which you would like. Please let me know. Thanks!
~Angela

From: Laurel Crawford [mailto:lcrawford@xdd-llc.com]
Sent: Thursday, June 21, 2007 2:06 PM
To: angelab@premierlaboratory.com
Subject: metals analysis

Hi Angela,

Could you tell me what the difference is between the 6010 and 6020? We'll need the 13 priority pollutant metals. Do both of these include those 13?

Thanks,

Laurel Crawford
XDD
22 Marin Way, Unit 3
Stratham, NH 03885
Office: 603-778-1100
Cell: 603-321-7738
www.xdd-llc.com

APPENDIX C

Mass Profiling Notes/Supplemental Information

COMPUTATION SHEET

Client: CH2MHill

Site: Site-47- Indian Head

Description: Mass Profiling Results

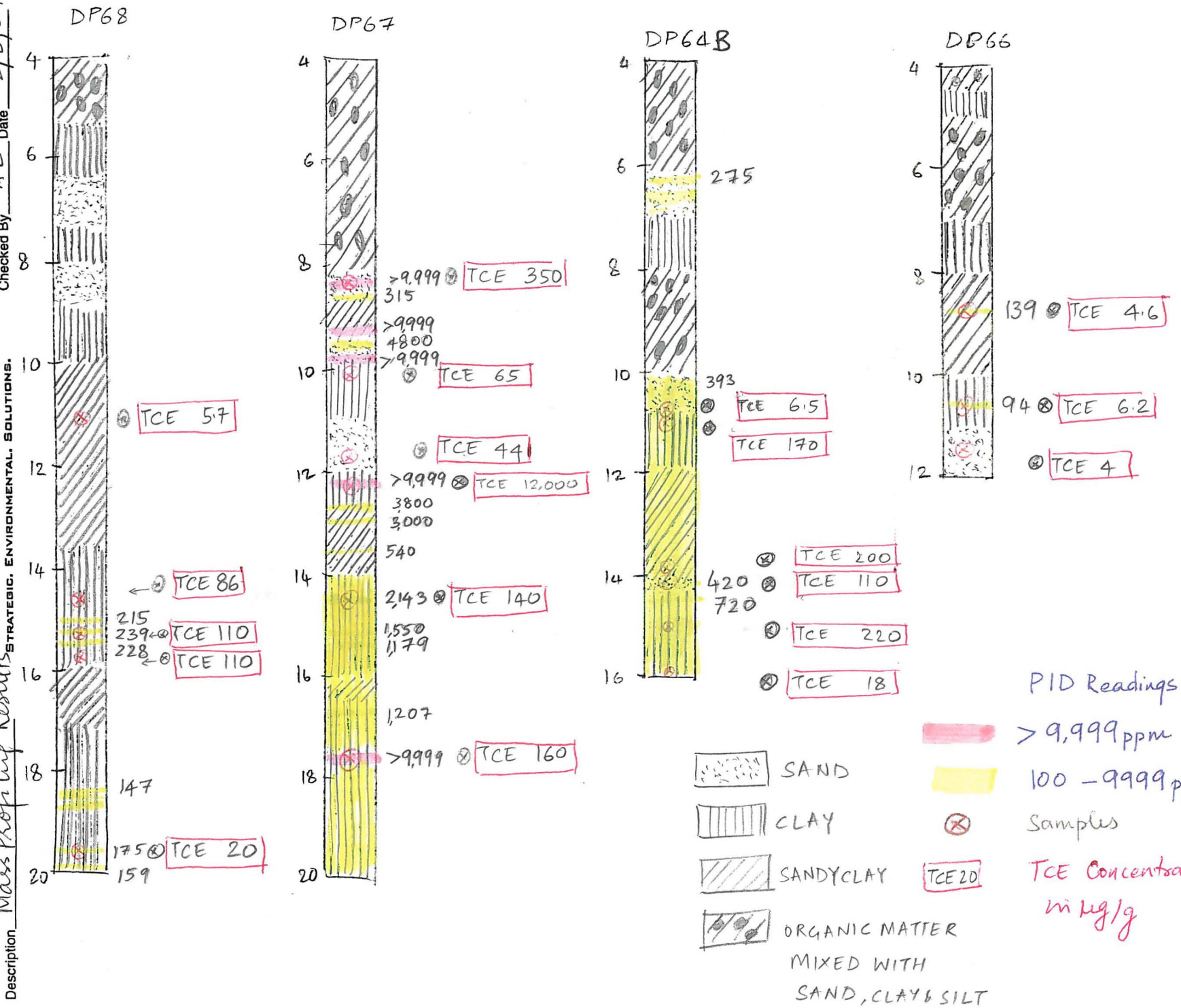
Page 1 of 1

Job #: 06010

Computed By: DKN Date: 1/19/07

Checked By: AL Date: 2/8/07

XDD STRATEGIC. ENVIRONMENTAL. SOLUTIONS.



APPENDIX D

Bench-Scale Photographs

Mass Profiling Cores:

Photograph No. 1: Soil borings IS17DP64B, IS17DP66, IS17DP67, and IS17DP68 (prior to opening sleeves).

Photograph No. 2: Soil boring IS17DP64B (depth interval: 8 to 10 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 3: Soil boring IS17DP64B (depth interval: 10 to 12 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 4: Soil boring IS17DP64B (depth interval: 12 to 16 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 5: Soil boring IS17DP66 (depth interval: 4 to 6 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 6: Soil boring IS17DP66 (depth interval: 6 to 8 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 7: Soil boring IS17DP66 (depth interval: 8 to 10 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 8: Soil boring IS17DP66 (depth interval: 10 to 12 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 9: Soil boring IS17DP67 (depth interval: 4 to 8 feet below ground surface).

Photograph No. 10: Soil boring IS17DP67 (depth interval: 8 to 10 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 11: Soil boring IS17DP67 (depth interval: 10 to 12 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 12: Soil boring IS17DP67 (depth interval: 12 to 14 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 13: Soil boring IS17DP67 (depth interval: 14 to 16 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 14: Soil boring IS17DP67 (depth interval: 16 to 20 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 15: Soil borings for IS17DP67 (depth interval: 4 to 16 feet below ground surface).

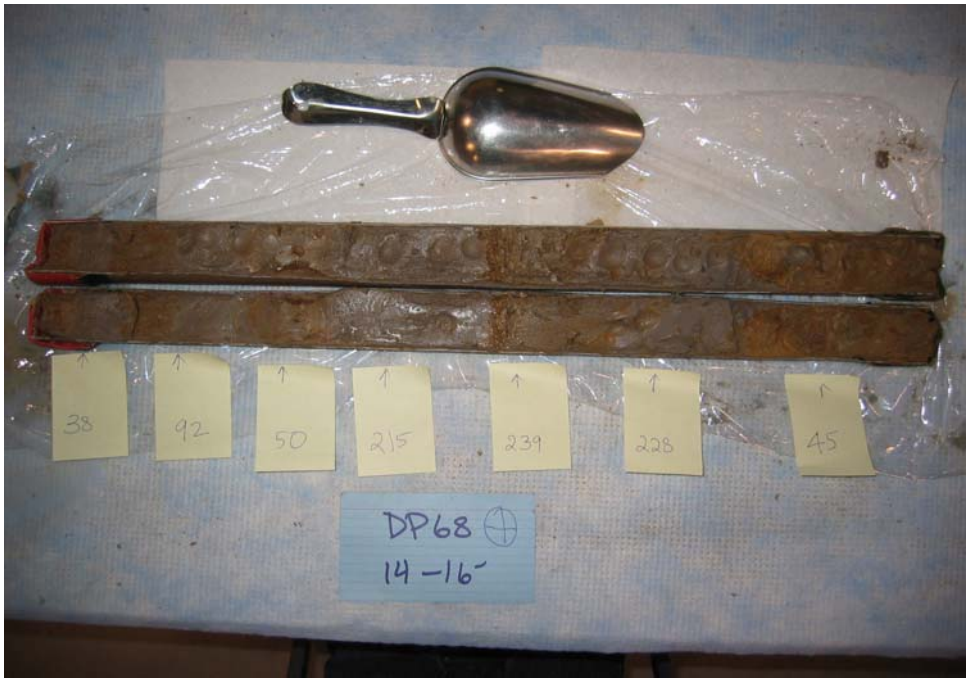
Photograph No. 16: Soil boring IS17DP68 (depth interval: 4 to 6 feet below ground surface).

Photograph No. 17: Soil boring IS17DP68 (depth interval: 6 to 8 feet below ground surface).

Photograph No. 18: Soil boring IS17DP68 (depth interval: 8 to 10 feet below ground surface).

Photograph No. 19: Soil boring IS17DP68 (depth interval: 10 to 12 feet below ground surface).

Photograph No. 20: Soil boring IS17DP68 (depth interval: 12 to 14 feet below ground surface). Numbers on yellow paper indicate PID readings.



Photograph No. 21: Soil boring IS17DP68 (depth interval: 14 to 16 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 22: Soil boring IS17DP68 (depth interval: 16 to 18 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 23: Soil boring IS17DP68 (depth interval: 18 to 20 feet below ground surface). Numbers on yellow paper indicate PID readings.

Photograph No. 24: Clay from soil borings.

Photograph No. 25: Sand from soil borings.

Photograph No. 26: Sandy clay from soil borings.

Photograph No. 27: Buffer Capacity

Photograph No. 28: Preliminary Test

Photograph No. 29: SOD Test

Photograph No. 30: Injection Simulation Test

APPENDIX E

Grain Size Analysis Laboratory Report

THIELSCH ENGINEERING
Construction Testing Services
195 Francis Avenue, Cranston, RI 02910
Tel. (401) 467-6454 Fax: (401) 467-2398

HYDROMETER CALCULATION

Client: XDD
Project: Site 17 Treatability
Subject: ASTM D422 152H

Date: 1/21/2008
Project No.: 74--08-0002
Report No.: TEI 08-S-005

Client ID #: Site 17 Composite 2

Sample #: 08-S-005

Total Wet Wt.: 249.8 g

Total Dry Wt.: 215.5 g

% Moisture: 15.9%

Starting Time: 8:29AM

Sieve	Wt. (g)	% Retain	% Passing
1"	0.0	0.0%	100.0%
3/4"	0.0	0.0%	100.0%
3/8"	0.0	0.0%	100.0%
#4	0.0	0.0%	100.0%
#10	0.0	0.0%	100.0%
#40	10.7	5.0%	95.0%
#200	68.6	31.8%	68.2%

Weight of soil use in Hydrometer: 100.5 g

Specific Gravity: 2.77 Correction Factor: 0.985

Time	Elapsed Time (min)	Actual Hydrometer Reading	Temp (℃)	Temperature and Specific Gravity Constant	Partical Diameter (mm)	Percent Finer Total
8:31am	2	44.5	15	0.01384	0.02936	43.6%
8:34am	5	39.5	15	0.01384	0.01918	38.7%
8:44am	15	36.0	15	0.01384	0.01152	35.3%
8:59am	30	32.0	15	0.01384	0.00842	31.4%
9:29am	60	28.0	15	0.01384	0.00611	27.4%
12:09pm	250	23.0	18	0.01349	0.00302	22.5%
8:29am	1440	15.0	23	0.01269	0.00132	14.7%

Calculation: Total % Finer = (Hydrometer Reading x Correction Factor) / Total weight of soil sample x 100%

USCS CLASSIFICATION: (--) CL-ML SILTY CLAY W / SAND

Verfiy JAMES HEYWOOD
Certification #: NICET # 87010
Date: 1/21/2008

Reviewed by: JAMES MCMANUS, CSI
QA/QC MANAGER
Date: 2/5/2008

THIELSCH ENGINEERING
Construction Testing Services
195 Francis Avenue, Cranston, RI 02910
Tel. (401) 467-6454 Fax: (401) 467-2398
www.thielsch.com

Client:	XDD	Date:	1/21/2008
Project Name:	Site 17 Treatabilty	T.E.I. Project #:	74-08-0002
T.E.I. Sample #:	08-S-005	Client Project #	
Client I.D. #:	Site 17 Composite 2	Report #:	TEI 08-S-005

Liquid Limit, Plastic Limit, & Plasticity Index of Soils
(ASTM - D4318)
Method A

Liquid Limit Test Results

Sample Number	Number of Drops	Sample Moisture	
		Weight of wet sample:	37.124
1	21	Weight of dry sample:	32.79
		% Water Content:	13.22%
		Weight of wet sample:	37.394
2	26	Weight of dry sample:	33.303
		% Water Content:	12.28%
		Weight of wet sample:	43.91
3	32	Weight of dry sample:	38.555
		% Water Content:	13.89%
	Average Liquid Limit:	13.21	

Plastic Limit Test Results

Sample Number	Sample Moisture	
	Weight of wet sample:	12.231
1	Weight of dry sample:	11.356
	% Water Content:	7.71%
	Weight of wet sample:	12.759
2	Weight of dry sample:	11.619
	% Water Content:	9.81%
Plastic Limit:	8.76	

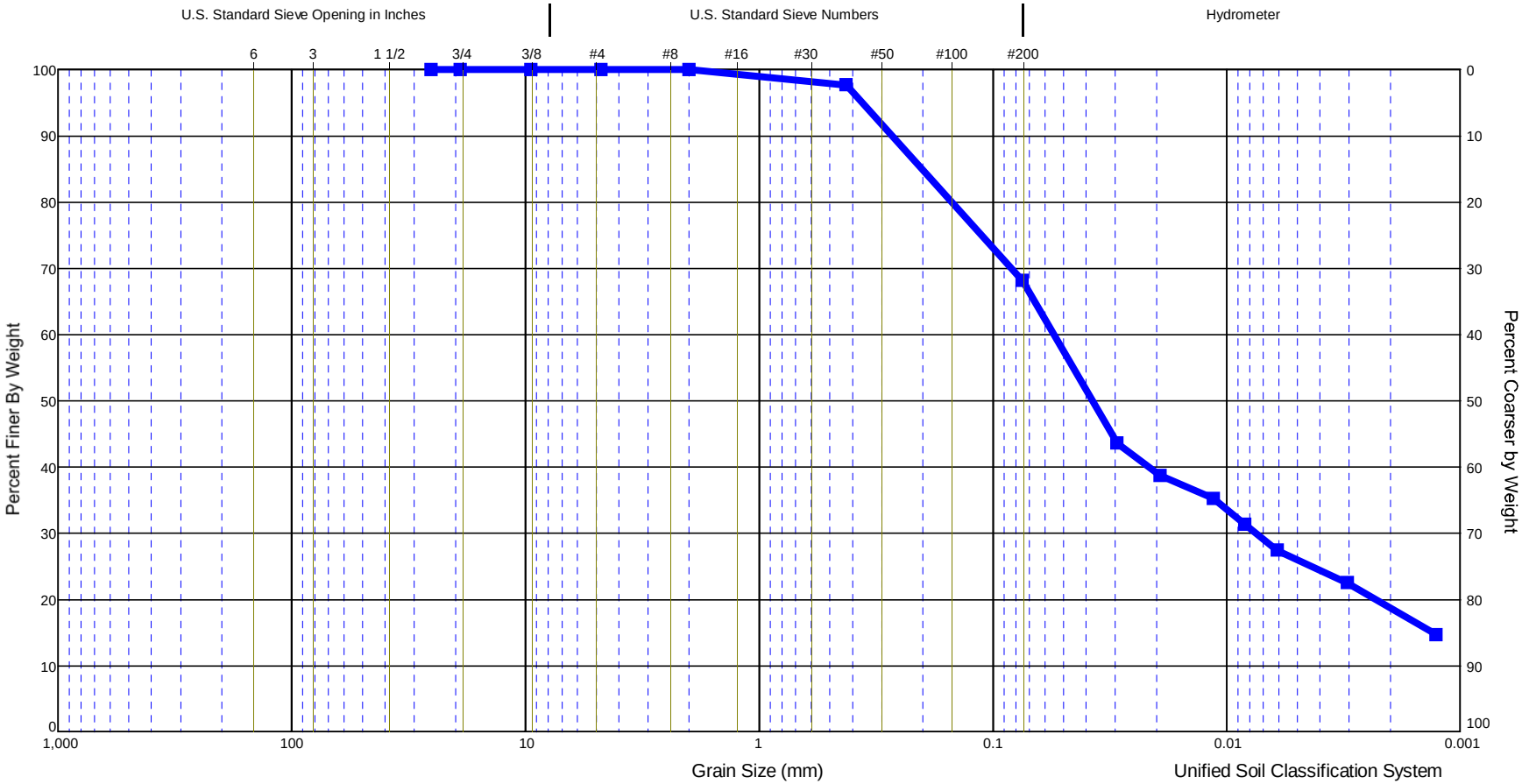
PLASTICITY INDEX: 4.45

Comments: Classification: CL-ML Silty Clayey w/ Sand

Technician JAMES HEYWOOD
Cert # NICET # 87010
Date: 1/0/1900

JAMES MCMANUS, CSI
QA/QC Manager
Date: 2/5/2008

GRAIN-SIZE DISTRIBUTION TEST REPORT



% Coarse	% Sand	% Silt	% Clay
0.0%	31.8%	56.6%	11.6%

Soil Counter	Borehole ID	Sample ID	Depth Upper	Depth Lower	Date Sampled	Texture	Soil Description	PL	LL	PI
713670200	Site 17	08-S-005	ft	ft		CL-ML	Silty clay with sand			

NP=No plastic limit

Company:	Thielsch Engineering	**Project No.:** 08-0004	**Borehole:** Site 17
Address:	195 Frances Ave.	**Project Name:** XDD-Site 17	
	Crantson Cranston RI 02910	**Location:**	
Country:	United States	**Soil Counter:** 713670200	**Sample ID:** 08-S-005
Telephone:	401-467-6454 **Fax:** 401-467-2398	**Depth:** ft	

USCS GRAIN-SIZE DISTRIBUTION

Tested By:

Test Date: 25-Jan-08