# PHASE II ENVIRONMENTAL SITE ASSESSMENT

rec'd
2-17-05

MICHIGAN PLAZA
3801-3823 WEST MICHIGAN STREET
INDIANAPOLIS, INDIANA
MUNDELL PROJECT NO. M01046 #6061202

Prepared for:

Mr. Daniel P. McInerny, Esq.
Bose McKinney & Evans LLP
2700 First Indiana Plaza
135 North Pennsylvania Street
Indianapolis, Indiana 46204

February 16, 2005

Prepared by:


**MUNDELL & ASSOCIATES, INC.**
429 East Vermont Street, Suite 200
Indianapolis, Indiana 46202-3688
317-630-9060, fax 317-630-9065
*http://www.MundellAssociates.com*



ANY UNAUTHORIZED DISSEMINATION OR REUSE OF THIS DOCUMENT WILL BE AT THE USER'S SOLE RISK AND WITH THE CONDITION THAT MUNDELL & ASSOCIATES, INC. BE HELD HARMLESS FROM ANY AND ALL CLAIMS FOR LOSSES OR DAMAGES AND EXPENSES ARISING OUT OF OR RESULTING FROM SUCH UNAUTHORIZED DISCLOSURE OR REUSE.

# MUNDELL & ASSOCIATES, INC.

*429 East Vermont Street, Suite 200, Indianapolis, Indiana 46202-3688*
*Phone: 317-630-9060, Fax: 317-630-9065, email: info@MundellAssociates.com*


February 16, 2005

Mr. Daniel P. McInerny, Esq.
**Bose McKinney & Evans LLP**
2700 First Indiana Plaza
135 North Pennsylvania Street
INDIANAPOLIS, INDIANA 46204

Re: Phase II Environmental Site Assessment
**Michigan Plaza**
**3801-3823 West Michigan Street**
Indianapolis, Indiana
MUNDELL Project No. M01046

Dear Mr. McInerny:

MUNDELL & ASSOCIATES, INC. (MUNDELL) has completed the Phase II Environmental Site Assessment for the above-referenced Site per your request. This report, *Phase II Environmental Site Assessment*, documents the activities completed at the site on August 18th, 2004. These activities were performed to determine the presence of potential chemical impacts, if any, to soil and groundwater from surrounding potential contaminant sources.

We appreciate the opportunity to be of service to Bose McKinney & Evans LLP for this project and look forward to working with you on future assignments. In the meantime, if you have questions about information in this report or if we can be of further assistance, please contact MUNDELL at (317) 630-9060.

Sincerely,
**MUNDELL & ASSOCIATES, INC.**

Leena Lothe
Staff Environmental Engineer

John A. Mundell, P.E., L.P.G.
President/Senior Environmental Consultant

/lal

attachment: *Phase II Environmental Site Assessment*

P:\M01046 Michigan Meadows Apts\Further Site Characterization_July 04\Phase II Reports\Phase II_ Plaza\PhaseII_Plaza1.doc

## TABLE OF CONTENTS

**1.0 INTRODUCTION** ..... 6
1.1 PREVIOUS INVESTIGATIONS ..... 6
1.1.1 GM AGT Plant 10 Soil and Groundwater Impacts ..... 7
1.1.2 Keramida March 2002 Phase II Investigation ..... 7
1.1.3 Keramida October 2002 RWP and August 2004 RWP ..... 8
1.1.4 MUNDELL's April 2003 Air Quality Study ..... 8
1.1.5 MUNDELL's November 2003 Phase I Site Assessment ..... 9
1.1.6 MUNDELL's October 2004 Air Quality Study ..... 10
1.1.7 MUNDELL's August/September 2004 Phase II Investigation – Michigan Meadows Apartments ..... 10
1.2 Scope of Work ..... 11

**2.0 FIELD INVESTIGATIONS** ..... 12
2.1 Geoprobe Sampling ..... 12
2.2 Onsite SDI Quick Groundwater Analysis ..... 12
2.3 Soil Analysis ..... 13
2.4 Groundwater Sample Collection and Analysis ..... 13

**3.0 RESULTS** ..... 14
3.1 Geologic Findings ..... 14
3.1.1 Regional Geology ..... 14
3.1.2 Near-surface Soil Characteristics ..... 14
3.1.3 Site Geology ..... 15
3.2 Hydrogeologic Findings ..... 16
3.2.1 Regional Hydrogeology ..... 16
3.3 Soil Analytical Results ..... 16
3.4 Groundwater Analytical Results ..... 17

**4.0 CONCLUSIONS** ..... 18

**5.0 LIMITATIONS** ..... 20

**6.0 PROFESSIONAL CREDENTIALS** ..... 21

**7.0 REFERENCES** ..... 22

## FIGURES

Figure 1. Site Vicinity/Topographic Map
Figure 2. Site Plan
Figure 3. Soil Analytical Results
Figure 4. Groundwater Analytical Results

## TABLES

Table 1. Soil Analytical Results
Table 2. Groundwater Analytical Results

## APPENDICES

Appendix A Soil Boring Logs
Appendix B Laboratory Certificates of Analysis

# PHASE II ENVIRONMENTAL SITE ASSESSMENT
MICHIGAN PLAZA
3801-3823 WEST MICHIGAN STREET
INDIANAPOLIS, INDIANA
MUNDELL PROJECT NO. M01046

## 1.0 INTRODUCTION

In August 2004, MUNDELL & ASSOCIATES, INC. (MUNDELL) performed a Phase II Environmental Site Assessment (ESA) of the Michigan Plaza property located at 3801-3823 West Michigan Street in Indianapolis, Indiana (Site). The location of the Site is presented in Figure 1, Site Vicinity Map.

The Site is located in a mixed residential/commercial and industrial area on the southwest side of Indianapolis. The Michigan Plaza consists of a single story, 'L' shaped commercial building with a number of retail and office tenants and asphalt-paved parking lots on approximately 1.5 acres of land. The Plaza currently consists of a Village Pantry (3801), a former Marion County Public Library (3805), a former Handicap Workshop (3815), a former office space (3817), Zacatecas, a Mexican grocery store (3819), and the Michigan Plaza Family Laundry (3823).

### 1.1 PREVIOUS INVESTIGATIONS

Environmental subsurface investigations conducted by a number of environmental consultants (*e.g.*, Engineering Science, Inc.; Fluor Daniel GTI, Keramida Environmental) since 1992 have disclosed volatile organic chemical (VOC) impacts to area groundwater from the operations of the location of the former General Motors Corporation Allison Gas Turbine Division (GM AGT) Plant 10 facility located due north of the Michigan Meadows Apartments across Little Eagle Creek. Groundwater sampling has indicated these impacts have apparently moved from this facility southward to the Site (see Section 7.0 for a list of report references). The former GM AGT has been entered into the IDEM Voluntary Remediation Program (VRP) by its current owner, the Genuine Parts Company.

A company named BHT Corporation (BHT), the previous owner of the former GM AGT Plant 10 facility utilized trichloroethylene (TCE) and tetrachloroethylene (PCE) as a parts degreaser in their parts rebuilding operations from the 1950s to the 1970s. Prior to 1956, the property north of Michigan Meadows Apartments was vacant land. Between 1956 and 1973, BHT operated the facility for carburetor and brake re-manufacturing. General

Motors purchased the property from BHT in 1973, and subsequently used it for warehousing obsolete machines, tooling, and fixtures until the mid-1980s. The property became part of the GM AGT Division in 1973.

### 1.1.1 GM AGT Plant 10 Soil and Groundwater Impacts

Engineering Science, Inc. (ESI) conducted a *Phase I* at the GM AGT Plant 10 site (1992 and 1993), and the Plant 10 site was identified as a potential area of concern (PAOC). A follow-up assessment was conducted in November 1993, and was documented as *Phase II Assessment* Final Report for General Motors Corporation Allison Gas Turbine Division. Results of this investigation identified trichloroethene (TCE), vinyl chloride (VC), 1,2-dichloroethene (1,2-DCE), tetrachloroethene (PCE), toluene, and methylene chloride in the soil at the GM AGT Plant 10 facility. Compounds most frequently detected included TCE, 1,2-DCE, and VC.

OBG conducted a *Buyer Environmental Assessment* for the former GM AGT Plant 10 facility in March of 1994. VOCs detected in the subsurface soil were 1,2-DCE and TCE. VOCs detected in the groundwater were trans-1,2-DCE, cis-1,2-DCE and TCE. Between June 1995 and January 1997, Fluor Daniel GTI conducted additional investigation activities, which included installation, and monitoring of on-site and off-site wells, soil and groundwater collection via push probe methods, Little Eagle Creek stream gauging, surface water sampling, and slug testing. These results are documented in their *Feasibility Study Report* (June 1997) and *Remedial Investigation* report (September 1997).

### 1.1.2 Keramida March 2002 Phase II Investigation

As a part of the *Phase II* investigation for the 2002 *Remediation Work Plan (RWP)* (March 2002; October 2002), Keramida conducted off-site subsurface sampling for volatile organic chemicals (VOCs), including testing at 3800 to 3823 West Michigan Street and the surrounding areas. One soil boring, KB-24, located south/southwest of the Plaza Building, exhibited a PCE concentration of 16 mg/kg above the groundwater table. This soil concentration exceeded the VRP Tier II Nonresidential cleanup goal. The source of this impact was not determined.

Groundwater samples taken by Keramida from both the shallow and deep groundwater systems in the area indicated chlorinated solvent groundwater impacts (most notably cis-1,2-DCE and vinyl chloride) beneath the Plaza above VRP Tier II Residential and Nonresidential cleanup goals. (Refer to Appendix I, MUNDELL *Phase I ESA*, December 2003, Figures 20, 21 and 22 from this report). These *Phase II* results, summarized on the organic chemical groundwater plume maps, established a clear connection between the groundwater contamination found at the former Allison facility and the contamination detected beneath the Michigan Meadows Apartments and at the Michigan Plaza.

### 1.1.3 Keramida October 2002 RWP and August 2004 RWP

In October 2002, Keramida submitted a *Remediation Work Plan* (*RWP*) to the IDEM VRP that outlined its plans for the remediation of the former GM AGT Plant 10 facility. In August 2004, Keramida submitted a revised *RWP* based on comments received by IDEM. Both *RWPs* show groundwater flowing south from the former GM AGT Plant 10 facility to Michigan Meadows Apartments and Michigan Plaza (as indicated by potentiometric maps provided in the 2002 *RWP* (Figures 9a through 9h) and 2004 RWP (Figures 12a through 12n)). In addition, groundwater analytical summary maps in the 2002 *RWP* (Figure 12b and 13a for cis-1,2-DCE; Figure 12c and 13b for vinyl chloride), the 2004 RWP (Figures 15b, 15c, 16a, 1b) and plume maps in the Keramida 2002 *Phase II Investigation* Report (Figures 20a and 20b for cis-1,2-DCE, and Figure 22a and 22b for vinyl chloride)), clearly demonstrated that the former GM AGT Plant 10 facility is directly upgradient of the property and the likely sole source of groundwater impacts the Michigan Meadows Apartments site and a contributing source to the Michigan Plaza Site.

### 1.1.4 MUNDELL's April 2003 Air Quality Study

Indoor air sampling performed by MUNDELL on December 10, 2001 had detected the presence of volatile organic chemicals at low concentrations in several apartment buildings basement areas in the northwestern portion of the Michigan Meadows Apartments property nearest the former GM AGT Plant 10 facility. These findings, along with a review of the subsurface investigations and remediation conducted by Keramida as part of the VRP activities, raised a concern that additional investigations at the Michigan Meadows Apartments and the Michigan Plaza were warranted to further define the severity and extent of groundwater impacts, and the resulting potential impact on indoor air quality for the facilities. As such, MUNDELL completed a more comprehensive indoor air quality investigation during April 2003 in coordination with IDEM and the Marion County Health Department (MCHD) designed to detect potential impacts at the Site that could pose a human-health concern to the current residents and tenants. The final results of this investigation were made available for review by IDEM and the MCHD to supplement ongoing studies by Keramida.

Air quality samples were collected from 23 Michigan Meadows Apartments buildings (Bldg Nos. 1 through 23) and 4 tenant units (3801, 3805, 3815 and 3817 West Michigan) at the Michigan Plaza Shopping Center. Each air sample was collected in a six-liter, evacuated, stainless steel Summa Canister equipped with a passive flow controller set to fill the canister over a 24-hour period.

All air samples collected were tested for the four chemicals of concern (COCs) previously identified in the shallow and deep impacted groundwater beneath the former GM AGT Plant 10 facility and the Site during the Keramida VRP investigations: tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE)

and vinyl chloride (VC). The sampling and testing program followed the general principles outlined in the *Massachusetts Indoor Air Sampling and Evaluation Guide* (WSC Policy #02-430, April 2002, Office of Research and Standards, Department of Environmental Protection) which is being considered as the basis for future IDEM indoor air quality policy development.

In addition to the indoor air sampling activities, the evaluation also included the collection of 5 soil gas samples and 5 groundwater samples taken at the installed soil gas monitoring well locations. Sampling locations were determined based on impacted groundwater data contained in previous investigations conducted by Keramida. Four sampling points were designated within Michigan Meadows Apartments and one within the parking lot of the Michigan Plaza Shopping Center.

The results of this investigation indicated that all four (4) indoor airborne concentrations in the tenant units in Michigan Plaza Shopping Center were above the draft U.S. EPA guidance target indoor air concentrations and IDEM draft default concentrations (at that time) for PCE and TCE. None of the other two COCs (i.e., 1,2-DCE and vinyl chloride) were found above U.S. EPA and IDEM draft vapor concentration levels.

A July 1, 2003 response letter was received from IDEM after review of MUNDELL's June 2003 *Air Quality Investigation Report*. IDEM stated that it did not believe the information presented indicated an imminent health threat requiring immediate action to relocate businesses or other immediate abatement action. IDEM did feel that the report indicated the potential for a vapor intrusion problem at Michigan Plaza, and that further investigation was prudent (Refer to Appendix K, *Phase I Environmental Site Assessment*, MUNDELL, December 2003 for a copy of the IDEM letter).

### 1.1.5 MUNDELL's November 2003 Phase I Site Assessment

Subsequent to the 2003 indoor air study, MUNDELL performed a detailed *Phase I Environmental Site Assessment* of the Michigan Plaza site in November 2003. This *Phase I ESA* included a reconnaissance visit to the Site, a review of the previously listed available environmental database and related agency information for the Site and surrounding properties, interviews, prior ownership records, aerial photographs, published geologic information, and other related items. This information was used to evaluate existing or potential environmental impairment of the Site due to current or past land use disclosed by this study.

The findings of this assessment disclosed some potential environmental concerns at the Site, including the potential for environmental impairment from current or past land usage or from surrounding properties.

The *Phase I ESA* indicated the historical existence of a dry cleaners on-site (Accent Dry Cleaners: 3819 W. Michigan Street - Michigan Plaza) that poses a potential

environmental concern for the Site due to the use of of hazardous substances (e.g. perchloroethene) from the previous dry cleaning operations. It also indicated the presence of known groundwater impacts in the area and other areas of off-site environmental concern, including 1) groundwater impacts from the former GM AGT Plant 10 facility located north of the Site, 2) violations and enforcement actions (RCRIS) documented for the General Motors Corporation Allison Transmission Plants 3 & 12/1, which exists upgradient of the site, and 3) petroleum releases from the Speedway/SM #6122 facility and the Marathon Ashland Petroleum Speedway.

Based on the *Phase I ESA* findings and conclusions, MUNDELL recommended the advancement of additional soil borings and groundwater sampling on the Site in the vicinity of the former dry cleaners to determine potential impacts from the former operations.

### 1.1.6 MUNDELL's October 2004 Air Quality Study

Another round of air sampling was conducted by MUNDELL in October 2004 that included sampling of the prior highest PCE/TCE air concentration tenant units at Michigan Meadows Apartments and Michigan Plaza Shopping Center. Air samples were collected at two of the 23 Michigan Meadows Apartment buildings and in two of the tenants of Michigan Plaza Shopping Center. In addition, one below-driveway slab air sample was collected behind the Mexican grocery store in the Plaza, and from the unsaturated soil zone of three (3) of the gas monitoring wells. All air samples were collected via an evacuated, stainless steel Summar Canister and tested for TCE, PCE, cis-1,2-DCE and VC. The results of this study are documented in a separate report, '*Air Quality Investigation Report – October 2004*'.

The air samples from the two tenant locations at the Plaza (3815 and 3819 West Michigan Street) indicated airborne concentrations above both the current draft U.S. EPA guidance target indoor air concentrations and the IDEM draft default concentrations for PCE. A potential source for these impacts includes a former dry cleaner that was located in the 3819 West Michigan space.

### 1.1.7 MUNDELL's August/September 2004 Phase II Investigation – Michigan Meadows Apartments

A recent Phase II subsurface investigation along the northern portion of the Michigan Meadows Apartment property was conducted by MUNDELL in August and September 2004. This study included the installation of six (6) groundwater monitoring wells and sampling and testing of groundwater. The results indicated VOC impacts coming onto the property from the former GM Plant 10 facility. However, only cis-1,2-DCE and vinyl chloride detectable concentrations were observed, with no TCE or PCE impacts. The results of this study are documented in a separate report, '*Phase II Investigation – Michigan Meadows Apartments*'.

## 1.2 Scope of Work

As recommended in the *Phase I Environmental Site Assessment* (MUNDELL, December 2003) additional soil and groundwater sampling was conducted within the Site to monitor ongoing impacts from the former GM AGT Plant 10 facility and to better determine the horizontal and vertical chlorinated organic impacts to the groundwater system.

Geoprobe sampling was conducted at five (5) locations: one boring on the northeast side (asphalt parking lot) of the Plaza building in the vicinity of gas well MGW-5, three borings just south of the Plaza in the downgradient direction of groundwater flow, and one boring in the asphalt along the east side of the Plaza. Continuous soil sampling was performed. Soil samples collected a couple of feet above the water table in each of the borings were analyzed (VOCs 8260) to determine the impacts to the unsaturated zone. Groundwater samples were collected from each of the borings, and were analysed for VOCs via SW846 Method 8260. Field screening included analyzing groundwater samples from the geoprobe soil borings on Site by MUNDELL personal using the Strategic Diagnostics, Inc. (SDI) Quick analysis procedure for total Volatile Organic Halides (VOHs) including trichloroethylene (TCE) and perchloroethylene (PCE).

## 2.0 FIELD INVESTIGATIONS

### 2.1 Geoprobe Sampling

Five (5) geoprobe borings were advanced on Site, by American Drilling Services (ADS) on August 18th, 2004. Each boring was probed under the direction of MUNDELL, using a truck-mounted Geoprobe Model 6600 drill rig. The five (5) boring locations (GP-01, GP-02, GP-03, GP-04 and GP-05) were as follows: one boring in the northeast side (asphalt parking lot) of the plaza building in the vicinity of soil gas well MGW-5, three borings just south of the plaza in the downgradient groundwater flow direction, and one boring in the asphalt along the east side of the plaza. The locations of the borings are presented in **Figure 2** and analytical results are reported in **Table 1 and 2**. Soil boring logs are provided in **Appendix A**.

Soil samples were collected from within a disposable vinyl tube located inside the tube soil sampler. Soil samples were collected continuously to the base of each boring and field screened by a MUNDELL staff scientist. Soils were classified into intervals using the Munsell Soil Color Chart and the USCS by examining color, grain size, silt and clay content and plasticity. Each sample was divided into 1.0-foot intervals and placed into plastic bags and sealed. Field screening of the soil samples included observations of moisture content, odor, staining and the detection of total volatile organic vapors (TOVs) using a photo-ionization detector (PID) calibrated to 100 parts per million (ppm) isobutylene.

### 2.2 Onsite SDI Quick Groundwater Analysis

The groundwater samples from the Geoprobe borings were analyzed on Site by MUNDELL personal using the Strategic Diagnostics, Inc. (SDI) Quick analysis procedure for total Volatile Organic Halides (VOHs) including trichloroethylene (TCE) and perchloroethylene (PCE). This method incorporates a photochemical reaction that produces quantifiable coloration proportional to the concentration of VOHs present in the groundwater sample. A color reagent was added to the sample and exposed to ultraviolet (UV) light by an Envirometer. The absorbance produced by the reagent-analyte complex was measured by the Envirometer and compared with an internal curve, which was standardized at the beginning of the analysis by MUNDELL personnel. The concentration of VOHs was then displayed and recorded in parts per billion (ppb) on the Envirometer. If the reading displayed by the Envirometer was "OL" (over the detection limit of 200 ppb), a dilution procedure was performed until a quantifiable concentration of VOHs was recorded. The results of these analyses are reported in **Table 2** and shown on **Figure 4**.

At the end of the on Site groundwater analysis, a Quality Assurance (QA) check was performed to establish groundwater field testing accuracy.

## 2.3 Soil Analysis

Soil samples for laboratory analysis were collected approximately 2-3 feet above the water table at each of the borings to delineate impacted unsaturated soils. These samples were placed into glass jars and sealed with a Teflon lined lid. After collection, the soil samples were transported on ice in a cooler to Pace Analytical Laboratories (Pace) in Indianapolis, Indiana, using appropriate chain-of-custody protocol for assignment of laboratory tests. All soil samples collected as a part of the *Phase II Investigation* were analyzed for VOCs via U.S. Method 8260. Pace laboratory certificates of analysis for the soil samples analyzed are provided in **Appendix B**.

## 2.4 Groundwater Sample Collection and Analysis

Groundwater samples were collected at varying vertical depths from the soil boring locations (GP-01, GP-02, GP-03, GP-04, and GP-05) using a groundwater sampling probe attached to the geoprobe for both on-site real time analytical testing using the SDI Quick Test kit and for off-site analytical testing. The groundwater samples were collected approximately 2 to 3 feet below the water table and field screened for Total Volatile organic Halides (TVOHs) using the SDI Quick Test kit. The kit is programmed to display the sum of concentrations of trichloroethene, tetrachloroethene, and 1,1,1-trichloroethane. The screening TVOHs concentration aided in the development of appropriate groundwater sampling depths for each of the soil borings. The field screening groundwater results are presented in **Table 2**.

The groundwater samples were collected using dedicated disposable plastic tubing placed inside the groundwater sampling probe. Groundwater samples were pumped out through the plastic tubing into 1.0 liter glass bottles, and then transferred into three 40-milliliter glass sample vials containing the preservative hydrochloric acid (HCl). Groundwater sample vials were sealed in plastic bags and placed in a cooler containing ice. All water samples were delivered to Pace Analytical services, Inc. using the appropriate chain-of-custody protocol for laboratory tests. All water samples collected as a part of the *Phase II Investigation* were analyzed for volatile organic compound (VOCs) via U.S. Method 8260. Pace laboratory certificates of analysis for the groundwater samples analyzed are presented in **Appendix B**.

# 3.0 RESULTS

## 3.1 Geologic Findings

### 3.1.1 Regional Geology

Marion County is situated within the southern part of the physiographic region known as the Tipton Till Plain, with most of the county underlain by a thick assemblage of glacial deposits located within the White River Basin. These glacial sediments, which include glacial till, randomly arranged ice contact sand and gravel, silt, lake clays, outwash sands and gravel, and alluvial materials, were deposited on a strongly dissected pre-glacial landscape formed on bedrock of highly variable resistance to erosion. The glacial drift cover in Marion County is believed to represent most of the major periods of glaciation that collectively constitute the Pleistocene Ice Age in this area of the United States. The deposits closest to the land surface are generally from the most recent period of glaciation known as the late Wisconsin age, and were formed as a result of several major ice advances into Marion County. The thickness of Wisconsinan glacial drift, which is comprised of loam till of the Trafalgar Formation and some outwash, ranges from 50 to 150 ft in the area (Fenlon et al., 1994).

### 3.1.2 Near-surface Soil Characteristics

The USDA Soil Survey of Marion County, Indiana (USDA, 1991) indicates that the Site consists of Urban land-Fox complex with estimated slopes between zero and three percent. The urban land complex indicates that fifty percent of the predominant soil type has been disturbed and has been covered with an impervious layer consisting of buildings, sidewalks, streets and other structures. The undisturbed areas of the complex retain the original soil characteristics. The Fox soils are identifiable in lawns, gardens, parks and other open areas. They have a representative profile of the series, but alteration is evident in many areas where topsoil has been stripped.

The Fox soil series generally consists of nearly level to moderately sloping, well-drained soils that are moderately-deep over sand and gravelly sand. The typical profile for the Fox series is as follows: the surface layer is dark brown loam 8 inches thick. The subsoil is 30 inches thick. The upper 10 inches is dark brown friable loam; the next 6 inches is dark brown, firm sandy clay loam; and the next 14 inches is dark brown, firm gravelly clay loam.

### 3.1.3 Site Geology

The surface of Marion County consists of Pleistocene glacial deposits and recent alluvial stream deposits. Marion County is situated within the southern part of the physiographic region known as the Tipton Till Plain. While most of the glacial material in the county consists of fine-grained silts and clay, sand and gravel outwash soils are commonly found along major streams. These outwash deposits, which fill the White River Valley and its major tributaries, were deposited in a complex fashion during what is thought to have been three primary ice advances and subsequent meltwater discharges from ice margins upstream from Marion County (Fleming et al., 2000). The Wisconsin-age sediments, within the White River Valley and a variety of smaller sand and gravel and fine-grained till units are distributed in a discontinuous nature throughout the valley.

The Site itself is situated with an area containing variable thickness of outwash overlying complexly interbedded sand and gravel and fine-grained glacial till. Thick unbroken sections of sand and gravel are present locally, and are typically unconfined within the upper portions of the system, and confined or semi-confined by bodies of glacial till at depth (Fleming et al., 2000). Estimated thickness of the unconfined sand and gravel outwash in the area ranges from 20 to 40 ft on top of an undifferentiated Pre-Wisconsinan glacial till (Brown and Fleming, 2000).

The bedrock beneath the unconsolidated deposits in Marion County consists of sedimentary rocks of Mississippian, Devonian and Silurian age. The bedrock surface slopes gently to the southwest. Therefore, younger Mississippian rocks are at the bedrock surface in the southwest corner of the county and progressively older Devonian and Silurian rocks are at the bedrock surface in the central and northeast portion of the county, respectively (Harrison, 1963; Fleming et al., 1993). Bedrock beneath the unconsolidated deposits at the site is Mississippian and Devonian age New Albany Shale. The top of the bedrock surface is estimated to be between EL 625 to EL 650 above MSL.

The soil stratigraphy encountered during the advancement of the soil borings was a fairly uniform 0.5 to 3.0 ft surficial sand and gravel (base course) and clayey fill overlying a natural, fine-grained silty clay layer (a low plasticity CL, according to the Unified Soil Classification System) near the ground surface down to a depth of about 3.5 to 8.0 feet bgs. This layer overlies a well-graded, gravelly sand (SW) layer that was encountered down to a depth of about 9.5 ft to18.5 ft bgs. Beneath this well-graded layer, a poorly-graded, fine to medium sand (SP) with little to no fines was encountered down to a depth of about 11.5 feet to 19.5 feet bgs. The top of the unconfined groundwater table was encountered within this layer between about 18 to 19 ft bgs, with the exception of boring GP-02 where the water table was encountered at nine (9) feet bgs. This layer overlies a well-graded, gravelly sand (SW) layer that was encountered down to a depth of about 30 ft bgs. Additional detailed lithological descriptions of these areas may be obtained from the boring logs provided in **Appendix A**.

## 3.2 Hydrogeologic Findings

### 3.2.1 Regional Hydrogeology

The site itself is located adjacent to the Little Eagle Creek. Based on local experience and published hydrogeologic data in this area (e.g., Meyer et al., 1975; Herring, 1976; Smith, 1983; Fleming et al., 2000), shallow regional groundwater levels in the vicinity are expected to range between EL 700 and EL 705 above MSL, with groundwater flow from the site generally towards the south-southeast in the direction of flow in Little Eagle Creek.

The surface waters of the White River, Eagle Creek and Fall Creek are sources of industrial and public water supplies and comprise approximately 90 percent of the water used in Marion County. The unconsolidated sand and gravel aquifers associated with the surface water bodies are the major source of groundwater supply in Marion County. The Little Eagle Creek is the principal surface water feature in the area. The Site is not located within a Marion County wellhead protection area (Refer to Appendix F, Phase I Environmental Site Assessment, MUNDELL, December 2003).

The Site is located within one of seven Marion County Health Department (MCHD) No Well Zones (NWZs). NWZs have been designated by the MCHD and reflect areas of contaminated groundwater identified by MCHD through routine sampling of potable wells. Since the MCHD requires permits for all water supply wells in the county, the purpose of the NWZs is to provide short-term protection of human health until the impacted groundwater is remediated by responsible parties; the NWZs are not intended to act as a permanent restriction on groundwater use.

## 3.3 Soil Analytical Results

Two VOCs (PCE and cis-1,2-DCE) were detected in soil samples taken from above the groundwater table at the Site. Of the five (5) soil samples analyzed from the Geoprobe soil borings, quantifiable concentrations of PCE impacts were detected in three (3) of the samples: GP-02 (35 ug/kg at 7 feet), GP-03 (230 ug/kg at 16 feet), and GP-04 (200 ug/kg at 16 feet). None of these concentrations exceed the IDEM RISC Default Closure PCE value for industrial properties. The detected PCE concentrations in borings GP-03 and GP-04 do exceed the IDEM RISC Default Closure value for a residential site. A detectable concentration of cis-1,2-DCE (5.4 ug/kg) was observed in the soil sample taken at 15.5 ft bgs in boring GP-01. This level is well below the IDEM RISC Default Closure levels for both residential and industrial site. No other volatile organic chemicals were detected in any of the soil samples tested. The soil analytical results are summarized in **Table 1** and presented on **Figure 3.**

## 3.4 Groundwater Analytical Results

Groundwater analytical testing results are summarized in **Table 2** and shown on **Figure 4.** As indicated, detectable levels of nine VOCs (PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, chloroform, vinyl chloride, methylene chloride, toluene and acetone) were observed in the groundwater collected beneath the Site. Groundwater samples tested from three (3) of the five (5) boring locations (GP-01, GP-03, GP-04) contained detectable levels of PCE above the IDEM RISC Residential Default Closure level. The most significant PCE levels were observed at boring GP-03 located behind and immediately downgradient of the former dry cleaning facility. The PCE concentrations exceeded the IDEM RISC Industrial Default Closure levels at this location, and ranged from a maximum of 730 ug/L at a depth of 20 ft bgs (within one foot of the top of the groundwater table) to 11 ug/L at a depth of 40 ft bgs (or at about 20 ft below the top of the groundwater surface). On-site screening groundwater analysis with the SDI Quick Test kit had indicated that groundwater impacts at this location were located primarily within the upper 20 ft of the saturated sand and gravel aquifer.

The IDEM RISC Residential Default Closure levels were also exceeded for TCE (GP-01), cis-1,2-DCE (GP-01, GP-03), vinyl chloride (GP-01, GP-03), and methylene chloride (GP-01, GP-02, GP-03), with RISC Industrial Default Closure levels exceeded for TCE (GP-01) and vinyl chloride (GP-01, GP-03). The detectable concentrations of all VOCs in the groundwater suggest a significant decline in VOCs from 20 ft to 40 ft bgs, indicating the most severe concentrations are limited to the upper 20 ft of saturated aquifer.

Based on the distribution of VOCs in groundwater emanating from the former GM AGT Plant 10 facility, as documented by the results of other studies in the area, both cis-1,2-DCE and vinyl chloride can be expected to be entering the Site from its upgradient, northern property line. However, the disclosure of the presence of detectable concentrations of PCE and TCE in groundwater, which have not been apparent in the groundwater beneath the Michigan Meadows Apartment property to the north, suggests that the historical existence of a dry cleaner at the Plaza could be a source of these impacts. Soil impacts above the groundwater table at the location of boring GP-03 (approximately 14 ft south of the Plaza building south wall, and closest to the former dry cleaner's space at 3819 West Michigan) provide further support for this conclusion. Further investigation of the Plaza Site, including the determination of the source of PCE and TCE impacts observed upgradient of the Plaza building at boring GP-01, is warranted to delineate the vertical and horizontal extent of contamination.

## 4.0 CONCLUSIONS

The *Phase II Environmental Site Assessment* activities were conducted by MUNDELL at the Michigan Plaza property located at 3801-3823 West Michigan Street, Indianapolis, Indiana to determine the source and delineate the extent of the soil and groundwater volatile organic chemical impacts. The on-site activities necessary to complete this assessment included completion of five (5) geoprobe soil borings, and soil and groundwater sampling and testing. In addition, air sampling (indoor air, soil gas wells, and below slab) was performed by MUNDELL as a part of this site investigation, and is documented in a separate report, "*Air Quality Investigation Report – October 2004.*' Based on observations made and the data collected during this *Phase II Investigation*, it can be concluded that:

1) Two volatile organic chemicals, PCE and cis-1,2-DCE, were detected in soil samples taken from above the groundwater table at the Site. None of the soil samples collected had VOC concentrations above their respective Indiana Department of Environmental Management (IDEM) Risk Integrated System Closure (RISC) industrial cleanup values. However, one (1) soil sample did exhibit a PCE concentration (227 ug/kg) above the IDEM RISC residential cleanup level.

2) Detectable levels of nine VOCs (PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, chloroform, vinyl chloride, methylene chloride, toluene and acetone) were observed in the groundwater collected beneath the Site. Groundwater samples tested from three (3) of the five (5) boring locations (borings GP-01, GP-03, GP-04) contained detectable levels of PCE above the IDEM RISC Residential Default Closure level. The most significant PCE levels were observed at boring GP-03 located behind and immediately downgradient of the former dry cleaning facility space within the Plaza building. These PCE concentrations exceeded the IDEM RISC Industrial Default Closure levels at this location, and ranged from a maximum of 730 ug/L at a depth of 20 ft bgs (within one foot of the top of the groundwater table) to 11 ug/L at a depth of 40 ft bgs (or at about 20 ft below the top of the groundwater surface).

3) The presence of elevated PCE soil concentrations above the groundwater table at borings GP-03 and GP-04 indicates these chemical impacts may have resulted from historical releases that occurred during past operations at the Site. The proximity of boring GP-03 to the former dry cleaner's space within the Plaza building suggests this as a likely source of these observed impacts. Further investigation of the area just

south of the plaza is warranted to confirm the source and to further delineate the vertical and horizontal extent of contamination.

4) The source of the elevated PCE and TCE concentrations in groundwater at boring location GP-01 located north and upgradient of the Plaza building has not been determined. An absence of PCE and TCE in groundwater beneath the Michigan Meadows Apartments property to the north indicates that the actual source may be on the Plaza property, and could be related to historical releases at the surface or possibly the discharge of facility wastewaters to an unknown subsurface drain system. Further investigation is necessary to confirm this conclusion.

5) Vertical sampling of the groundwater within the saturated aquifer beneath the Site and on-site screening groundwater analysis with the SDI Quick Test kit and analytical test results indicated suggest a significant decline in VOCs from 20 to 40 ft bgs. This indicates that the most severe groundwater impacts appear to be limited to the upper 20 ft of the saturated sand and gravel aquifer.

6) Based on the current analytical results, downgradient on-site groundwater PCE impacts from the Plaza appear to be somewhat restricted in an east-west direction to the area directly behind the former dry cleaner, as indicated by the water quality observed in Geoprobe borings GP-02 and GP-04.

## 5.0 LIMITATIONS

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This statement is in lieu of other statements either expressed or implied. This company is not responsible for the independent conclusions, opinions or recommendations made by others based on the records review, Site observations, field exploration, and laboratory test data presented in this report.

It should be noted that environmental evaluations are inherently limited in the sense that conclusions are drawn and recommendations developed from information obtained from limited research and Site evaluation. For these types of evaluations, it is often necessary to use information prepared by others and MUNDELL cannot be responsible for the accuracy of such information. Additionally, the passage of time may result in a change in the environmental characteristics at this Site and surrounding properties. This report does not warrant against future operations or conditions, nor does this warrant operations or conditions present of a type or at a location not investigated. This report is not a regulatory compliance audit and is not intended to satisfy the requirements of any state, federal, or local real estate transfer laws.

This report is intended for the sole use of Bose McKinney & Evans LLP. This report may not be used or relied upon by any other party without the written consent of MUNDELL. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user.

MUNDELL does not warrant the correctness, completeness, currentness, merchantability, or fitness of any information related to records review or work performed by others summarized in this report. Such information is not the product of an independent review conducted by MUNDELL, but is only publicly available environmental information maintained by federal, state, and local government agencies.

## 6.0 PROFESSIONAL CREDENTIALS

A qualifications statement of the environmental professionals responsible for this Phase II Environmental Site Assessment and preparation of the report has been delivered to Bose McKinney & Evans LLP, under separate cover. This statement includes relevant individual and corporate qualifications.

## 7.0 REFERENCES

Brown, S.E. and Fleming, A. H., 2000, *Thickness of Unconfined Sand and Gravel*, in Hydrogeologic Framework of Marion County, Indiana: A Digital Atlas Illustrating Hydrogeologic Terrain and Sequence, S. E. Brown and A. J. Laudick, Eds., Scale 1:50,000, Plate 9 of 15, Indiana Geological Survey Open-file Study 00-14.

Engineering-Science, Inc., April 21, 1993, *Phase I Information* Review Report for General Motors Corporation Allison Gas Turbine Division Plant 10.

Engineering-Science, Inc., June 1993, *Soil Gas Data AGT Site*, , June 1993.

Engineering-Science, Inc., November 19, 1993, *Phase II Site Assessment Final Report* for General Motors Corporation Allison Gas Turbine Division Plant 10.

Fleming, A. H., Brown, S.E. and Ferguson, V. R., 2000, *Potentiometric Surface and Hydrogeologic Setting of the Shallow Aquifer System*, in Hydrogeologic Framework of Marion County, Indiana: A Digital Atlas Illustrating Hydrogeologic Terrain and Sequence, S. E. Brown and A. J. Laudick, Eds., Scale 1:50,000, Plate 11 of 15, Indiana Geological Survey Open-file Study 00-14.

Fluor Daniel GTI, June 3, 1997, *Feasibility Study Report*, General Motors-Allison Gas Turbine Plant 10, (DRAFT).

Fluor Daniel GTI, September 19, 1997, *Remedial Investigation Report*, General Motors-Allison Gas Turbine Plant 10. (DRAFT).

Geophere, Inc., September 2000, *Geophysical Survey for Buried Materials at the Allison Engine Company Plant 10 Site*.

Indiana Department of Environmental Management, July 1, 2003, Response Letter, Michigan Meadows Apartments and Michigan Plaza Shopping Center, Indianapolis, Indiana.

Keramida Environmental, Inc., March 29, 2002, *Phase II Investigation Report*, Former General Motors Corporation, Allison Gas Turbine Division Plant 10, Indianapolis, Indiana.

Keramida Environmental Inc., October 30, 2002, *Remediation Work Plan*, Former General Motors Corporation, Allison Gas Turbine Division, Plant 10, Indianapolis, Indiana.

Keramida Environmental Inc., August 15, 2003, *Remediation System Evaluation Report*, Former General Motors Corporation, Allison Gas Turbine Division, Plant 10, Indianapolis, Indiana.

Meyer, W., Reussow, J.P., and Gillies, D.C., 1975, *Availability of Ground Water in Marion County*, Indiana, USGS, Open File Report 75-312, 87 p.

Mundell & Associates, Inc., January 18, 2002, *Air Quality Monitoring Results*, Michigan Meadows Apartments, 3800 West Michigan, Indianapolis, Indiana.

Mundell & Associates, Inc., October 22, 2002, *Review of Keramida Environmental, Inc. Phase II Investigation Report*, Former General Motors Corporation Allison Gas Turbine Division Plant 10, 700 North Olin Avenue, Indianapolis, Indiana.

Mundell & Associates, Inc., February 14, 2003, *Review of Keramida Environmental, Inc. Remediation Work Plan*, Former General Motors Corporation Allison Gas Turbine Division Plant 10, 700 North Olin Avenue, Indianapolis, Indiana.

Mundell & Associates, Inc., December 29, 2003, *Phase I Environmental Site Assessment*, Michigan Plaza, 3801-3823 West Michigan Street, Indianapolis, Indiana

Mundell & Associates, Inc., June 9, 2003, *Air Quality Investigation Report*, Michigan Meadows Apartments and Michigan Plaza Shopping Center, Indianapolis, Indiana.

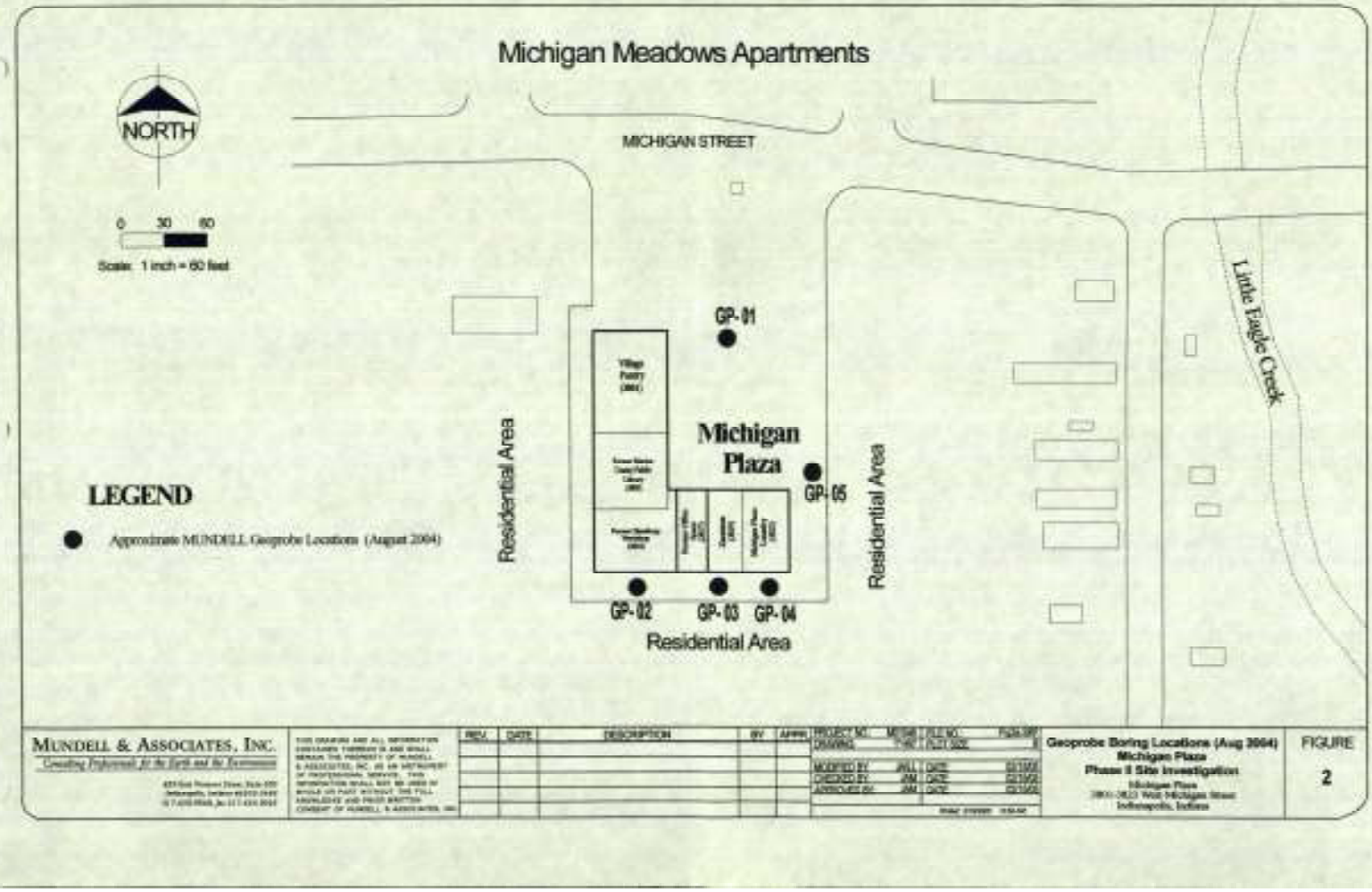
Mundell & Associates, Inc., February 2004, *Air Quality Investigation Report – October 2004*, Michigan Meadows Apartments and Michigan Plaza Shopping Center, Indianapolis, Indiana.

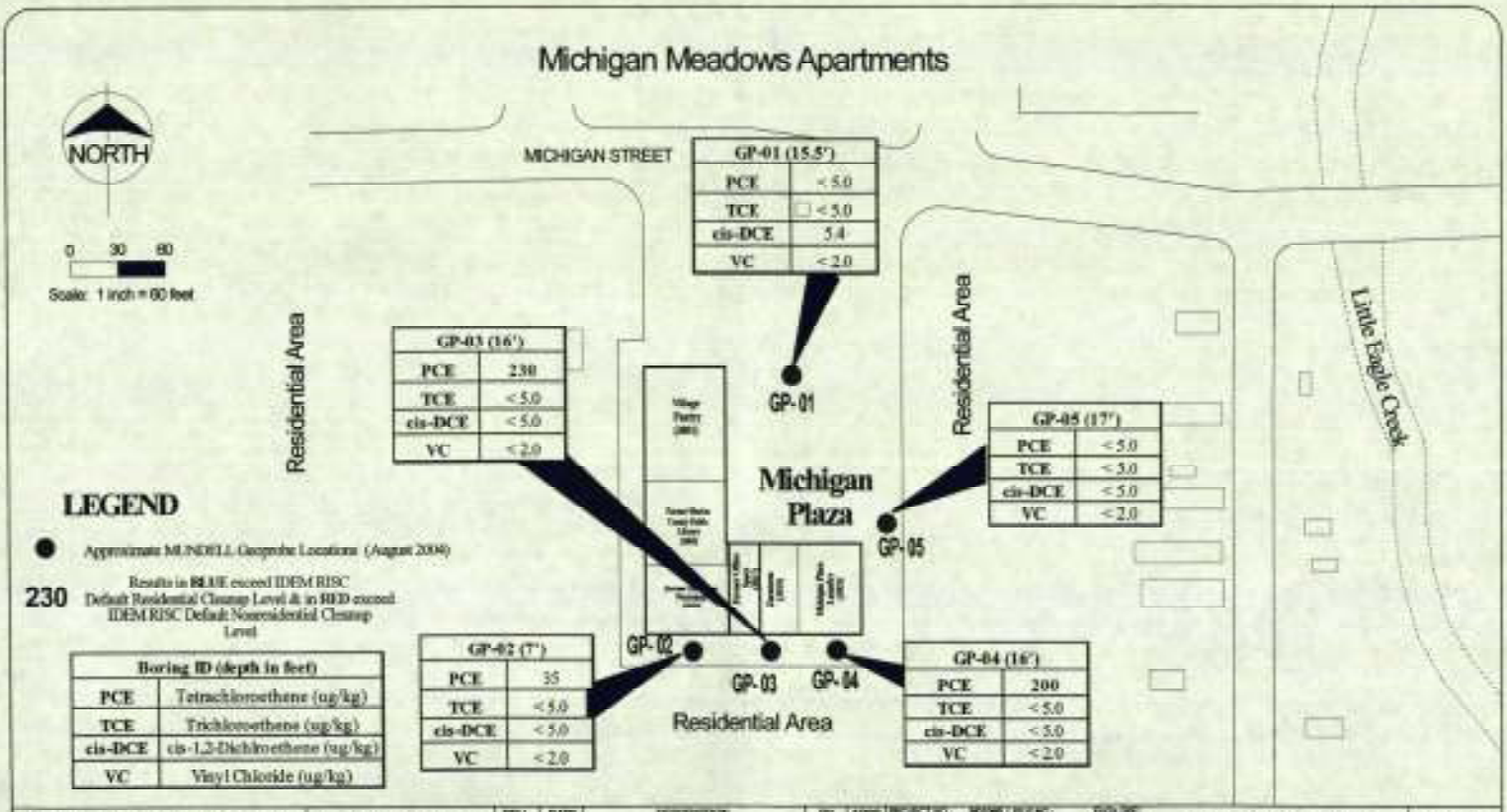
Mundell & Associates, Inc., February 2004, *Phase II Investigation – Michigan Meadows Apartments, Indianapolis, Indiana.*

O'Brien & Gere Engineers, Inc., May 1994, *Buyer Environmental Assessment*, Allison Engine Company, Inc.

United States Department of Agriculture, Soil Conservation Service, October 1991, *Soil Survey of Marion County, Indiana.*

United States Department of the Interior, Geologic Survey, Topographical Map, Indiana Quadrangle, 1986.


Michigan Meadows Apartments
NORTH
0 30 60
Scale: 1 inch = 60 feet
MICHIGAN STREET
Little Eagle Creek
GP-01
Michigan Plaza
GP-05
Residential Area
Residential Area
GP-02
GP-03
GP-04
Residential Area
LEGEND
Approximate MUNDELL Geoprobe Locations (August 2004)
MUNDELL & ASSOCIATES, INC.
Geoprobe Boring Locations (Aug 2004)
Michigan Plaza
Phase II Site Investigation
FIGURE
2


Michigan Meadows Apartments
NORTH
0 30 60
Scale: 1 inch = 60 feet
MICHIGAN STREET
Residential Area
Residential Area
Little Eagle Creek
Michigan Plaza
GP-01
GP-02
GP-03
GP-04
GP-05
Residential Area
GP-01 (15.5')
PCE < 5.0
TCE < 5.0
cis-DCE 5.4
VC < 2.0
GP-03 (16')
PCE 230
TCE < 5.0
cis-DCE < 5.0
VC < 2.0
GP-05 (17')
PCE < 5.0
TCE < 5.0
cis-DCE < 5.0
VC < 2.0
GP-02 (7')
PCE 35
TCE < 5.0
cis-DCE < 5.0
VC < 2.0
GP-04 (16')
PCE 200
TCE < 5.0
cis-DCE < 5.0
VC < 2.0
LEGEND
Approximate MUNDELL Geoprobe Locations (August 2004)
230 Results in BLUE exceed IDEM RISC Default Residential Cleanup Level & in RED exceed IDEM RISC Default Nonresidential Cleanup Level
Boring ID (depth in feet)
PCE Tetrachloroethene (ug/kg)
TCE Trichloroethene (ug/kg)
cis-DCE cis-1,2-Dichloroethene (ug/kg)
VC Vinyl Chloride (ug/kg)
MUNDELL & ASSOCIATES, INC.
Consulting Professionals for the Earth and the Environment
REV DATE DESCRIPTION BY APPR
SOIL ANALYTICAL RESULTS
MICHIGAN PLAZA
Phase II Site Investigation
FIGURE
3

# Michigan Meadows Apartments

NORTH

0 30 60

Scale: 1 inch = 60 feet

MICHIGAN STREET

Little Eagle Creek

Residential Area

Residential Area

Residential Area

Michigan Plaza

GP-01

GP-02

GP-03

GP-04

GP-05

| GP-01 | | |
|---|---|---|
| | 24' | 30' |
| PCE | 6.8 | < 5.0 |
| TCE | 120 | 6.1 |
| cis-DCE | 130 | 25 |
| VC | < 2.0 | 6.1 |
| TVOHs * | 105 | 9.1 |

| GP-03 | | | |
|---|---|---|---|
| | 20' | 30' | 40' |
| PCE | 730 | 500 | 11 |
| TCE | < 5.0 | < 5.0 | < 5.0 |
| cis-DCE | 79 | 88 | < 5.0 |
| VC | < 2.0 | < 2.0 | 4.1 |
| TVOHs * | 380 | 117 | 0 |

| GP-05-22' | |
|---|---|
| PCE | < 5.0 |
| TCE | < 5.0 |
| cis-DCE | < 5.0 |
| VC | < 2.0 |
| TVOHs * | 0 |

| GP-02-12' | |
|---|---|
| PCE | < 5.0 |
| TCE | < 5.0 |
| cis-DCE | 34 |
| VC | < 2.0 |
| TVOHs * | 19.4 |

| GP-04-22' | |
|---|---|
| PCE | 23 |
| TCE | < 5.0 |
| cis-DCE | < 5.0 |
| VC | < 2.0 |
| TVOHs * | 0 |

## LEGEND

● Approximate MUNDELL Geoprobe Locations (August 2004)

230 Results in BLUE exceed IDEM VRP Tier II Residential Cleanup Goal & in RED exceed IDEM VRP Tier II Nonresidential Cleanup Goal

| Boring ID (depth in feet) | |
|---|---|
| PCE | Tetrachloroethene (ug/l) |
| TCE | Trichloroethene (ug/l) |
| cis-DCE | cis-1,2-Dichloroethene (ug/l) |
| VC | Vinyl Chloride (ug/l) |
| TVOHs * | Total Volatile Organic Halides (ug/l) |

MUNDELL & ASSOCIATES, INC.

Consulting Professionals for the Earth and the Environment

| REV. | DATE | DESCRIPTION | BY | APPR |
|---|---|---|---|---|
| | | | | |

GROUNDWATER ANALYTICAL RESULTS
MICHIGAN PLAZA
Phase II Site Investigation

FIGURE 4

**Table 1**
**Soil Analytical Results**
**Phase II Environmental Site Assessment**
**Michigan Plaza**
**Indianapolis, Indiana**
**MUNDELL Job No.: M01046**

| Sample | Sample Date | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | Chloroform | Vinyl chloride |
|---|---|---|---|---|---|---|---|
| | | ug/kg | ug/kg | ug/kg | ug/kg | ug/kg | ug/kg |
| GP-01 (15.5') | 8/18/2004 | < 5.0 | < 5.0 | 5.4 | < 5.0 | < 5.0 | < 2.0 |
| GP-02 (7') | 8/18/2004 | 35 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 2.0 |
| GP-03 (16') | 8/18/2004 | 230 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 2.0 |
| GP-04 (16') | 8/18/2004 | 200 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 2.0 |
| GP-05 (17') | 8/18/2004 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 2.0 |
| IDEM RISC Default Industrial Cleanup Level | - | 640 | 82 | 5,800 | 14,000 | 1,200 | 13 |
| IDEM RISC Default Residential Cleanup Level | - | 58 | 57 | 400 | 680 | 470 | 13 |

Note:

All Values Over IDEM RISC Industrial Default Cleanup Level shown in RED

All Values Over IDEM RISC Residential Default Cleanup Level shown in BLUE

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethane

**Table 2**
**Groundwater Analytical Results**
**Phase II Environmental Site Assessment**
**Michigan Plaza**
**Indianapolis, Indiana**
**MUNDELL Job No.: M01046**

| Sample | Sample Date | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | Chloroform | Vinyl chloride | Methylene chloride | Toluene | Acetone | TVOHs * |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| GP-01-21' | 8/18/2004 | 6.8 | 120 | 130 | 12 | < 5.0 | < 2.0 | 7.7 | 12 | < 25. | 105 |
| GP-01-30' | 8/18/2004 | < 5.0 | 6.1 | 25 | < 5.0 | < 5.0 | 6.1 | 8.9 | 11 | < 25. | 9.1 |
| GP-02-12' | 8/18/2004 | < 5.0 | < 5.0 | 34 | < 5.0 | 9.3 | < 2.0 | 8.6 | 11 | 49 | 19.4 |
| GP-03-20' | 8/18/2004 | 730 | < 5.0 | 79 | 9.2 | < 5.0 | < 2.0 | 7.6 | 12 | < 25. | 380 |
| GP-03-30' | 8/18/2004 | 500 | < 5.0 | 88 | 10 | < 5.0 | < 2.0 | 7.6 | 12 | < 25. | 117 |
| GP-03-40' | 8/18/2004 | 11 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | 4.1 | < 5.0 | < 5.0 | < 25. | 0 |
| GP-04-22' | 8/18/2004 | 23 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 2.0 | < 5.0 | < 5.0 | < 25. | 0 |
| GP-05-22' | 8/18/2004 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 2.0 | < 5.0 | < 5.0 | < 25. | 0 |
| IDEM RISC Default Industrial Cleanup Level | - | 66 | 7.2 | 1,000 | 2,000 | 1,000 | 2 | 380 | 20,000 | 92,000 | - |
| IDEM RISC Default Residential Cleanup Level | - | 5 | 5 | 70 | 100 | 80 | 2 | 5 | 1,000 | 950 | - |

Note:
All Values Over IDEM RISC Default Industrial Cleanup Level in RED
All Values Over IDEM RISC Default Residential Cleanup Level in BLUE
PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene
*TVOHs = Total Volatile Organic Halides (results from SDI Quick Test = Sum of TCE, PCE and 1,1,1-Trichlorethane)

# MUNDELL & ASSOCIATES, INC.

App A

**BORING LOG**

**BORING NO:** GP-01



**CLIENT:** AIMCO
**PROJECT LOCATION:** Indianapolis, Indiana
**PROJECT NAME:** Michigan Meadows
**PROJECT NO:** M01046
**DRILLING CONTRACTOR:** American Drilling Services
**DRILLER:** Rick Davis
**BORING LOCATION:** Center of Michigan Plaza
**FIELD GEOLOGIST:** Leena Lothe & Jason Armour
**NOTES:** SL sample:GP-01-15.5'; 2 GW samples: GP-01-21' & GP-01-30'

**DATE BEGAN:** 08/18/04
**DATE FINISHED:** 08/18/04
**DRILLING METHOD:** Direct Push
**DRILL EQUIP:** Geoprobe 5400
**GW DEPTH (OBSERVED):** 19.0'
**DEPTH OF BORING:** 30.0'
**TOP OF CASING ELEVATION:** N/A
**SURFACE ELEVATION:** N/A
**COMMENTS:**

| Lithologic Description | USCS Symbol | Stratum Depth (feet) | PID Headspace (ppm) | Rec. % | Sample Location | Sample ID | Depth (feet) | Well Completion Diagram |
|---|---|---|---|---|---|---|---|---|
| ASPHALT: About 3 inches of ASPHALT | | | | | | | 0.0 | |
| CRUSHED LIMESTONE: CRUSHED LIMESTONE, light olive brown (2.5 Y 5/6), dry, no odor | | 0.2 | 5.1 | | | | | |
| | | | 5.3 | | | | | |
| | | | 7.8 | 70% | | | | |
| SAND: Fine to medium SAND with trace to some gravel - potential fill, light olive brown (2.5 Y 5/6), dry, no odor | SW | 2.6 | 7.9 | | | | | |
| CL: SILTY CLAY with trace to some sand, dark olive brown (2.5 Y 3/3), dry, slightly organic odor | CL | 3.5 | NA | | | | | |
| - slightly organic odor observed from about 4.5' to 5.0' | | | 6.6 | | | | 5.0 | |
| SW: MEDIUM TO COARSE SAND with trace to some fine to medium gravel, light yellowish brown (2.5 Y 6/4), dry, no odor | SW | 6.0 | 7.0 | 75% | | | | |
| | | | 7.8 | | | | | |
| | | | NA | | | | | |
| | | | 8.1 | | | | | |
| SP: FINE TO MEDIUM SAND with trace coarse sand and fine gravel, light yellowish brown (2.5 Y 6/4), dry, no odor | SP | 10.0 | 7.8 | 60% | | | 10.0 | |
| SW: MEDIUM TO COARSE SAND with trace to some fine to medium gravel, color changes back to light yellowish brown (2.5 Y 6/4), dry, no odor | SW | 11.0 | 8.5 | | | | | |
| | | | NA | | | | | |
| - color change to dark yellowish brown (10 YR 4/6) beyond 11' | | | 7.1 | | | | | |
| | | | 8.5 | 75% | | | | |
| | | | 7.3 | | | | 15.0 | |
| | | | NA | | | | | |
| - color changes back to yellowish brown (2.5 Y 6/4) beyond 14.5' | | | NA | | | | | |
| | | | 8.3 | 50% | | | | |
| SP: FINE TO MEDIUM SAND with trace silt and fine gravel, light yellowish brown (2.5 Y 6/4), dry - wet, no odor | SP | 18.5 | 9.5 | | | | | |
| ML: SILT with trace sand and trace fine gravel, dark gray (2.5 Y 4/1), wet, no odor | ML | 19.75 | | | | | 20.0 | |
| SW: MEDIUM TO COARSE SAND with trace to some fine to medium gravel, gray (2.5 Y 5/1), dry - wet, no odor | | 20.0 | NA | | | | | |
| | | | NA | | | | | |
| | | | 11.5 | | | | | |

# MUNDELL & ASSOCIATES, INC.

**BORING LOG**

**BORING NO:** GP-01



**CLIENT:** AIMCO
**PROJECT LOCATION:** Indianapolis, Indiana
**PROJECT NAME:** Michigan Meadows
**PROJECT NO:** M01046
**DRILLING CONTRACTOR:** American Drilling Services
**DRILLER:** Rick Davis
**BORING LOCATION:** Center of Michigan Plaza
**FIELD GEOLOGIST:** Leena Lothe & Jason Armour
**NOTES:** SL sample:GP-01-15.5'; 2 GW samples: GP-01-21' & GP-01-30'

**DATE BEGAN:** 08/18/04
**DATE FINISHED:** 08/18/04
**DRILLING METHOD:** Direct Push
**DRILL EQUIP:** Geoprobe 5400
**GW DEPTH (OBSERVED):** 19.0'
**DEPTH OF BORING:** 30.0'
**TOP OF CASING ELEVATION:** N/A
**SURFACE ELEVATION:** N/A
**COMMENTS:**

| Lithologic Description | USCS Symbol | Stratum Depth (feet) | PID Headspace (ppm) | Rec. % | Sample Location | Sample ID | Depth (feet) | Well Completion Diagram |
|---|---|---|---|---|---|---|---|---|
| | SW | | 17.5 | 60% | | | | |
| | | | 30.0 | | | | 25.0 | |
| | | | NA | | | | | |
| | | | NA | | | | | |
| | | | 17.5 | | | | | |
| | | | 21.9 | 55% | | | | |
| - End of the Boring at 30' | | | 31.1 | | | | 30.0 | |

# MUNDELL & ASSOCIATES, INC.

**BORING LOG**

**BORING NO:** GP-02



**CLIENT:** AIMCO
**PROJECT LOCATION:** Indianapolis, Indiana
**PROJECT NAME:** Michigan Meadows
**PROJECT NO:** M01046
**DRILLING CONTRACTOR:** American Drilling Services
**DRILLER:** Rick Davis
**BORING LOCATION:** SW Corner of the Plaza
**FIELD GEOLOGIST:** Leena Lothe & Jason Armour
**NOTES:** SL sample:GP-02-7'; 1 GW sample: GP-02-12'

**DATE BEGAN:** 08/18/04
**DATE FINISHED:** 08/18/04
**DRILLING METHOD:** Direct Push
**DRILL EQUIP:** Geoprobe 5400
**GW DEPTH (OBSERVED):** 9.0'
**DEPTH OF BORING:** 12'
**TOP OF CASING ELEVATION:** N/A
**SURFACE ELEVATION:** N/A
**COMMENTS:**

| Lithologic Description | USCS Symbol | Stratum Depth (feet) | PID Headspace (ppm) | Rec. % | Sample Location | Sample ID | Depth (feet) | Well Completion Diagram |
|---|---|---|---|---|---|---|---|---|
| ASPHALT: About 3 inches of ASPHALT | | 0.2 | 4.2 | | | | 0.0 | |
| GRAVEL: about 6 inches of GRAVEL, GRAVEL BASE COURSE | | 0.75 | | | | | | |
| FILL: Fine to medium fill SAND, dark yellowish brown (10 YR 4/4), dry, no odor | | | 5.8 | | | | | |
| | | | 5.7 | 85% | | | | |
| CL: SILTY CLAY with trace sand and gravel, trace root fragments, very dark gray (10 YR 3/1), slight moist, slightly organic odor | | 3.0 | 5.4 | | | | | |
| | | | NA | | | | | |
| | CL | | NA | | | | 5.0 | |
| - orange coloration observed - maybe Iron, dark brown (10 YR 3/3) with occasional orange-red (2.5 YR 5/8) from about 7.0' to 8.0' | | | 7.5 | 50% | | | | |
| | | | 5.1 | | | | | |
| SW: FINE TO COARSE SAND with trace to some fine to medium gravel, light yellowish brown (2.5 Y 6/4), wet, no odor | | 8.0 | NA | | | | | |
| | SW | | 5.3 | | | | | |
| - black staining (10 YR 2/1) with possible septic odor observed at about 9.8' - 10.4', fragments of clay tile at 10.4' | | | 5.2 | 75% | | | 10.0 | |
| SP: FINE TO MEDIUM SAND with trace coarse sand and fine gravel, light yellowish brown (2.5 Y 6/4), wet, no odor | SP | 11.0 | 6.8 | | | | | |
| | | 12.0 | | | | | | |
| - End of the Boring at 12' | | | | | | | 15.0 | |

# MUNDELL & ASSOCIATES, INC.

**BORING LOG**

**BORING NO:** GP-03



**CLIENT:** AIMCO
**PROJECT LOCATION:** Indianapolis, Indiana
**PROJECT NAME:** Michigan Meadows
**PROJECT NO:** M01046
**DRILLING CONTRACTOR:** American Drilling Services
**DRILLER:** Rick Davis
**BORING LOCATION:** South of the Plaza (center one)
**FIELD GEOLOGIST:** Leena Lothe & Jason Armour
**NOTES:** SS:GP-03-16'; 3 GW samples:GP-03-20', GP-03-30' & GP-03-40'

**DATE BEGAN:** 08/18/04
**DATE FINISHED:** 08/18/04
**DRILLING METHOD:** Direct Push
**DRILL EQUIP:** Geoprobe 5400
**GW DEPTH (OBSERVED):** 18.0'
**DEPTH OF BORING:** 40.0'
**TOP OF CASING ELEVATION:** N/A
**SURFACE ELEVATION:** N/A
**COMMENTS:**

| Lithologic Description | USCS Symbol | Stratum Depth (feet) | PID Headspace (ppm) | Rec. % | Sample Location | Sample ID | Depth (feet) | Well Completion Diagram |
|---|---|---|---|---|---|---|---|---|
| ASPHALT: About 3 inches of ASPHALT | | 0.2 | 2.2 | | | | 0.0 | |
| GRAVEL: about 6 inches of BASE COURSE | | 0.75 | | | | | | |
| CL: SILTY CLAY with trace to some medium to coarse and trace to medium gravel, very dark gray (10 YR 3/1), slightly moist, organic odor | | | 1.9 | | | | | |
| | | | 2.0 | 90% | | | | |
| - color change to dark yellowish brown (10 YR 3/6) at 2' | CL | | 1.9 | | | | | |
| SW: MEDIUM TO COARSE SAND with trace to some fine to medium gravel, dark brown (7.5 YR 4/3), dry, no odor | | 4.0 | NA | | | | | |
| | | | 5.6 | | | | 5.0 | |
| | | | 6.5 | 55% | | | | |
| | | | 5.2 | | | | | |
| - color change to light yellowish brown (2.5 Y 6/4) at 6.5' with some gravel observed. | SW | | NA | | | | | |
| | | | 8.1 | | | | | |
| | | | 8.4 | 55% | | | 10.0 | |
| | | | 9.5 | | | | | |
| SP: FINE TO MEDIUM SAND with trace coarse sand and fine gravel, trace silt, light yellowish brown (2.5 Y 6/4), dry, no odor | | 11.5 | NA | | | | | |
| | | | 8.1 | | | | | |
| | SP | | 8.8 | 60% | | | | |
| | | | 12.9 | | | | 15.0 | |
| | | | NA | | | | | |
| | | | 8.2 | | | | | |
| | | | 8.1 | 60% | | | | |
| | | | 11.3 | | | | | |
| CL: SILTY CLAY with some medium to coarse sand, light olive brown (2.5 Y 5/6), dry, no odor | CL | 19.5 | | | | | 20.0 | |
| SW: MEDIUM TO COARSE SAND with trace to some fine to medium gravel, dark brown (7.5 YR 4/3), dry, no odor | | 20.0 | NA | | | | | |
| | | | 6.6 | | | | | |
| | | | 7.4 | | | | | |

# MUNDELL & ASSOCIATES, INC.

**BORING LOG**

**BORING NO:** GP-03



**CLIENT:** AIMCO
**PROJECT LOCATION:** Indianapolis, Indiana
**PROJECT NAME:** Michigan Meadows
**PROJECT NO:** M01046
**DRILLING CONTRACTOR:** American Drilling Services
**DRILLER:** Rick Davis
**BORING LOCATION:** South of the Plaza (center one)
**FIELD GEOLOGIST:** Leena Lothe & Jason Armour
**NOTES:** SS:GP-03-16'; 3 GW samples:GP-03-20', GP-03-30' & GP-03-40'

**DATE BEGAN:** 08/18/04
**DATE FINISHED:** 08/18/04
**DRILLING METHOD:** Direct Push
**DRILL EQUIP:** Geoprobe 5400
**GW DEPTH (OBSERVED):** 18.0'
**DEPTH OF BORING:** 40.0'
**TOP OF CASING ELEVATION:** N/A
**SURFACE ELEVATION:** N/A
**COMMENTS:**

| Lithologic Description | USCS Symbol | Stratum Depth (feet) | PID Headspace (ppm) | Rec. % | Sample Location | Sample ID | Depth (feet) | Well Completion Diagram |
|---|---|---|---|---|---|---|---|---|
| | SW | | 12.6 | 60% | | | | |
| | | | 11.8 | | | | 25.0 | |
| | | | NA | | | | | |
| | | | NA | | | | | |
| | | | NA | | | | | |
| | | | 11.6 | 40% | | | | |
| | | | 8.3 | | | | | |
| BL. DRILLED FROM 30' to 40' | | -30.0 | | | | | 30.0 | |
| | | | | | | | 35.0 | |
| - End of the Boring at 40' | | | | | | | 40.0 | |

# MUNDELL & ASSOCIATES, INC.

**BORING LOG**

**BORING NO:** GP-04



**CLIENT:** AIMCO
**PROJECT LOCATION:** Indianapolis, Indiana
**PROJECT NAME:** Michigan Meadows
**PROJECT NO:** M01046
**DRILLING CONTRACTOR:** American Drilling Services
**DRILLER:** Rick Davis
**BORING LOCATION:** SE Corner of the Plaza
**FIELD GEOLOGIST:** Leena Lothe & Jason Armour
**NOTES:** SS:GP-04 (16'); 1 GW sample:GP-04-22'

**DATE BEGAN:** 08/18/04
**DATE FINISHED:** 08/18/04
**DRILLING METHOD:** Direct Push
**DRILL EQUIP:** Geoprobe 5400
**GW DEPTH (OBSERVED):** 18.5'
**DEPTH OF BORING:** 20.0'
**TOP OF CASING ELEVATION:** N/A
**SURFACE ELEVATION:** N/A
**COMMENTS:**

| Lithologic Description | USCS Symbol | Stratum Depth (feet) | PID Headspace (ppm) | Rec. % | Sample Location | Sample ID | Depth (feet) | Well Completion Diagram |
|---|---|---|---|---|---|---|---|---|
| ASPHALT: About 3 inches of ASPHALT | | 0.25 | 4.5 | | | | 0.0 | |
| GRAVEL: about 6 inches of BASE COURSE | | 0.75 | | | | | | |
| CL: SILTY CLAY with trace medium to coarse sand, dark yellowish brown (10 YR 3/4), slightly moist, no odor | CL | | 4.8 | | | | | |
| | | | 5.8 | 80% | | | | |
| | | | 5.5 | | | | | |
| SW: FINE TO COARSE SAND with trace to some fine gravel, dark brown (10 YR 4/3), dry, no odor | SW | 3.5 | 6.5 | | | | | |
| | | | 6.5 | | | | 5.0 | |
| | | | 8.0 | 85% | | | | |
| | | | 7.2 | | | | | |
| | | | 6.2 | | | | | |
| SP: FINE TO MEDIUM SAND with trace silt, dark yellowish brown (10 YR 4/4), dry, no odor | SP | 9.5 | 10.2 | | | | | |
| | | | 8.8 | 80% | | | 10.0 | |
| | | | 7.2 | | | | | |
| SW: FINE TO COARSE SAND with trace to some fine gravel, dark yellowish brown (10 YR 4/3) with intermittent orange-red orange coloration observed - maybe Iron, dark brown (10 YR 3/3) with occasional orange-red (2.5 YR 5/8) coloration, dry, no odor | SW | 11.5 | NA | | | | | |
| | | | 11.3 | | | | | |
| | | | 15.1 | 75% | | | | |
| - color change to brownish yellow (10 YR 6/6) at 15' | | | 13.0 | | | | 15.0 | |
| | | | 5.2 | | | | | |
| | | | 4.8 | | | | | |
| | | | 6.9 | 50% | | | | |
| SP: FINE TO COARSE SAND, dark yellowish brown (10 YR 3/4), slightly wet, no odor | SP | 18.5 | 7.1 | | | | | |
| | | 20.0 | | | | | 20.0 | |
| - End of the Boring at 22' | | | | | | | | |

# MUNDELL & ASSOCIATES, INC.

**BORING LOG**

**BORING NO:** GP-05



**CLIENT:** AIMCO
**PROJECT LOCATION:** Indianapolis, Indiana
**PROJECT NAME:** Michigan Meadows
**PROJECT NO:** M01046
**DRILLING CONTRACTOR:** American Drilling Services
**DRILLER:** Rick Davis
**BORING LOCATION:** East side of plaza parking lot
**FIELD GEOLOGIST:** Leena Lothe & Jason Armour
**NOTES:** SS:GP-05 (17"); 1 GW sample:GP-05-22'

**DATE BEGAN:** 08/18/04
**DATE FINISHED:** 08/18/04
**DRILLING METHOD:** Direct Push
**DRILL EQUIP:** Geoprobe 5400
**GW DEPTH (OBSERVED):** 19'
**DEPTH OF BORING:** 22.0'
**TOP OF CASING ELEVATION:** N/A
**SURFACE ELEVATION:** N/A
**COMMENTS:**

| Lithologic Description | USCS Symbol | Stratum Depth (feet) | PID Headspace (ppm) | Rec. % | Sample Location | Sample ID | Depth (feet) | Well Completion Diagram |
|---|---|---|---|---|---|---|---|---|
| ASPHALT: About 3 inches of ASPHALT | | 0.25 | 5.4 | | | | 0.0 | |
| FILL: FILL medium sand with some clay, first four inches BASE COURSE followed by yellowish brown (10 YR 4/4) fill material, slight moist, no odor | | | 4.5 | | | | | |
| CL: SILTY CLAY with trace to some sand, trace fine gravel and coarse sand, very dark gray (10 YR 3/1), trace roots and natural wood fragments, slightly moist, slight organic odor | | 2.0 | 3.4 | 90% | | | | |
| | | | 3.8 | | | | | |
| | CL | | 3.3 | | | | 5.0 | |
| - color change to dark yellowish brown (10 YR 3/4) at 3' with some sand, no odor | | | 3.9 | | | | | |
| - grading to some coarse and medium sand with trace to some fine to medium gravel beyond 4' | | | 3.9 | 80% | | | | |
| SW: MEDIUM TO COARSE SAND with trace to some fine to medium gravel, dark yellowish brown (10 YR 4/4), dry, no odor | | 7.0 | 3.8 | | | | | |
| | | | 3.9 | | | | | |
| | | | 4.0 | | | | 10.0 | |
| | SW | | 5.0 | 90% | | | | |
| | | | 3.6 | | | | | |
| | | | 6.7 | | | | | |
| - color change to yellowish brown (10 YR 5/8) at 10-11' | | | 5.6 | | | | | |
| | | | 6.0 | 90% | | | | |
| SP: FINE SAND with trace coarse sand, trace to some fine gravel, light olive brown (2.5 Y 5/4), dry, no odor | | 15.0 | 5.2 | | | | 15.0 | |
| | SP | | 6.8 | | | | | |
| | | | 9.9 | | | | | |
| - soil becomes slightly moist at 18' | | | 4.7 | 50% | | | | |
| | | | 4.8 | | | | | |
| ML: SILT with trace fine sand, gray (2.5 Y 5/1), no odor | ML | 19.5 | | | | | 20.0 | |
| | | 20.0 | | | | | | |
| - blind drilled | | | | | | | | |
| - End of the Boring at 22' | | | | | | | | |

# APPENDIX B

## Laboratory Certificates of Analysis

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

August 27, 2004

Mr. John Mundell
Mundell & Associates, Inc.
429 East Vermont Street
Suite 200
Indianapolis, IN 46202

RE: Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Dear Mr. Mundell:

Enclosed are the analytical results for sample(s) received by the laboratory on August 19, 2004. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Mick Mayse

Mick Mayse
mmayse@pacelabs.com
Project Manager

Enclosures

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Solid results are reported on a wet weight basis

Lab Sample No: 503718322 | Project Sample Number: 5037940-001 | Date Collected: 08/18/04 15:42
Client Sample ID: GP-01 (15.5') | Matrix: Soil | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | | | | | | | | | |
| Percent Moisture | Method: SM 2540G | | | | | | | | |
| Percent Moisture | 3.5 | % | | 1.0 | 08/27/04 | ART2 | | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Prep/Method: EPA 5030 / EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 75-71-8 | | |
| Chloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 74-87-3 | | |
| Vinyl chloride | ND | ug/kg | 2.0 | 1.0 | 08/25/04 01:45 | TMB | 75-01-4 | | |
| Bromomethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 74-83-9 | | |
| Chloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 75-69-4 | | |
| Methylene chloride | ND | ug/kg | 20. | 1.0 | 08/25/04 01:45 | TMB | 75-09-2 | | |
| 1,1-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 75-35-4 | | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 594-20-7 | | |
| cis-1,2-Dichloroethene | 5.4 | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 156-59-2 | | |
| Chloroform | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 67-66-3 | | |
| Bromochloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 563-58-6 | | |
| Benzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 107-06-2 | | |
| Trichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 78-87-5 | | |
| Bromodichloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 75-27-4 | | |
| Dibromomethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 74-95-3 | | |
| Toluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 79-00-5 | | |
| Tetrachloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 142-28-9 | | |
| Dibromochloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 106-93-4 | | |
| Chlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 630-20-6 | | |
| Ethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 100-41-4 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718322
Client Sample ID: GP-01 (15.5')

Project Sample Number: 5037940-001
Matrix: Soil

Date Collected: 08/18/04 15:42
Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | Reglmt |
|---|---|---|---|---|---|---|---|---|---|
| m&p-Xylene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | | | |
| o-Xylene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 95-47-6 | | |
| Styrene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 100-42-5 | | |
| Bromoform | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 98-82-8 | | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 79-34-5 | | |
| Bromobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 96-18-4 | | |
| n-Propylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 106-46-7 | | |
| n-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 87-68-3 | | |
| Naphthalene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/kg | 50. | 1.0 | 08/25/04 01:45 | TMB | 110-75-8 | | |
| Acetone | ND | ug/kg | 100 | 1.0 | 08/25/04 01:45 | TMB | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/kg | 10. | 1.0 | 08/25/04 01:45 | TMB | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 10. | 1.0 | 08/25/04 01:45 | TMB | 108-10-1 | | |
| Carbon disulfide | ND | ug/kg | 10. | 1.0 | 08/25/04 01:45 | TMB | 75-15-0 | | |
| Acrolein | ND | ug/kg | 100 | 1.0 | 08/25/04 01:45 | TMB | 107-02-8 | | |
| Acrylonitrile | ND | ug/kg | 100 | 1.0 | 08/25/04 01:45 | TMB | 107-13-1 | | |
| 2-Hexanone | ND | ug/kg | 100 | 1.0 | 08/25/04 01:45 | TMB | 591-78-6 | | |
| Vinyl acetate | ND | ug/kg | 100 | 1.0 | 08/25/04 01:45 | TMB | 108-05-4 | | |
| Iodomethane | ND | ug/kg | 100 | 1.0 | 08/25/04 01:45 | TMB | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.0 | 1.0 | 08/25/04 01:45 | TMB | 1634-04-4 | | |
| Ethyl methacrylate | ND | ug/kg | 100 | 1.0 | 08/25/04 01:45 | TMB | 97-63-2 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718322
Client Sample ID: GP-01 (15.5')

Project Sample Number: 5037940-001
Matrix: Soil

Date Collected: 08/18/04 15:42
Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,4-Dichloro-2-butene | ND | ug/kg | 100 | 1.0 | 08/25/04 01:45 | TMB | 110-57-6 | | |
| Dibromofluoromethane (S) | 103 | % | | 1.0 | 08/25/04 01:45 | TMB | 1868-53-7 | | |
| Toluene-d8 (S) | 98 | % | | 1.0 | 08/25/04 01:45 | TMB | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 92 | % | | 1.0 | 08/25/04 01:45 | TMB | 460-00-4 | | |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718330 | Project Sample Number: 5037940-002 | Date Collected: 08/18/04 09:55
Client Sample ID: GP-02 (7') | Matrix: Soil | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | | | | | | | | | |
| Percent Moisture | Method: SM 2540G | | | | | | | | |
| Percent Moisture | 18.4 | % | | 1.0 | 08/27/04 | ART2 | | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Prep/Method: EPA 5030 / EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 75-71-8 | | |
| Chloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 74-87-3 | | |
| Vinyl chloride | ND | ug/kg | 2.0 | 1.0 | 08/25/04 02:17 | TMB | 75-01-4 | | |
| Bromomethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 74-83-9 | | |
| Chloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 75-69-4 | | |
| Methylene chloride | ND | ug/kg | 20. | 1.0 | 08/25/04 02:17 | TMB | 75-09-2 | | |
| 1,1-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 75-35-4 | | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 594-20-7 | | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 156-59-2 | | |
| Chloroform | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 67-66-3 | | |
| Bromochloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 563-58-6 | | |
| Benzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 107-06-2 | | |
| Trichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 78-87-5 | | |
| Bromodichloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 75-27-4 | | |
| Dibromomethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 74-95-3 | | |
| Toluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 79-00-5 | | |
| Tetrachloroethene | 35. | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 142-28-9 | | |
| Dibromochloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 106-93-4 | | |
| Chlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 630-20-6 | | |
| Ethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 100-41-4 | | |
| m&p-Xylene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718330
Client Sample ID: GP-02 (7')

Project Sample Number: 5037940-002
Matrix: Soil

Date Collected: 08/18/04 09:55
Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | Regint |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 95-47-6 | | |
| Styrene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 100-42-5 | | |
| Bromoform | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 98-82-8 | | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 79-34-5 | | |
| Bromobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 96-18-4 | | |
| n-Propylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 106-46-7 | | |
| n-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 87-68-3 | | |
| Naphthalene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/kg | 50. | 1.0 | 08/25/04 02:17 | TMB | 110-75-8 | | |
| Acetone | ND | ug/kg | 100 | 1.0 | 08/25/04 02:17 | TMB | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/kg | 10. | 1.0 | 08/25/04 02:17 | TMB | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 10. | 1.0 | 08/25/04 02:17 | TMB | 108-10-1 | | |
| Carbon disulfide | ND | ug/kg | 10. | 1.0 | 08/25/04 02:17 | TMB | 75-15-0 | | |
| Acrolein | ND | ug/kg | 100 | 1.0 | 08/25/04 02:17 | TMB | 107-02-8 | | |
| Acrylonitrile | ND | ug/kg | 100 | 1.0 | 08/25/04 02:17 | TMB | 107-13-1 | | |
| 2-Hexanone | ND | ug/kg | 100 | 1.0 | 08/25/04 02:17 | TMB | 591-78-6 | | |
| Vinyl acetate | ND | ug/kg | 100 | 1.0 | 08/25/04 02:17 | TMB | 108-05-4 | | |
| Iodomethane | ND | ug/kg | 100 | 1.0 | 08/25/04 02:17 | TMB | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:17 | TMB | 1634-04-4 | | |
| Ethyl methacrylate | ND | ug/kg | 100 | 1.0 | 08/25/04 02:17 | TMB | 97-63-2 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/kg | 100 | 1.0 | 08/25/04 02:17 | TMB | 110-57-6 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718330 | Project Sample Number: 5037940-002 | Date Collected: 08/18/04 09:55
Client Sample ID: GP-02 (7') | Matrix: Soil | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane (S) | 104 | % | | 1.0 | 08/25/04 02:17 | TMB | 1868-53-7 | | |
| Toluene-d8 (S) | 96 | % | | 1.0 | 08/25/04 02:17 | TMB | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 93 | % | | 1.0 | 08/25/04 02:17 | TMB | 460-00-4 | | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718348 | Project Sample Number: 5037940-003 | Date Collected: 08/18/04 12:30
Client Sample ID: GP-03 (16') | Matrix: Soil | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | | | | | | | | | |
| Percent Moisture | Method: SM 2540G | | | | | | | | |
| Percent Moisture | 5.2 | % | | 1.0 | 08/27/04 | ART2 | | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Prep/Method: EPA 5030 / EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 75-71-8 | | |
| Chloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 74-87-3 | | |
| Vinyl chloride | ND | ug/kg | 2.0 | 1.0 | 08/25/04 02:49 | TMB | 75-01-4 | | |
| Bromomethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 74-83-9 | | |
| Chloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 75-69-4 | | |
| Methylene chloride | ND | ug/kg | 20. | 1.0 | 08/25/04 02:49 | TMB | 75-09-2 | | |
| 1,1-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 75-35-4 | | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 594-20-7 | | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 156-59-2 | | |
| Chloroform | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 67-66-3 | | |
| Bromochloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 563-58-6 | | |
| Benzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 107-06-2 | | |
| Trichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 78-87-5 | | |
| Bromodichloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 75-27-4 | | |
| Dibromomethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 74-95-3 | | |
| Toluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 79-00-5 | | |
| Tetrachloroethene | 230 | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 142-28-9 | | |
| Dibromochloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 106-93-4 | | |
| Chlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 630-20-6 | | |
| Ethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 100-41-4 | | |
| m&p-Xylene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718348
Client Sample ID: GP-03 (16')

Project Sample Number: 5037940-003
Matrix: Soil

Date Collected: 08/18/04 12:30
Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 95-47-6 | | |
| Styrene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 100-42-5 | | |
| Bromoform | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 98-82-8 | | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 79-34-5 | | |
| Bromobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 96-18-4 | | |
| n-Propylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 106-46-7 | | |
| n-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 87-68-3 | | |
| Naphthalene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/kg | 50. | 1.0 | 08/25/04 02:49 | TMB | 110-75-8 | | |
| Acetone | ND | ug/kg | 100 | 1.0 | 08/25/04 02:49 | TMB | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/kg | 10. | 1.0 | 08/25/04 02:49 | TMB | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 10. | 1.0 | 08/25/04 02:49 | TMB | 108-10-1 | | |
| Carbon disulfide | ND | ug/kg | 10. | 1.0 | 08/25/04 02:49 | TMB | 75-15-0 | | |
| Acrolein | ND | ug/kg | 100 | 1.0 | 08/25/04 02:49 | TMB | 107-02-8 | | |
| Acrylonitrile | ND | ug/kg | 100 | 1.0 | 08/25/04 02:49 | TMB | 107-13-1 | | |
| 2-Hexanone | ND | ug/kg | 100 | 1.0 | 08/25/04 02:49 | TMB | 591-78-6 | | |
| Vinyl acetate | ND | ug/kg | 100 | 1.0 | 08/25/04 02:49 | TMB | 108-05-4 | | |
| Iodomethane | ND | ug/kg | 100 | 1.0 | 08/25/04 02:49 | TMB | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.0 | 1.0 | 08/25/04 02:49 | TMB | 1634-04-4 | | |
| Ethyl methacrylate | ND | ug/kg | 100 | 1.0 | 08/25/04 02:49 | TMB | 97-63-2 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/kg | 100 | 1.0 | 08/25/04 02:49 | TMB | 110-57-6 | | |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718348 Project Sample Number: 5037940-003 Date Collected: 08/18/04 12:30
Client Sample ID: GP-03 (16') Matrix: Soil Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | Reglmt |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane (S) | 101 | % | | 1.0 | 08/25/04 02:49 | TMB | 1868-53-7 | | |
| Toluene-d8 (S) | 96 | % | | 1.0 | 08/25/04 02:49 | TMB | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 90 | % | | 1.0 | 08/25/04 02:49 | TMB | 460-00-4 | | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718355 | Project Sample Number: 5037940-004 | Date Collected: 08/18/04 11:41
Client Sample ID: GP-04 (16') | Matrix: Soil | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | | | | | | | | | |
| Percent Moisture | Method: SM 2540G | | | | | | | | |
| Percent Moisture | 5.1 | % | | 1.0 | 08/27/04 | ART2 | | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Prep/Method: EPA 5030 / EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 75-71-8 | | |
| Chloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 74-87-3 | | |
| Vinyl chloride | ND | ug/kg | 2.0 | 1.0 | 08/25/04 03:20 | TMB | 75-01-4 | | |
| Bromomethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 74-83-9 | | |
| Chloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 75-69-4 | | |
| Methylene chloride | ND | ug/kg | 20. | 1.0 | 08/25/04 03:20 | TMB | 75-09-2 | | |
| 1,1-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 75-35-4 | | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 594-20-7 | | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 156-59-2 | | |
| Chloroform | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 67-66-3 | | |
| Bromochloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 563-58-6 | | |
| Benzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 107-06-2 | | |
| Trichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 78-87-5 | | |
| Bromodichloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 75-27-4 | | |
| Dibromomethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 74-95-3 | | |
| Toluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 79-00-5 | | |
| Tetrachloroethene | 200 | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 142-28-9 | | |
| Dibromochloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 106-93-4 | | |
| Chlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 630-20-6 | | |
| Ethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 100-41-4 | | |
| m&p-Xylene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718355
Client Sample ID: GP-04 (16')

Project Sample Number: 5037940-004
Matrix: Soil

Date Collected: 08/18/04 11:41
Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 95-47-6 | | |
| Styrene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 100-42-5 | | |
| Bromoform | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 98-82-8 | | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 79-34-5 | | |
| Bromobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 96-18-4 | | |
| n-Propylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 106-46-7 | | |
| n-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 87-68-3 | | |
| Naphthalene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/kg | 50. | 1.0 | 08/25/04 03:20 | TMB | 110-75-8 | | |
| Acetone | ND | ug/kg | 100 | 1.0 | 08/25/04 03:20 | TMB | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/kg | 10. | 1.0 | 08/25/04 03:20 | TMB | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 10. | 1.0 | 08/25/04 03:20 | TMB | 108-10-1 | | |
| Carbon disulfide | ND | ug/kg | 10. | 1.0 | 08/25/04 03:20 | TMB | 75-15-0 | | |
| Acrolein | ND | ug/kg | 100 | 1.0 | 08/25/04 03:20 | TMB | 107-02-8 | | |
| Acrylonitrile | ND | ug/kg | 100 | 1.0 | 08/25/04 03:20 | TMB | 107-13-1 | | |
| 2-Hexanone | ND | ug/kg | 100 | 1.0 | 08/25/04 03:20 | TMB | 591-78-6 | | |
| Vinyl acetate | ND | ug/kg | 100 | 1.0 | 08/25/04 03:20 | TMB | 108-05-4 | | |
| Iodomethane | ND | ug/kg | 100 | 1.0 | 08/25/04 03:20 | TMB | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:20 | TMB | 1634-04-4 | | |
| Ethyl methacrylate | ND | ug/kg | 100 | 1.0 | 08/25/04 03:20 | TMB | 97-63-2 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/kg | 100 | 1.0 | 08/25/04 03:20 | TMB | 110-57-6 | | |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718355 Project Sample Number: 5037940-004 Date Collected: 08/18/04 11:41
Client Sample ID: GP-04 (16') Matrix: Soil Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane (S) | 103 | % | | 1.0 | 08/25/04 03:20 | TMB | 1868-53-7 | | |
| Toluene-d8 (S) | 97 | % | | 1.0 | 08/25/04 03:20 | TMB | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 90 | % | | 1.0 | 08/25/04 03:20 | TMB | 460-00-4 | | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718363 | Project Sample Number: 5037940-005 | Date Collected: 08/18/04 08:05
Client Sample ID: GP-05 (17') | Matrix: Soil | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | | | | | | | | | |
| Percent Moisture | Method: SM 2540G | | | | | | | | |
| Percent Moisture | 11.8 | % | | 1.0 | 08/27/04 | ART2 | | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Prep/Method: EPA 5030 / EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 75-71-8 | | |
| Chloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 74-87-3 | | |
| Vinyl chloride | ND | ug/kg | 2.0 | 1.0 | 08/25/04 03:51 | TMB | 75-01-4 | | |
| Bromomethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 74-83-9 | | |
| Chloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 75-69-4 | | |
| Methylene chloride | ND | ug/kg | 20. | 1.0 | 08/25/04 03:51 | TMB | 75-09-2 | | |
| 1,1-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 75-35-4 | | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 594-20-7 | | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 156-59-2 | | |
| Chloroform | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 67-66-3 | | |
| Bromochloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 563-58-6 | | |
| Benzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 107-06-2 | | |
| Trichloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 78-87-5 | | |
| Bromodichloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 75-27-4 | | |
| Dibromomethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 74-95-3 | | |
| Toluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 79-00-5 | | |
| Tetrachloroethene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 142-28-9 | | |
| Dibromochloromethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 106-93-4 | | |
| Chlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 630-20-6 | | |
| Ethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 100-41-4 | | |
| m&p-Xylene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718363 | Project Sample Number: 5037940-005 | Date Collected: 08/18/04 08:05
Client Sample ID: GP-05 (17') | Matrix: Soil | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 95-47-6 | | |
| Styrene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 100-42-5 | | |
| Bromoform | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 98-82-8 | | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 79-34-5 | | |
| Bromobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 96-18-4 | | |
| n-Propylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 106-46-7 | | |
| n-Butylbenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 87-68-3 | | |
| Naphthalene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/kg | 50. | 1.0 | 08/25/04 03:51 | TMB | 110-75-8 | | |
| Acetone | ND | ug/kg | 100 | 1.0 | 08/25/04 03:51 | TMB | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/kg | 10. | 1.0 | 08/25/04 03:51 | TMB | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 10. | 1.0 | 08/25/04 03:51 | TMB | 108-10-1 | | |
| Carbon disulfide | ND | ug/kg | 10. | 1.0 | 08/25/04 03:51 | TMB | 75-15-0 | | |
| Acrolein | ND | ug/kg | 100 | 1.0 | 08/25/04 03:51 | TMB | 107-02-8 | | |
| Acrylonitrile | ND | ug/kg | 100 | 1.0 | 08/25/04 03:51 | TMB | 107-13-1 | | |
| 2-Hexanone | ND | ug/kg | 100 | 1.0 | 08/25/04 03:51 | TMB | 591-78-6 | | |
| Vinyl acetate | ND | ug/kg | 100 | 1.0 | 08/25/04 03:51 | TMB | 108-05-4 | | |
| Iodomethane | ND | ug/kg | 100 | 1.0 | 08/25/04 03:51 | TMB | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.0 | 1.0 | 08/25/04 03:51 | TMB | 1634-04-4 | | |
| Ethyl methacrylate | ND | ug/kg | 100 | 1.0 | 08/25/04 03:51 | TMB | 97-63-2 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/kg | 100 | 1.0 | 08/25/04 03:51 | TMB | 110-57-6 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718363 | Project Sample Number: 5037940-005 | Date Collected: 08/18/04 08:05
Client Sample ID: GP-05 (17') | Matrix: Soil | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane (S) | 103 | % | | 1.0 | 08/25/04 03:51 | TMB | 1868-53-7 | | |
| Toluene-d8 (S) | 98 | % | | 1.0 | 08/25/04 03:51 | TMB | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 90 | % | | 1.0 | 08/25/04 03:51 | TMB | 460-00-4 | | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

| | |
|---|---|
| ND | Not detected at or above adjusted reporting limit |
| NC | Not Calculable |
| J | Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit |
| MDL | Adjusted Method Detection Limit |
| (S) | Surrogate |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

QC Batch: 75899 Analysis Method: EPA 8260
QC Batch Method: EPA 5030 Analysis Description: GC/MS VOCs by 8260
Associated Lab Samples: 503718322 503718330 503718348 503718355 503718363

METHOD BLANK: 503737199
Associated Lab Samples: 503718322 503718330 503718348 503718355 503718363

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Dichlorodifluoromethane | ug/kg | ND | 5.0 | |
| Chloromethane | ug/kg | ND | 5.0 | |
| Vinyl chloride | ug/kg | ND | 2.0 | |
| Bromomethane | ug/kg | ND | 5.0 | |
| Chloroethane | ug/kg | ND | 5.0 | |
| Trichlorofluoromethane | ug/kg | ND | 5.0 | |
| Methylene chloride | ug/kg | ND | 20. | |
| 1,1-Dichloroethene | ug/kg | ND | 5.0 | |
| trans-1,2-Dichloroethene | ug/kg | ND | 5.0 | |
| 1,1-Dichloroethane | ug/kg | ND | 5.0 | |
| ,2-Dichloropropane | ug/kg | ND | 5.0 | |
| cis-1,2-Dichloroethene | ug/kg | ND | 5.0 | |
| Chloroform | ug/kg | ND | 5.0 | |
| Bromochloromethane | ug/kg | ND | 5.0 | |
| 1,1,1-Trichloroethane | ug/kg | ND | 5.0 | |
| Carbon tetrachloride | ug/kg | ND | 5.0 | |
| 1,1-Dichloropropene | ug/kg | ND | 5.0 | |
| Benzene | ug/kg | ND | 5.0 | |
| 1,2-Dichloroethane | ug/kg | ND | 5.0 | |
| Trichloroethene | ug/kg | ND | 5.0 | |
| 1,2-Dichloropropane | ug/kg | ND | 5.0 | |
| Bromodichloromethane | ug/kg | ND | 5.0 | |
| Dibromomethane | ug/kg | ND | 5.0 | |
| Toluene | ug/kg | ND | 5.0 | |
| 1,1,2-Trichloroethane | ug/kg | ND | 5.0 | |
| Tetrachloroethene | ug/kg | ND | 5.0 | |
| 1,3-Dichloropropane | ug/kg | ND | 5.0 | |
| Dibromochloromethane | ug/kg | ND | 5.0 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | 5.0 | |
| Chlorobenzene | ug/kg | ND | 5.0 | |
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | 5.0 | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

METHOD BLANK: 503737139
Associated Lab Samples: 503718322 503718330 503718348 503718355 503718363

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Ethylbenzene | ug/kg | ND | 5.0 | |
| m&p-Xylene | ug/kg | ND | 5.0 | |
| o-Xylene | ug/kg | ND | 5.0 | |
| Styrene | ug/kg | ND | 5.0 | |
| Bromoform | ug/kg | ND | 5.0 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | 5.0 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | 5.0 | |
| Bromobenzene | ug/kg | ND | 5.0 | |
| 1,2,3-Trichloropropane | ug/kg | ND | 5.0 | |
| n-Propylbenzene | ug/kg | ND | 5.0 | |
| 2-Chlorotoluene | ug/kg | ND | 5.0 | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | 5.0 | |
| 4-Chlorotoluene | ug/kg | ND | 5.0 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | 5.0 | |
| sec-Butylbenzene | ug/kg | ND | 5.0 | |
| tert-Butylbenzene | ug/kg | ND | 5.0 | |
| p-Isopropyltoluene | ug/kg | ND | 5.0 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 5.0 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 5.0 | |
| n-Butylbenzene | ug/kg | ND | 5.0 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 5.0 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | 5.0 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | 5.0 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 5.0 | |
| Naphthalene | ug/kg | ND | 5.0 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | 5.0 | |
| trans-1,3-Dichloropropene | ug/kg | ND | 5.0 | |
| cis-1,3-Dichloropropene | ug/kg | ND | 5.0 | |
| 2-Chloroethylvinyl ether | ug/kg | ND | 50. | |
| Acetone | ug/kg | ND | 100 | |
| 2-Butanone (MEK) | ug/kg | ND | 10. | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | 10. | |
| Carbon disulfide | ug/kg | ND | 10. | |
| Acrolein | ug/kg | ND | 100 | |
| Acrylonitrile | ug/kg | ND | 100 | |
| 2-Hexanone | ug/kg | ND | 100 | |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

METHOD BLANK: 503737199
Associated Lab Samples: 503718322 503718330 503718348 503718355 503718363

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Vinyl acetate | ug/kg | ND | 100 | |
| Iodomethane | ug/kg | ND | 100 | |
| Methyl-tert-butyl ether | ug/kg | ND | 5.0 | |
| Ethyl methacrylate | ug/kg | ND | 100 | |
| trans-1,4-Dichloro-2-butene | ug/kg | ND | 100 | |
| Dibromofluoromethane (S) | % | 102 | | |
| Toluene-d8 (S) | % | 98 | | |
| 4-Bromofluorobenzene (S) | % | 93 | | |

LABORATORY CONTROL SAMPLE: 503737207

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | ug/kg | 50.00 | 44.32 | 89 | |
| Chloromethane | ug/kg | 50.00 | 48.13 | 96 | |
| Vinyl chloride | ug/kg | 50.00 | 52.58 | 105 | |
| Bromomethane | ug/kg | 50.00 | 49.49 | 99 | |
| Chloroethane | ug/kg | 50.00 | 57.39 | 115 | |
| Trichlorofluoromethane | ug/kg | 50.00 | 56.30 | 113 | |
| Methylene chloride | ug/kg | 50.00 | 54.13 | 108 | |
| 1,1-Dichloroethene | ug/kg | 50.00 | 57.59 | 115 | |
| trans-1,2-Dichloroethene | ug/kg | 50.00 | 55.37 | 111 | |
| 1,1-Dichloroethane | ug/kg | 50.00 | 55.92 | 112 | |
| 2,2-Dichloropropane | ug/kg | 50.00 | 50.58 | 101 | |
| cis-1,2-Dichloroethene | ug/kg | 50.00 | 53.99 | 108 | |
| Chloroform | ug/kg | 50.00 | 55.87 | 112 | |
| Bromochloromethane | ug/kg | 50.00 | 62.60 | 125 | |
| 1,1,1-Trichloroethane | ug/kg | 50.00 | 55.05 | 110 | |
| Carbon tetrachloride | ug/kg | 50.00 | 54.30 | 109 | |
| 1,1-Dichloropropene | ug/kg | 50.00 | 54.64 | 109 | |
| Benzene | ug/kg | 50.00 | 55.15 | 110 | |
| 1,2-Dichloroethane | ug/kg | 50.00 | 56.47 | 113 | |
| Trichloroethene | ug/kg | 50.00 | 55.84 | 112 | |
| 1,2-Dichloropropane | ug/kg | 50.00 | 53.90 | 108 | |
| Bromodichloromethane | ug/kg | 50.00 | 53.37 | 107 | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

LABORATORY CONTROL SAMPLE: 503737207

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Dibromomethane | ug/kg | 50.00 | 53.40 | 107 | |
| Toluene | ug/kg | 50.00 | 55.51 | 111 | |
| 1,1,2-Trichloroethane | ug/kg | 50.00 | 55.44 | 111 | |
| Tetrachloroethene | ug/kg | 50.00 | 44.22 | 88 | |
| 1,3-Dichloropropane | ug/kg | 50.00 | 53.84 | 108 | |
| Dibromochloromethane | ug/kg | 50.00 | 47.54 | 95 | |
| 1,2-Dibromoethane (EDB) | ug/kg | 50.00 | 53.07 | 106 | |
| Chlorobenzene | ug/kg | 50.00 | 53.36 | 107 | |
| 1,1,1,2-Tetrachloroethane | ug/kg | 50.00 | 51.72 | 103 | |
| Ethylbenzene | ug/kg | 50.00 | 53.08 | 106 | |
| m&p-Xylene | ug/kg | 100.00 | 107.0 | 107 | |
| o-Xylene | ug/kg | 50.00 | 53.26 | 107 | |
| Styrene | ug/kg | 50.00 | 51.84 | 104 | |
| Bromoform | ug/kg | 50.00 | 46.08 | 92 | |
| Isopropylbenzene (Cumene) | ug/kg | 50.00 | 50.64 | 101 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | 50.00 | 49.90 | 100 | |
| Bromobenzene | ug/kg | 50.00 | 50.47 | 101 | |
| 1,2,3-Trichloropropane | ug/kg | 50.00 | 40.41 | 81 | |
| n-Propylbenzene | ug/kg | 50.00 | 53.08 | 106 | |
| 2-Chlorotoluene | ug/kg | 50.00 | 53.07 | 106 | |
| 1,3,5-Trimethylbenzene | ug/kg | 50.00 | 51.98 | 104 | |
| 4-Chlorotoluene | ug/kg | 50.00 | 51.95 | 104 | |
| 1,2,4-Trimethylbenzene | ug/kg | 50.00 | 51.92 | 104 | |
| sec-Butylbenzene | ug/kg | 50.00 | 54.10 | 108 | |
| tert-Butylbenzene | ug/kg | 50.00 | 49.03 | 98 | |
| p-Isopropyltoluene | ug/kg | 50.00 | 50.27 | 101 | |
| 1,3-Dichlorobenzene | ug/kg | 50.00 | 51.40 | 103 | |
| 1,4-Dichlorobenzene | ug/kg | 50.00 | 50.23 | 100 | |
| n-Butylbenzene | ug/kg | 50.00 | 50.89 | 102 | |
| 1,2-Dichlorobenzene | ug/kg | 50.00 | 52.02 | 104 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | 50.00 | 57.73 | 115 | |
| 1,2,4-Trichlorobenzene | ug/kg | 50.00 | 45.77 | 92 | |
| Hexachloro-1,3-butadiene | ug/kg | 50.00 | 50.46 | 101 | |
| Naphthalene | ug/kg | 50.00 | 46.23 | 92 | |
| 1,2,3-Trichlorobenzene | ug/kg | 50.00 | 47.95 | 96 | |
| trans-1,3-Dichloropropene | ug/kg | 50.00 | 49.04 | 98 | |
| cis-1,3-Dichloropropene | ug/kg | 50.00 | 48.54 | 97 | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

LABORATORY CONTROL SAMPLE: 503737207

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Methyl-tert-butyl ether | ug/kg | 100.00 | 115.2 | 115 | |
| Dibromofluoromethane (S) | | | | 100 | |
| Toluene-d8 (S) | | | | 100 | |
| 4-Bromofluorobenzene (S) | | | | 100 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 503737215 503737223

| Parameter | Units | 503722530 Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | ug/kg | 0 | 50.00 | 63.91 | 57.41 | 128 | 115 | 11 | |
| Benzene | ug/kg | 0 | 50.00 | 47.27 | 40.81 | 94 | 82 | 15 | |
| Trichloroethene | ug/kg | 0 | 50.00 | 74.87 | 62.83 | 150 | 126 | 18 | |
| Toluene | ug/kg | 0 | 50.00 | 42.85 | 34.77 | 86 | 70 | 21 | |
| Chlorobenzene | ug/kg | 0 | 50.00 | 31.26 | 23.11 | 62 | 46 | 30 | |
| Dibromofluoromethane (S) | | | | | | 99 | 101 | | |
| Toluene-d8 (S) | | | | | | 104 | 103 | | |
| 4-Bromofluorobenzene (S) | | | | | | 98 | 98 | | 1 |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

QC Batch: 75997 Analysis Method: SM 2540G
QC Batch Method: SM 2540G Analysis Description: Percent Moisture
Associated Lab Samples: 503718322 503718330 503718348 503718355 503718363

SAMPLE DUPLICATE: 503743866

| Parameter | Units | 503718322 Result | DUP Result | RPD | Footnotes |
|---|---|---|---|---|---|
| Percent Moisture | % | 3.500 | 3.900 | 12 | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037940
Client Project ID: Michigan Meadows / M01046

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

| | |
|---|---|
| LCS(D) | Laboratory Control Sample (Duplicate) |
| MS(D) | Matrix Spike (Duplicate) |
| DUP | Sample Duplicate |
| ND | Not detected at or above adjusted reporting limit |
| NC | Not Calculable |
| J | Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit |
| MDL | Adjusted Method Detection Limit |
| RPD | Relative Percent Difference |
| (S) | Surrogate |
| [1] | Matrix (MS) and or surrogate spike recovery (S) was affected by the sample matrix. Refer to the batch QC recoveries blank and LCS to demonstrate that the analytical system was operating in control. |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

August 24, 2004

Mr. John Mundell
Mundell & Associates, Inc.
429 East Vermont Street
Suite 200
Indianapolis, IN 46202

RE: Lab Project Number: 5017941
Client Project ID: Michigan Meadows / M01046

Dear Mr. Mundell:

Enclosed are the analytical results for sample(s) received by the laboratory on August 19, 2004. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Mick Mayse

Mick Mayse
mmayse@pacelabs.com
Project Manager

Enclosures

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718371 | Project Sample Number: 5037941-001 | Date Collected: 08/18/04 14:20
Client Sample ID: GP-01-21' | Matrix: Water | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 75-71-8 | | |
| Chloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 74-87-3 | | |
| Vinyl chloride | ND | ug/l | 2.0 | 1.0 | 08/24/04 06:28 | TMB | 75-01-4 | | |
| Bromomethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 74-83-9 | | |
| Chloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 75-69-4 | | |
| Methylene chloride | 7.7 | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 75-09-2 | 1 | |
| 1,1-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 75-35-4 | | |
| trans-1,2-Dichloroethene | 12. | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 594-20-7 | | |
| cis-1,2-Dichloroethene | 130 | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 156-59-2 | | |
| Chloroform | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 67-66-3 | | |
| Bromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 563-58-6 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 107-06-2 | | |
| Trichloroethene | 120 | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 78-87-5 | | |
| Bromodichloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 75-27-4 | | |
| Dibromomethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 74-95-3 | | |
| Toluene | 12. | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 79-00-5 | | |
| Tetrachloroethene | 6.8 | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 142-28-9 | | |
| Dibromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 106-93-4 | | |
| Chlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 630-20-6 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 100-41-4 | | |
| m&p-Xylene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 95-47-6 | | |
| Styrene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 100-42-5 | | |
| Bromoform | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 98-82-8 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718371 Project Sample Number: 5037941-001 Date Collected: 08/18/04 14:20
Client Sample ID: GP-01-21' Matrix: Water Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 79-34-5 | | |
| Bromobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 96-18-4 | | |
| n-Propylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 106-46-7 | | |
| n-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 87-68-3 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/l | 10. | 1.0 | 08/24/04 06:28 | TMB | 110-75-8 | | |
| Acetone | ND | ug/l | 25. | 1.0 | 08/24/04 06:28 | TMB | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/l | 10. | 1.0 | 08/24/04 06:28 | TMB | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/l | 10. | 1.0 | 08/24/04 06:28 | TMB | 108-10-1 | | |
| Acrolein | ND | ug/l | 50. | 1.0 | 08/24/04 06:28 | TMB | 107-02-8 | | |
| Acrylonitrile | ND | ug/l | 50. | 1.0 | 08/24/04 06:28 | TMB | 107-13-1 | | |
| 2-Hexanone | ND | ug/l | 10. | 1.0 | 08/24/04 06:28 | TMB | 591-78-6 | | |
| Vinyl acetate | ND | ug/l | 10. | 1.0 | 08/24/04 06:28 | TMB | 108-05-4 | | |
| Iodomethane | ND | ug/l | 10. | 1.0 | 08/24/04 06:28 | TMB | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 1634-04-4 | | |
| Carbon disulfide | ND | ug/l | 5.0 | 1.0 | 08/24/04 06:28 | TMB | 75-15-0 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/l | 100 | 1.0 | 08/24/04 06:28 | TMB | 110-57-6 | | |
| Ethyl methacrylate | ND | ug/l | 100 | 1.0 | 08/24/04 06:28 | TMB | 97-63-2 | | |
| Xylene (Total) | ND | ug/l | 10. | 1.0 | 08/24/04 06:28 | TMB | 1330-20-7 | | |
| Dibromofluoromethane (S) | 102 | % | | 1.0 | 08/24/04 06:28 | TMB | 1868-53-7 | | |
| Toluene-d8 (S) | 98 | % | | 1.0 | 08/24/04 06:28 | TMB | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 93 | % | | 1.0 | 08/24/04 06:28 | TMB | 460-00-4 | | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718389 | Project Sample Number: 5037941-002 | Date Collected: 08/18/04 15:00
Client Sample ID: GP-01-30' | Matrix: Water | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 75-71-8 | | |
| Chloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 74-87-3 | | |
| Vinyl chloride | 6.1 | ug/l | 2.0 | 1.0 | 08/24/04 07:00 | TMB | 75-01-4 | | |
| Bromomethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 74-83-9 | | |
| Chloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 75-69-4 | | |
| Methylene chloride | 8.9 | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 75-09-2 | 2 | |
| 1,1-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 75-35-4 | | |
| trans-1,2-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 594-20-7 | | |
| cis-1,2-Dichloroethene | 25. | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 156-59-2 | | |
| Chloroform | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 67-66-3 | | |
| Bromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 563-58-6 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 107-06-2 | | |
| Trichloroethene | 6.1 | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 78-87-5 | | |
| Bromodichloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 75-27-4 | | |
| Dibromomethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 74-95-3 | | |
| Toluene | 11. | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 79-00-5 | | |
| Tetrachloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 142-28-9 | | |
| Dibromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 106-93-4 | | |
| Chlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 630-20-6 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 100-41-4 | | |
| m&p-Xylene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 95-47-6 | | |
| Styrene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 100-42-5 | | |
| Bromoform | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 98-82-8 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718389 | Project Sample Number: 5037941-002 | Date Collected: 08/18/04 15:00
Client Sample ID: GP-01-30' | Matrix: Water | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | Reglmt |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 79-34-5 | | |
| Bromobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 96-18-4 | | |
| n-Propylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 106-46-7 | | |
| n-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 87-68-3 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/l | 10. | 1.0 | 08/24/04 07:00 | TMB | 110-75-8 | | |
| Acetone | ND | ug/l | 25. | 1.0 | 08/24/04 07:00 | TMB | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/l | 10. | 1.0 | 08/24/04 07:00 | TMB | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/l | 10. | 1.0 | 08/24/04 07:00 | TMB | 108-10-1 | | |
| Acrolein | ND | ug/l | 50. | 1.0 | 08/24/04 07:00 | TMB | 107-02-8 | | |
| Acrylonitrile | ND | ug/l | 50. | 1.0 | 08/24/04 07:00 | TMB | 107-13-1 | | |
| 2-Hexanone | ND | ug/l | 10. | 1.0 | 08/24/04 07:00 | TMB | 591-78-6 | | |
| Vinyl acetate | ND | ug/l | 10. | 1.0 | 08/24/04 07:00 | TMB | 108-05-4 | | |
| Iodomethane | ND | ug/l | 10. | 1.0 | 08/24/04 07:00 | TMB | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 1634-04-4 | | |
| Carbon disulfide | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:00 | TMB | 75-15-0 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/l | 100 | 1.0 | 08/24/04 07:00 | TMB | 110-57-6 | | |
| Ethyl methacrylate | ND | ug/l | 100 | 1.0 | 08/24/04 07:00 | TMB | 97-63-2 | | |
| Xylene (Total) | ND | ug/l | 10. | 1.0 | 08/24/04 07:00 | TMB | 1330-20-7 | | |
| Dibromofluoromethane (S) | 103 | % | | 1.0 | 08/24/04 07:00 | TMB | 1868-53-7 | | |
| Toluene-d8 (S) | 97 | % | | 1.0 | 08/24/04 07:00 | TMB | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 95 | % | | 1.0 | 08/24/04 07:00 | TMB | 460-00-4 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718397 | Project Sample Number: 5037941-003 | Date Collected: 08/18/04 09:35
Client Sample ID: GP-02-22' | Matrix: Water | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 75-71-8 | | |
| Chloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 74-87-3 | | |
| Vinyl chloride | ND | ug/l | 2.0 | 1.0 | 08/24/04 07:31 | TMB | 75-01-4 | | |
| Bromomethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 74-83-9 | | |
| Chloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 75-69-4 | | |
| Methylene chloride | 8.6 | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 75-09-2 | 3 | |
| 1,1-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 75-35-4 | | |
| trans-1,2-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 594-20-7 | | |
| cis-1,2-Dichloroethene | 34. | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 156-59-2 | | |
| Chloroform | 9.3 | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 67-66-3 | | |
| Bromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 563-58-6 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 107-06-2 | | |
| Trichloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 78-87-5 | | |
| Bromodichloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 75-27-4 | | |
| Dibromomethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 74-95-3 | | |
| Toluene | 11. | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 79-00-5 | | |
| Tetrachloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 142-28-9 | | |
| Dibromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 106-93-4 | | |
| Chlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 630-20-6 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 100-41-4 | | |
| m&p-Xylene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 95-47-6 | | |
| Styrene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 100-42-5 | | |
| Bromoform | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 98-82-8 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718397 Project Sample Number: 5037941-003 Date Collected: 08/18/04 09:35
Client Sample ID: GP-02-22' Matrix: Water Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 79-34-5 | | |
| Bromobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 96-18-4 | | |
| n-Propylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 106-46-7 | | |
| n-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 87-68-3 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/l | 10. | 1.0 | 08/24/04 07:31 | TMB | 110-75-8 | | |
| Acetone | 49. | ug/l | 25. | 1.0 | 08/24/04 07:31 | TMB | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/l | 10. | 1.0 | 08/24/04 07:31 | TMB | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/l | 10. | 1.0 | 08/24/04 07:31 | TMB | 108-10-1 | | |
| Acrolein | ND | ug/l | 50. | 1.0 | 08/24/04 07:31 | TMB | 107-02-8 | | |
| Acrylonitrile | ND | ug/l | 50. | 1.0 | 08/24/04 07:31 | TMB | 107-13-1 | | |
| 2-Hexanone | ND | ug/l | 10. | 1.0 | 08/24/04 07:31 | TMB | 591-78-6 | | |
| Vinyl acetate | ND | ug/l | 10. | 1.0 | 08/24/04 07:31 | TMB | 108-05-4 | | |
| Iodomethane | ND | ug/l | 10. | 1.0 | 08/24/04 07:31 | TMB | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 1634-04-4 | | |
| Carbon disulfide | ND | ug/l | 5.0 | 1.0 | 08/24/04 07:31 | TMB | 75-15-0 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/l | 100 | 1.0 | 08/24/04 07:31 | TMB | 110-57-6 | | |
| Ethyl methacrylate | ND | ug/l | 100 | 1.0 | 08/24/04 07:31 | TMB | 97-63-2 | | |
| Xylene (Total) | ND | ug/l | 10. | 1.0 | 08/24/04 07:31 | TMB | 1330-20-7 | | |
| Dibromofluoromethane (S) | 105 | % | | 1.0 | 08/24/04 07:31 | TMB | 1868-53-7 | | |
| Toluene-d8 (S) | 95 | % | | 1.0 | 08/24/04 07:31 | TMB | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 94 | % | | 1.0 | 08/24/04 07:31 | TMB | 460-00-4 | | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718405 Project Sample Number: 5037941-004 Date Collected: 08/18/04 12:10
Client Sample ID: GP-03-20' Matrix: Water Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | Regimt |
|---|---|---|---|---|---|---|---|---|---|
| GC/MS Volatiles | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 75-71-8 | | |
| Chloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 74-87-3 | | |
| Vinyl chloride | ND | ug/l | 2.0 | 1.0 | 08/24/04 08:03 | TMB | 75-01-4 | | |
| Bromomethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 74-83-9 | | |
| Chloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 75-69-4 | | |
| Methylene chloride | 7.6 | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 75-09-2 | 4 | |
| 1,1-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 75-35-4 | | |
| trans-1,2-Dichloroethene | 9.2 | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 594-20-7 | | |
| cis-1,2-Dichloroethene | 79. | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 156-59-2 | | |
| Chloroform | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 67-66-3 | | |
| Bromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 563-58-6 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 107-06-2 | | |
| Trichloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 78-87-5 | | |
| Bromodichloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 75-27-4 | | |
| Dibromomethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 74-95-3 | | |
| Toluene | 12. | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 79-00-5 | | |
| Tetrachloroethene | 730 | ug/l | 25. | 5.0 | 08/24/04 08:34 | TMB | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 142-28-9 | | |
| Dibromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 106-93-4 | | |
| Chlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 630-20-6 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 100-41-4 | | |
| m&p-Xylene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 95-47-6 | | |
| Styrene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 100-42-5 | | |
| Bromoform | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 98-82-8 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718405 Project Sample Number: 5037941-004 Date Collected: 08/18/04 12:10
Client Sample ID: GP-03-20' Matrix: Water Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | Reglmt |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 79-34-5 | | |
| Bromobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 96-18-4 | | |
| n-Propylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 106-46-7 | | |
| n-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 87-68-3 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/l | 10. | 1.0 | 08/24/04 08:03 | TMB | 110-75-8 | | |
| Acetone | ND | ug/l | 25. | 1.0 | 08/24/04 08:03 | TMB | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/l | 10. | 1.0 | 08/24/04 08:03 | TMB | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/l | 10. | 1.0 | 08/24/04 08:03 | TMB | 108-10-1 | | |
| Acrolein | ND | ug/l | 50. | 1.0 | 08/24/04 08:03 | TMB | 107-02-8 | | |
| Acrylonitrile | ND | ug/l | 50. | 1.0 | 08/24/04 08:03 | TMB | 107-13-1 | | |
| 2-Hexanone | ND | ug/l | 10. | 1.0 | 08/24/04 08:03 | TMB | 591-78-6 | | |
| Vinyl acetate | ND | ug/l | 10. | 1.0 | 08/24/04 08:03 | TMB | 108-05-4 | | |
| Iodomethane | ND | ug/l | 10. | 1.0 | 08/24/04 08:03 | TMB | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 1634-04-4 | | |
| Carbon disulfide | ND | ug/l | 5.0 | 1.0 | 08/24/04 08:03 | TMB | 75-15-0 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/l | 100 | 1.0 | 08/24/04 08:03 | TMB | 110-57-6 | | |
| Ethyl methacrylate | ND | ug/l | 100 | 1.0 | 08/24/04 08:03 | TMB | 97-63-2 | | |
| Xylene (Total) | ND | ug/l | 10. | 1.0 | 08/24/04 08:03 | TMB | 1330-20-7 | | |
| Dibromofluoromethane (S) | 102 | % | | 1.0 | 08/24/04 08:03 | TMB | 1868-53-7 | | |
| Toluene-d8 (S) | 94 | % | | 1.0 | 08/24/04 08:03 | TMB | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 91 | % | | 1.0 | 08/24/04 08:03 | TMB | 460-00-4 | | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718413 | Project Sample Number: 5037941-005 | Date Collected: 08/18/04 12:40
Client Sample ID: GP-03-30' | Matrix: Water | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 75-71-8 | | |
| Chloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 74-87-3 | | |
| Vinyl chloride | ND | ug/l | 2.0 | 1.0 | 08/24/04 09:06 | TMB | 75-01-4 | | |
| Bromomethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 74-83-9 | | |
| Chloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 75-69-4 | | |
| Methylene chloride | 7.6 | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 75-09-2 | 5 | |
| 1,1-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 75-35-4 | | |
| trans-1,2-Dichloroethene | 10. | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 594-20-7 | | |
| cis-1,2-Dichloroethene | 88. | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 156-59-2 | | |
| Chloroform | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 67-66-3 | | |
| Bromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 563-58-6 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 107-06-2 | | |
| Trichloroethene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 78-87-5 | | |
| Bromodichloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 75-27-4 | | |
| Dibromomethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 74-95-3 | | |
| Toluene | 12. | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 79-00-5 | | |
| Tetrachloroethene | 500 | ug/l | 25. | 5.0 | 08/24/04 09:38 | TMB | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 142-28-9 | | |
| Dibromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 106-93-4 | | |
| Chlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 630-20-6 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 100-41-4 | | |
| m&p-Xylene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 95-47-6 | | |
| Styrene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 100-42-5 | | |
| Bromoform | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 98-82-8 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718413 | Project Sample Number: 5037941-005 | Date Collected: 08/18/04 12:40
Client Sample ID: GP-03-30' | Matrix: Water | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | Regimt |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 79-34-5 | | |
| Bromobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 96-18-4 | | |
| n-Propylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 106-46-7 | | |
| n-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 87-68-3 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/l | 10. | 1.0 | 08/24/04 09:06 | TMB | 110-75-8 | | |
| Acetone | ND | ug/l | 25. | 1.0 | 08/24/04 09:06 | TMB | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/l | 10. | 1.0 | 08/24/04 09:06 | TMB | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/l | 10. | 1.0 | 08/24/04 09:06 | TMB | 108-10-1 | | |
| Acrolein | ND | ug/l | 50. | 1.0 | 08/24/04 09:06 | TMB | 107-02-8 | | |
| Acrylonitrile | ND | ug/l | 50. | 1.0 | 08/24/04 09:06 | TMB | 107-13-1 | | |
| 2-Hexanone | ND | ug/l | 10. | 1.0 | 08/24/04 09:06 | TMB | 591-78-6 | | |
| Vinyl acetate | ND | ug/l | 10. | 1.0 | 08/24/04 09:06 | TMB | 108-05-4 | | |
| Iodomethane | ND | ug/l | 10. | 1.0 | 08/24/04 09:06 | TMB | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 1634-04-4 | | |
| Carbon disulfide | ND | ug/l | 5.0 | 1.0 | 08/24/04 09:06 | TMB | 75-15-0 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/l | 100 | 1.0 | 08/24/04 09:06 | TMB | 110-57-6 | | |
| Ethyl methacrylate | ND | ug/l | 100 | 1.0 | 08/24/04 09:06 | TMB | 97-63-2 | | |
| Xylene (Total) | ND | ug/l | 10. | 1.0 | 08/24/04 09:06 | TMB | 1330-20-7 | | |
| Dibromofluoromethane (S) | 104 | % | | 1.0 | 08/24/04 09:06 | TMB | 1868-53-7 | | |
| Toluene-d8 (S) | 97 | % | | 1.0 | 08/24/04 09:06 | TMB | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 89 | % | | 1.0 | 08/24/04 09:06 | TMB | 460-00-4 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718421 | Project Sample Number: 5037941-006 | Date Collected: 08/18/04 16:15
Client Sample ID: GP-03-40' | Matrix: Water | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 75-71-8 | | |
| Chloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 74-87-3 | | |
| Vinyl chloride | 4.1 | ug/l | 2.0 | 1.0 | 08/21/04 08:22 | JLF | 75-01-4 | | |
| Bromomethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 74-83-9 | | |
| Chloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 75-69-4 | | |
| Methylene chloride | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 75-09-2 | | |
| 1,1-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 75-35-4 | | |
| trans-1,2-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 594-20-7 | | |
| cis-1,2-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 156-59-2 | | |
| Chloroform | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 67-66-3 | | |
| Bromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 563-58-6 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 107-06-2 | | |
| Trichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 78-87-5 | | |
| Bromodichloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 75-27-4 | | |
| Dibromomethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 74-95-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 79-00-5 | | |
| Tetrachloroethene | 11. | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 142-28-9 | | |
| Dibromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 106-93-4 | | |
| Chlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 630-20-6 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 100-41-4 | | |
| m&p-Xylene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 95-47-6 | | |
| Styrene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 100-42-5 | | |
| Bromoform | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 98-82-8 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718421 | Project Sample Number: 5037941-006 | Date Collected: 08/18/04 16:15
Client Sample ID: GP-03-40' | Matrix: Water | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 79-34-5 | | |
| Bromobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 96-18-4 | | |
| n-Propylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 106-46-7 | | |
| n-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 87-68-3 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/l | 10. | 1.0 | 08/21/04 08:22 | JLF | 110-75-8 | | |
| Acetone | ND | ug/l | 25. | 1.0 | 08/21/04 08:22 | JLF | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/l | 10. | 1.0 | 08/21/04 08:22 | JLF | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/l | 10. | 1.0 | 08/21/04 08:22 | JLF | 108-10-1 | | |
| Acrolein | ND | ug/l | 50. | 1.0 | 08/21/04 08:22 | JLF | 107-02-8 | | |
| Acrylonitrile | ND | ug/l | 50. | 1.0 | 08/21/04 08:22 | JLF | 107-13-1 | | |
| 2-Hexanone | ND | ug/l | 10. | 1.0 | 08/21/04 08:22 | JLF | 591-78-6 | | |
| Vinyl acetate | ND | ug/l | 10. | 1.0 | 08/21/04 08:22 | JLF | 108-05-4 | | |
| Iodomethane | ND | ug/l | 10. | 1.0 | 08/21/04 08:22 | JLF | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 1634-04-4 | | |
| Carbon disulfide | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:22 | JLF | 75-15-0 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/l | 100 | 1.0 | 08/21/04 08:22 | JLF | 110-57-6 | | |
| Ethyl methacrylate | ND | ug/l | 100 | 1.0 | 08/21/04 08:22 | JLF | 97-63-2 | | |
| Xylene (Total) | ND | ug/l | 10. | 1.0 | 08/21/04 08:22 | JLF | 1330-20-7 | | |
| Dibromofluoromethane (S) | 94 | % | | 1.0 | 08/21/04 08:22 | JLF | 1868-53-7 | | |
| Toluene-d8 (S) | 99 | % | | 1.0 | 08/21/04 08:22 | JLF | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 90 | % | | 1.0 | 08/21/04 08:22 | JLF | 460-00-4 | | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718439 | Project Sample Number: 5037941-007 | Date Collected: 08/18/04 10:30
Client Sample ID: GP-04-22' | Matrix: Water | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | Regimt |
|---|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 75-71-8 | | |
| Chloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 74-87-3 | | |
| Vinyl chloride | ND | ug/l | 2.0 | 1.0 | 08/21/04 08:53 | JLF | 75-01-4 | | |
| Bromomethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 74-83-9 | | |
| Chloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 75-69-4 | | |
| Methylene chloride | ND | ug/l | 5.0 | 1.0 | 08/23/04 23:13 | JLF | 75-09-2 | | |
| 1,1-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 75-35-4 | | |
| trans-1,2-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 594-20-7 | | |
| cis-1,2-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 156-59-2 | | |
| Chloroform | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 67-66-3 | | |
| Bromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 563-58-6 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 107-06-2 | | |
| Trichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 78-87-5 | | |
| Bromodichloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 75-27-4 | | |
| Dibromomethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 74-95-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 79-00-5 | | |
| Tetrachloroethene | 23. | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 142-28-9 | | |
| Dibromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 106-93-4 | | |
| Chlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 630-20-6 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 100-41-4 | | |
| m&p-Xylene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 95-47-6 | | |
| Styrene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 100-42-5 | | |
| Bromoform | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 98-82-8 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718439 | Project Sample Number: 5037941-007 | Date Collected: 08/18/04 10:30
Client Sample ID: GP-04-22' | Matrix: Water | Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | Reglmt |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 79-34-5 | | |
| Bromobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 96-18-4 | | |
| n-Propylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 106-46-7 | | |
| n-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 87-68-3 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/l | 10. | 1.0 | 08/21/04 08:53 | JLF | 110-75-8 | | |
| Acetone | ND | ug/l | 25. | 1.0 | 08/21/04 08:53 | JLF | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/l | 10. | 1.0 | 08/21/04 08:53 | JLF | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/l | 10. | 1.0 | 08/21/04 08:53 | JLF | 108-10-1 | | |
| Acrolein | ND | ug/l | 50. | 1.0 | 08/21/04 08:53 | JLF | 107-02-8 | | |
| Acrylonitrile | ND | ug/l | 50. | 1.0 | 08/21/04 08:53 | JLF | 107-13-1 | | |
| 2-Hexanone | ND | ug/l | 10. | 1.0 | 08/21/04 08:53 | JLF | 591-78-6 | | |
| Vinyl acetate | ND | ug/l | 10. | 1.0 | 08/21/04 08:53 | JLF | 108-05-4 | | |
| Iodomethane | ND | ug/l | 10. | 1.0 | 08/21/04 08:53 | JLF | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 1634-04-4 | | |
| Carbon disulfide | ND | ug/l | 5.0 | 1.0 | 08/21/04 08:53 | JLF | 75-15-0 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/l | 100 | 1.0 | 08/21/04 08:53 | JLF | 110-57-6 | | |
| Ethyl methacrylate | ND | ug/l | 100 | 1.0 | 08/21/04 08:53 | JLF | 97-63-2 | | |
| Xylene (Total) | ND | ug/l | 10. | 1.0 | 08/21/04 08:53 | JLF | 1330-20-7 | | |
| Dibromofluoromethane (S) | 94 | % | | 1.0 | 08/21/04 08:53 | JLF | 1868-53-7 | | |
| Toluene-d8 (S) | 98 | % | | 1.0 | 08/21/04 08:53 | JLF | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 89 | % | | 1.0 | 08/21/04 08:53 | JLF | 460-00-4 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718447
Client Sample ID: GP-05-22'

Project Sample Number: 5037941-008
Matrix: Water

Date Collected: 08/18/04 09:11
Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | Reglmt |
|---|---|---|---|---|---|---|---|---|---|
| GC/MS Volatiles | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Dichlorodifluoromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 75-71-8 | | |
| Chloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 74-87-3 | | |
| Vinyl chloride | ND | ug/l | 2.0 | 1.0 | 08/21/04 09:25 | JLF | 75-01-4 | | |
| Bromomethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 74-83-9 | | |
| Chloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 75-00-3 | | |
| Trichlorofluoromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 75-69-4 | | |
| Methylene chloride | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 75-09-2 | | |
| 1,1-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 75-35-4 | | |
| trans-1,2-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 156-60-5 | | |
| 1,1-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 75-34-3 | | |
| 2,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 594-20-7 | | |
| cis-1,2-Dichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 156-59-2 | | |
| Chloroform | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 67-66-3 | | |
| Bromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 74-97-5 | | |
| 1,1,1-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 71-55-6 | | |
| Carbon tetrachloride | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 56-23-5 | | |
| 1,1-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 563-58-6 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 71-43-2 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 107-06-2 | | |
| Trichloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 79-01-6 | | |
| 1,2-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 78-87-5 | | |
| Bromodichloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 75-27-4 | | |
| Dibromomethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 74-95-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 108-88-3 | | |
| 1,1,2-Trichloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 79-00-5 | | |
| Tetrachloroethene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 127-18-4 | | |
| 1,3-Dichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 142-28-9 | | |
| Dibromochloromethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 124-48-1 | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 106-93-4 | | |
| Chlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 108-90-7 | | |
| 1,1,1,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 630-20-6 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 100-41-4 | | |
| m&p-Xylene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 95-47-6 | | |
| Styrene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 100-42-5 | | |
| Bromoform | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 75-25-2 | | |
| Isopropylbenzene (Cumene) | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 98-82-8 | | |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

Lab Sample No: 503718447
Client Sample ID: GP-05-22'

Project Sample Number: 5037941-008
Matrix: Water

Date Collected: 08/18/04 09:11
Date Received: 08/19/04 10:21

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 79-34-5 | | |
| Bromobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 108-86-1 | | |
| 1,2,3-Trichloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 96-18-4 | | |
| n-Propylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 103-65-1 | | |
| 2-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 95-49-8 | | |
| 1,3,5-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 108-67-8 | | |
| 4-Chlorotoluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 106-43-4 | | |
| 1,2,4-Trimethylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 95-63-6 | | |
| sec-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 135-98-8 | | |
| tert-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 98-06-6 | | |
| p-Isopropyltoluene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 99-87-6 | | |
| 1,3-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 541-73-1 | | |
| 1,4-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 106-46-7 | | |
| n-Butylbenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 104-51-8 | | |
| 1,2-Dichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 95-50-1 | | |
| 1,2-Dibromo-3-chloropropane | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 96-12-8 | | |
| 1,2,4-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 120-82-1 | | |
| Hexachloro-1,3-butadiene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 87-68-3 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 91-20-3 | | |
| 1,2,3-Trichlorobenzene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 87-61-6 | | |
| trans-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 10061-02-6 | | |
| cis-1,3-Dichloropropene | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 10061-01-5 | | |
| 2-Chloroethylvinyl ether | ND | ug/l | 10. | 1.0 | 08/21/04 09:25 | JLF | 110-75-8 | | |
| Acetone | ND | ug/l | 25. | 1.0 | 08/21/04 09:25 | JLF | 67-64-1 | | |
| 2-Butanone (MEK) | ND | ug/l | 10. | 1.0 | 08/21/04 09:25 | JLF | 78-93-3 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/l | 10. | 1.0 | 08/21/04 09:25 | JLF | 108-10-1 | | |
| Acrolein | ND | ug/l | 50. | 1.0 | 08/21/04 09:25 | JLF | 107-02-8 | | |
| Acrylonitrile | ND | ug/l | 50. | 1.0 | 08/21/04 09:25 | JLF | 107-13-1 | | |
| 2-Hexanone | ND | ug/l | 10. | 1.0 | 08/21/04 09:25 | JLF | 591-78-6 | | |
| Vinyl acetate | ND | ug/l | 10. | 1.0 | 08/21/04 09:25 | JLF | 108-05-4 | | |
| Iodomethane | ND | ug/l | 10. | 1.0 | 08/21/04 09:25 | JLF | 74-88-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 1634-04-4 | | |
| Carbon disulfide | ND | ug/l | 5.0 | 1.0 | 08/21/04 09:25 | JLF | 75-15-0 | | |
| trans-1,4-Dichloro-2-butene | ND | ug/l | 100 | 1.0 | 08/21/04 09:25 | JLF | 110-57-6 | | |
| Ethyl methacrylate | ND | ug/l | 100 | 1.0 | 08/21/04 09:25 | JLF | 97-63-2 | | |
| Xylene (Total) | ND | ug/l | 10. | 1.0 | 08/21/04 09:25 | JLF | 1330-20-7 | | |
| Dibromofluoromethane (S) | 95 | % | | 1.0 | 08/21/04 09:25 | JLF | 1868-53-7 | | |
| Toluene-d8 (S) | 100 | % | | 1.0 | 08/21/04 09:25 | JLF | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 89 | % | | 1.0 | 08/21/04 09:25 | JLF | 460-00-4 | | |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

| | |
|---|---|
| ND | Not detected at or above adjusted reporting limit |
| NC | Not Calculable |
| J | Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit |
| MDL | Adjusted Method Detection Limit |
| (S) | Surrogate |
| [1] | Result confirmed by second analysis run 08/21/04 06:00. |
| [2] | Result confirmed by second analysis run 08/21/04 06:32. |
| [3] | Result confirmed by second analysis run 08/21/04 07:03. |
| [4] | Result confirmed by second analysis run 08/21/04 07:35. |
| [5] | Result confirmed by second analysis run 08/21/04 08:06. |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

QC Batch: 75627 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: GC/MS VOCs by 8260
Associated Lab Samples: 503718421 503718439 503718447

METHOD BLANK: 503725301
Associated Lab Samples: 503718421 503718439 503718447

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Dichlorodifluoromethane | ug/l | ND | 5.0 | |
| Chloromethane | ug/l | ND | 5.0 | |
| Vinyl chloride | ug/l | ND | 2.0 | |
| Bromomethane | ug/l | ND | 5.0 | |
| Chloroethane | ug/l | ND | 5.0 | |
| Trichlorofluoromethane | ug/l | ND | 5.0 | |
| Methylene chloride | ug/l | ND | 5.0 | |
| 1,1-Dichloroethene | ug/l | ND | 5.0 | |
| trans-1,2-Dichloroethene | ug/l | ND | 5.0 | |
| 1,1-Dichloroethane | ug/l | ND | 5.0 | |
| 1,2-Dichloropropane | ug/l | ND | 5.0 | |
| cis-1,2-Dichloroethene | ug/l | ND | 5.0 | |
| Chloroform | ug/l | ND | 5.0 | |
| Bromochloromethane | ug/l | ND | 5.0 | |
| 1,1,1-Trichloroethane | ug/l | ND | 5.0 | |
| Carbon tetrachloride | ug/l | ND | 5.0 | |
| 1,1-Dichloropropene | ug/l | ND | 5.0 | |
| Benzene | ug/l | ND | 5.0 | |
| 1,2-Dichloroethane | ug/l | ND | 5.0 | |
| Trichloroethene | ug/l | ND | 5.0 | |
| 1,2-Dichloropropane | ug/l | ND | 5.0 | |
| Bromodichloromethane | ug/l | ND | 5.0 | |
| Dibromomethane | ug/l | ND | 5.0 | |
| Toluene | ug/l | ND | 5.0 | |
| 1,1,2-Trichloroethane | ug/l | ND | 5.0 | |
| Tetrachloroethene | ug/l | ND | 5.0 | |
| 1,3-Dichloropropane | ug/l | ND | 5.0 | |
| Dibromochloromethane | ug/l | ND | 5.0 | |
| 1,2-Dibromoethane (EDB) | ug/l | ND | 5.0 | |
| Chlorobenzene | ug/l | ND | 5.0 | |
| 1,1,1,2-Tetrachloroethane | ug/l | ND | 5.0 | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

METHOD BLANK: 503725301
Associated Lab Samples: 503718421 503718439 503718447

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Ethylbenzene | ug/l | ND | 5.0 | |
| m&p-Xylene | ug/l | ND | 5.0 | |
| o-Xylene | ug/l | ND | 5.0 | |
| Styrene | ug/l | ND | 5.0 | |
| Bromoform | ug/l | ND | 5.0 | |
| Isopropylbenzene (Cumene) | ug/l | ND | 5.0 | |
| 1,1,2,2-Tetrachloroethane | ug/l | ND | 5.0 | |
| Bromobenzene | ug/l | ND | 5.0 | |
| 1,2,3-Trichloropropane | ug/l | ND | 5.0 | |
| n-Propylbenzene | ug/l | ND | 5.0 | |
| 2-Chlorotoluene | ug/l | ND | 5.0 | |
| 1,3,5-Trimethylbenzene | ug/l | ND | 5.0 | |
| 4-Chlorotoluene | ug/l | ND | 5.0 | |
| 1,2,4-Trimethylbenzene | ug/l | ND | 5.0 | |
| sec-Butylbenzene | ug/l | ND | 5.0 | |
| tert-Butylbenzene | ug/l | ND | 5.0 | |
| p-Isopropyltoluene | ug/l | ND | 5.0 | |
| 1,3-Dichlorobenzene | ug/l | ND | 5.0 | |
| 1,4-Dichlorobenzene | ug/l | ND | 5.0 | |
| n-Butylbenzene | ug/l | ND | 5.0 | |
| 1,2-Dichlorobenzene | ug/l | ND | 5.0 | |
| 1,2-Dibromo-3-chloropropane | ug/l | ND | 5.0 | |
| 1,2,4-Trichlorobenzene | ug/l | ND | 5.0 | |
| Hexachloro-1,3-butadiene | ug/l | ND | 5.0 | |
| Naphthalene | ug/l | ND | 5.0 | |
| 1,2,3-Trichlorobenzene | ug/l | ND | 5.0 | |
| trans-1,3-Dichloropropene | ug/l | ND | 5.0 | |
| cis-1,3-Dichloropropene | ug/l | ND | 5.0 | |
| 2-Chloroethylvinyl ether | ug/l | ND | 10. | |
| Acetone | ug/l | ND | 25. | |
| 2-Butanone (MEK) | ug/l | ND | 10. | |
| 4-Methyl-2-pentanone (MIBK) | ug/l | ND | 10. | |
| Acrolein | ug/l | ND | 50. | |
| Acrylonitrile | ug/l | ND | 50. | |
| 2-Hexanone | ug/l | ND | 10. | |
| Vinyl acetate | ug/l | ND | 10. | |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

METHOD BLANK: 503725301
Associated Lab Samples: 503718421 503718439 503718447

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Iodomethane | ug/l | ND | 10. | |
| Methyl-tert-butyl ether | ug/l | ND | 5.0 | |
| Carbon disulfide | ug/l | ND | 5.0 | |
| trans-1,4-Dichloro-2-butene | ug/l | ND | 100 | |
| Ethyl methacrylate | ug/l | ND | 100 | |
| Xylene (Total) | ug/l | ND | 10. | |
| Dibromofluoromethane (S) | % | 96 | | |
| Toluene-d8 (S) | % | 98 | | |
| 4-Bromofluorobenzene (S) | % | 93 | | |

LABORATORY CONTROL SAMPLE: 503725319

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | ug/l | 50.00 | 26.02 | 52 | |
| Chloromethane | ug/l | 50.00 | 33.72 | 67 | |
| Vinyl chloride | ug/l | 50.00 | 43.08 | 86 | |
| Bromomethane | ug/l | 50.00 | 39.84 | 80 | |
| Chloroethane | ug/l | 50.00 | 48.81 | 98 | |
| Trichlorofluoromethane | ug/l | 50.00 | 52.27 | 105 | |
| Methylene chloride | ug/l | 50.00 | 52.09 | 104 | |
| 1,1-Dichloroethene | ug/l | 50.00 | 52.88 | 106 | |
| trans-1,2-Dichloroethene | ug/l | 50.00 | 53.14 | 106 | |
| 1,1-Dichloroethane | ug/l | 50.00 | 53.08 | 106 | |
| 2,2-Dichloropropane | ug/l | 50.00 | 47.83 | 96 | |
| cis-1,2-Dichloroethene | ug/l | 50.00 | 52.88 | 106 | |
| Chloroform | ug/l | 50.00 | 52.73 | 105 | |
| Bromochloromethane | ug/l | 50.00 | 51.53 | 103 | |
| 1,1,1-Trichloroethane | ug/l | 50.00 | 52.59 | 105 | |
| Carbon tetrachloride | ug/l | 50.00 | 50.55 | 101 | |
| 1,1-Dichloropropene | ug/l | 50.00 | 52.11 | 104 | |
| Benzene | ug/l | 50.00 | 52.96 | 106 | |
| 1,2-Dichloroethane | ug/l | 50.00 | 51.75 | 104 | |
| Trichloroethene | ug/l | 50.00 | 54.56 | 109 | |
| 1,2-Dichloropropane | ug/l | 50.00 | 52.17 | 104 | |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

LABORATORY CONTROL SAMPLE: 503725319

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Bromodichloromethane | ug/l | 50.00 | 52.16 | 104 | |
| Dibromomethane | ug/l | 50.00 | 53.03 | 106 | |
| Toluene | ug/l | 50.00 | 54.14 | 108 | |
| 1,1,2-Trichloroethane | ug/l | 50.00 | 55.71 | 111 | |
| Tetrachloroethene | ug/l | 50.00 | 45.28 | 91 | |
| 1,3-Dichloropropane | ug/l | 50.00 | 55.22 | 110 | |
| Dibromochloromethane | ug/l | 50.00 | 50.70 | 101 | |
| 1,2-Dibromoethane (EDB) | ug/l | 50.00 | 53.78 | 108 | |
| Chlorobenzene | ug/l | 50.00 | 53.44 | 107 | |
| 1,1,1,2-Tetrachloroethane | ug/l | 50.00 | 53.09 | 106 | |
| Ethylbenzene | ug/l | 50.00 | 52.52 | 105 | |
| m&p-Xylene | ug/l | 100.00 | 105.8 | 106 | |
| o-Xylene | ug/l | 50.00 | 52.72 | 105 | |
| Styrene | ug/l | 50.00 | 51.28 | 103 | |
| Bromoform | ug/l | 50.00 | 50.36 | 101 | |
| Isopropylbenzene (Cumene) | ug/l | 50.00 | 49.77 | 100 | |
| ,1,2,2-Tetrachloroethane | ug/l | 50.00 | 53.67 | 107 | |
| Bromobenzene | ug/l | 50.00 | 50.42 | 101 | |
| 1,2,3-Trichloropropane | ug/l | 50.00 | 45.20 | 90 | |
| n-Propylbenzene | ug/l | 50.00 | 52.35 | 105 | |
| 2-Chlorotoluene | ug/l | 50.00 | 53.21 | 106 | |
| 1,3,5-Trimethylbenzene | ug/l | 50.00 | 51.43 | 103 | |
| 4-Chlorotoluene | ug/l | 50.00 | 51.68 | 103 | |
| 1,2,4-Trimethylbenzene | ug/l | 50.00 | 50.48 | 101 | |
| sec-Butylbenzene | ug/l | 50.00 | 53.77 | 108 | |
| tert-Butylbenzene | ug/l | 50.00 | 51.19 | 102 | |
| p-Isopropyltoluene | ug/l | 50.00 | 48.46 | 97 | |
| 1,3-Dichlorobenzene | ug/l | 50.00 | 51.19 | 102 | |
| 1,4-Dichlorobenzene | ug/l | 50.00 | 50.68 | 101 | |
| n-Butylbenzene | ug/l | 50.00 | 47.41 | 95 | |
| 1,2-Dichlorobenzene | ug/l | 50.00 | 53.21 | 106 | |
| 1,2-Dibromo-3-chloropropane | ug/l | 50.00 | 54.83 | 110 | |
| 1,2,4-Trichlorobenzene | ug/l | 50.00 | 45.92 | 92 | |
| Hexachloro-1,3-butadiene | ug/l | 50.00 | 49.99 | 100 | |
| Naphthalene | ug/l | 50.00 | 48.55 | 97 | |
| 1,2,3-Trichlorobenzene | ug/l | 50.00 | 49.00 | 98 | |
| trans-1,3-Dichloropropene | ug/l | 50.00 | 49.88 | 100 | |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

LABORATORY CONTROL SAMPLE: 503725319

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | ug/l | 50.00 | 50.80 | 102 | |
| Methyl-tert-butyl ether | ug/l | 100.00 | 88.40 | 88 | |
| Xylene (Total) | ug/l | 150.00 | 158.5 | 106 | |
| Dibromofluoromethane (S) | | | | 96 | |
| Toluene-d8 (S) | | | | 100 | |
| 4-Bromofluorobenzene (S) | | | | 101 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 503725327 503725335

| Parameter | Units | 503721482 Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | ug/l | 0 | 50.00 | 65.45 | 57.62 | 131 | 115 | 13 | |
| Benzene | ug/l | 0 | 50.00 | 59.39 | 53.47 | 119 | 107 | 10 | |
| Trichloroethene | ug/l | 0 | 50.00 | 58.75 | 53.48 | 118 | 107 | 9 | |
| Toluene | ug/l | 0 | 50.00 | 59.88 | 53.23 | 120 | 106 | 12 | |
| Chlorobenzene | ug/l | 0 | 50.00 | 57.92 | 51.19 | 116 | 102 | 12 | |
| Dibromofluoromethane (S) | | | | | | 98 | 97 | | |
| Toluene-d8 (S) | | | | | | 99 | 98 | | |
| 4-Bromofluorobenzene (S) | | | | | | 100 | 99 | | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

QC Batch: 75829 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: GC/MS VOCs by 8260
Associated Lab Samples: 503718371 503718389 503718397 503718405 503718413

METHOD BLANK: 503733552
Associated Lab Samples: 503718371 503718389 503718397 503718405 503718413

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Dichlorodifluoromethane | ug/l | ND | 5.0 | |
| Chloromethane | ug/l | ND | 5.0 | |
| Vinyl chloride | ug/l | ND | 2.0 | |
| Bromomethane | ug/l | ND | 5.0 | |
| Chloroethane | ug/l | ND | 5.0 | |
| Trichlorofluoromethane | ug/l | ND | 5.0 | |
| Methylene chloride | ug/l | ND | 5.0 | |
| 1,1-Dichloroethene | ug/l | ND | 5.0 | |
| trans-1,2-Dichloroethene | ug/l | ND | 5.0 | |
| 1,1-Dichloroethane | ug/l | ND | 5.0 | |
| 1,2-Dichloropropane | ug/l | ND | 5.0 | |
| cis-1,2-Dichloroethene | ug/l | ND | 5.0 | |
| Chloroform | ug/l | ND | 5.0 | |
| Bromochloromethane | ug/l | ND | 5.0 | |
| 1,1,1-Trichloroethane | ug/l | ND | 5.0 | |
| Carbon tetrachloride | ug/l | ND | 5.0 | |
| 1,1-Dichloropropene | ug/l | ND | 5.0 | |
| Benzene | ug/l | ND | 5.0 | |
| 1,2-Dichloroethane | ug/l | ND | 5.0 | |
| Trichloroethene | ug/l | ND | 5.0 | |
| 1,2-Dichloropropane | ug/l | ND | 5.0 | |
| Bromodichloromethane | ug/l | ND | 5.0 | |
| Dibromomethane | ug/l | ND | 5.0 | |
| Toluene | ug/l | ND | 5.0 | |
| 1,1,2-Trichloroethane | ug/l | ND | 5.0 | |
| Tetrachloroethene | ug/l | ND | 5.0 | |
| 1,3-Dichloropropane | ug/l | ND | 5.0 | |
| Dibromochloromethane | ug/l | ND | 5.0 | |
| 1,2-Dibromoethane (EDB) | ug/l | ND | 5.0 | |
| Chlorobenzene | ug/l | ND | 5.0 | |
| 1,1,1,2-Tetrachloroethane | ug/l | ND | 5.0 | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

METHOD BLANK: 503733552
Associated Lab Samples: 503718371 503718389 503718397 503718405 503718413

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Ethylbenzene | ug/l | ND | 5.0 | |
| m&p-Xylene | ug/l | ND | 5.0 | |
| o-Xylene | ug/l | ND | 5.0 | |
| Styrene | ug/l | ND | 5.0 | |
| Bromoform | ug/l | ND | 5.0 | |
| Isopropylbenzene (Cumene) | ug/l | ND | 5.0 | |
| 1,1,2,2-Tetrachloroethane | ug/l | ND | 5.0 | |
| Bromobenzene | ug/l | ND | 5.0 | |
| 1,2,3-Trichloropropane | ug/l | ND | 5.0 | |
| n-Propylbenzene | ug/l | ND | 5.0 | |
| 2-Chlorotoluene | ug/l | ND | 5.0 | |
| 1,3,5-Trimethylbenzene | ug/l | ND | 5.0 | |
| 4-Chlorotoluene | ug/l | ND | 5.0 | |
| 1,2,4-Trimethylbenzene | ug/l | ND | 5.0 | |
| sec-Butylbenzene | ug/l | ND | 5.0 | |
| tert-Butylbenzene | ug/l | ND | 5.0 | |
| p-Isopropyltoluene | ug/l | ND | 5.0 | |
| 1,3-Dichlorobenzene | ug/l | ND | 5.0 | |
| 1,4-Dichlorobenzene | ug/l | ND | 5.0 | |
| n-Butylbenzene | ug/l | ND | 5.0 | |
| 1,2-Dichlorobenzene | ug/l | ND | 5.0 | |
| 1,2-Dibromo-3-chloropropane | ug/l | ND | 5.0 | |
| 1,2,4-Trichlorobenzene | ug/l | ND | 5.0 | |
| Hexachloro-1,3-butadiene | ug/l | ND | 5.0 | |
| Naphthalene | ug/l | ND | 5.0 | |
| 1,2,3-Trichlorobenzene | ug/l | ND | 5.0 | |
| trans-1,3-Dichloropropene | ug/l | ND | 5.0 | |
| cis-1,3-Dichloropropene | ug/l | ND | 5.0 | |
| 2-Chloroethylvinyl ether | ug/l | ND | 10. | |
| Acetone | ug/l | ND | 25. | |
| 2-Butanone (MEK) | ug/l | ND | 10. | |
| 4-Methyl-2-pentanone (MIBK) | ug/l | ND | 10. | |
| Acrolein | ug/l | ND | 50. | |
| Acrylonitrile | ug/l | ND | 50. | |
| 2-Hexanone | ug/l | ND | 10. | |
| Vinyl acetate | ug/l | ND | 10. | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

METHOD BLANK: 503733552
Associated Lab Samples: 503718371 503718389 503718397 503718405 503718413

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Iodomethane | ug/l | ND | 10. | |
| Methyl-tert-butyl ether | ug/l | ND | 5.0 | |
| Carbon disulfide | ug/l | ND | 5.0 | |
| trans-1,4-Dichloro-2-butene | ug/l | ND | 100 | |
| Ethyl methacrylate | ug/l | ND | 100 | |
| Xylene (Total) | ug/l | ND | 10. | |
| Dibromofluoromethane (S) | % | 99 | | |
| Toluene-d8 (S) | % | 100 | | |
| 4-Bromofluorobenzene (S) | % | 97 | | |

LABORATORY CONTROL SAMPLE: 503733560

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | ug/l | 50.00 | 47.92 | 96 | |
| Chloromethane | ug/l | 50.00 | 46.62 | 93 | |
| Vinyl chloride | ug/l | 50.00 | 53.70 | 107 | |
| Bromomethane | ug/l | 50.00 | 52.87 | 106 | |
| Chloroethane | ug/l | 50.00 | 57.48 | 115 | |
| Trichlorofluoromethane | ug/l | 50.00 | 55.46 | 111 | |
| Methylene chloride | ug/l | 50.00 | 51.02 | 102 | |
| 1,1-Dichloroethene | ug/l | 50.00 | 58.66 | 117 | |
| trans-1,2-Dichloroethene | ug/l | 50.00 | 56.62 | 113 | |
| 1,1-Dichloroethane | ug/l | 50.00 | 54.47 | 109 | |
| 2,2-Dichloropropane | ug/l | 50.00 | 50.76 | 102 | |
| cis-1,2-Dichloroethene | ug/l | 50.00 | 54.12 | 108 | |
| Chloroform | ug/l | 50.00 | 54.82 | 110 | |
| Bromochloromethane | ug/l | 50.00 | 59.74 | 119 | |
| 1,1,1-Trichloroethane | ug/l | 50.00 | 54.75 | 109 | |
| Carbon tetrachloride | ug/l | 50.00 | 53.78 | 108 | |
| 1,1-Dichloropropene | ug/l | 50.00 | 55.14 | 110 | |
| Benzene | ug/l | 50.00 | 55.31 | 111 | |
| 1,2-Dichloroethane | ug/l | 50.00 | 53.35 | 107 | |
| Trichloroethene | ug/l | 50.00 | 55.15 | 110 | |
| 1,2-Dichloropropane | ug/l | 50.00 | 53.64 | 107 | |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

LABORATORY CONTROL SAMPLE: 503733560

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Bromodichloromethane | ug/l | 50.00 | 52.45 | 105 | |
| Dibromomethane | ug/l | 50.00 | 51.93 | 104 | |
| Toluene | ug/l | 50.00 | 54.31 | 109 | |
| 1,1,2-Trichloroethane | ug/l | 50.00 | 53.23 | 106 | |
| Tetrachloroethene | ug/l | 50.00 | 43.72 | 87 | |
| 1,3-Dichloropropane | ug/l | 50.00 | 52.36 | 105 | |
| Dibromochloromethane | ug/l | 50.00 | 48.10 | 96 | |
| 1,2-Dibromoethane (EDB) | ug/l | 50.00 | 52.26 | 105 | |
| Chlorobenzene | ug/l | 50.00 | 52.87 | 106 | |
| 1,1,1,2-Tetrachloroethane | ug/l | 50.00 | 51.26 | 103 | |
| Ethylbenzene | ug/l | 50.00 | 53.41 | 107 | |
| m&p-Xylene | ug/l | 100.00 | 107.9 | 108 | |
| o-Xylene | ug/l | 50.00 | 53.56 | 107 | |
| Styrene | ug/l | 50.00 | 51.49 | 103 | |
| Bromoform | ug/l | 50.00 | 46.82 | 94 | |
| Isopropylbenzene (Cumene) | ug/l | 50.00 | 51.09 | 102 | |
| 1,1,2,2-Tetrachloroethane | ug/l | 50.00 | 49.98 | 100 | |
| Bromobenzene | ug/l | 50.00 | 50.28 | 101 | |
| 1,2,3-Trichloropropane | ug/l | 50.00 | 39.74 | 80 | |
| n-Propylbenzene | ug/l | 50.00 | 52.99 | 106 | |
| 2-Chlorotoluene | ug/l | 50.00 | 52.42 | 105 | |
| 1,3,5-Trimethylbenzene | ug/l | 50.00 | 52.38 | 105 | |
| 4-Chlorotoluene | ug/l | 50.00 | 52.03 | 104 | |
| 1,2,4-Trimethylbenzene | ug/l | 50.00 | 51.49 | 103 | |
| sec-Butylbenzene | ug/l | 50.00 | 54.22 | 108 | |
| tert-Butylbenzene | ug/l | 50.00 | 50.02 | 100 | |
| p-Isopropyltoluene | ug/l | 50.00 | 50.62 | 101 | |
| 1,3-Dichlorobenzene | ug/l | 50.00 | 50.67 | 101 | |
| 1,4-Dichlorobenzene | ug/l | 50.00 | 49.38 | 99 | |
| n-Butylbenzene | ug/l | 50.00 | 50.05 | 100 | |
| 1,2-Dichlorobenzene | ug/l | 50.00 | 51.52 | 103 | |
| 1,2-Dibromo-3-chloropropane | ug/l | 50.00 | 55.76 | 112 | |
| 1,2,4-Trichlorobenzene | ug/l | 50.00 | 46.15 | 92 | |
| Hexachloro-1,3-butadiene | ug/l | 50.00 | 50.37 | 101 | |
| Naphthalene | ug/l | 50.00 | 47.71 | 95 | |
| 1,2,3-Trichlorobenzene | ug/l | 50.00 | 47.09 | 94 | |
| trans-1,3-Dichloropropene | ug/l | 50.00 | 48.84 | 98 | |



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

# QUALITY CONTROL DATA

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

LABORATORY CONTROL SAMPLE: 503733560

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | ug/l | 50.00 | 49.19 | 98 | |
| Methyl-tert-butyl ether | ug/l | 100.00 | 116.9 | 117 | |
| Xylene (Total) | ug/l | 150.00 | 161.5 | 108 | |
| Dibromofluoromethane (S) | | | | 98 | |
| Toluene-d8 (S) | | | | 100 | |
| 4-Bromofluorobenzene (S) | | | | 101 | |



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5037941
Client Project ID: Michigan Meadows / M01046

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

| | |
|---|---|
| LCS(D) | Laboratory Control Sample (Duplicate) |
| MS(D) | Matrix Spike (Duplicate) |
| DUP | Sample Duplicate |
| ND | Not detected at or above adjusted reporting limit |
| NC | Not Calculable |
| J | Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit |
| MDL | Adjusted Method Detection Limit |
| RPD | Relative Percent Difference |
| (S) | Surrogate |



REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.