ENVIRONMENTAL RESTORATION PROGRAM

FINAL
ERP SITE NO. 2 REMEDIAL INVESTIGATION REPORT

157th AIR OPERATIONS GROUP
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION
MISSOURI AIR NATIONAL GUARD
ST. LOUIS, MISSOURI

Prepared For:

ANG/CEVR
Andrews Air Force Base, Maryland

October 2004

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CONTRACT NO. DAHA92-01-D0007
Delivery Order No. 0007
MWH No. 2101274.07180203

Prepared For:
ANG/CEVR
Andrews Air Force Base, Maryland

Prepared By:
MWH Americas, Inc.

October 2004

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LIST OF ACRONYMS

° F	degrees Fahrenheit
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
ANG	Air National Guard
AOC	Area of Concern
AOG	Air Operations Group
ARAR	applicable or relevant and appropriate requirement
ARNG	Army National Guard
AST	aboveground storage tank
bgs	below ground surface
Brotcke	Brotcke Well & Pump, Inc.
BTEX	benzene, toluene, ethylbenzene, and total xylenes
CALM	Cleanup Levels for Missouri
CCV	continuing calibration verification
CE	Civil Engineer
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
C_{IDI}	contact/inhalation values
C_{LEACH}	soil leaching to groundwater concentration values
CLP	Contract Laboratory Program
COC	chain-of-custody
DOD	Department of Defense
EPA	Environmental Protection Agency
FS	Feasibility Study
HSA	hollow-stem auger
ID	inner-diameter
IDW	investigation-derived waste
ERP	Environmental Restoration Program
Keystone	Keystone Laboratories, Inc.
LCS	laboratory control standard
MDNR	Missouri Department of Natural Resources
mg/kg	milligrams per kilogram
MOANG	Missouri Air National Guard
msl	mean sea level
MS/MSD	matrix spike/matrix spike duplicate
MWH	MWH Americas, Inc.
NFG	National Functional Guidelines
OD	outside diameter
OpTech	Operational Technologies Corporation
PA	Preliminary Assessment
PCB	polychlorinated biphenyl
PID	photoionization detector

LIST OF ACRONYMS
(CONTINUED)

ppmv	parts per million by volume
PVC	polyvinyl chloride
QA/QC	quality assurance/quality control
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RPD	relative percent difference
RI	Remedial Investigation
SI	Site Inspection
SOW	Statement of Work
SSP	Site Safety Plan
Station	Jefferson Barracks ANG Station
SVOC	semivolatile organic compound
TEH	total extractable hydrocarbons
TPH	total petroleum hydrocarbons
U.S.	United States
UST	underground storage tank
VOC	volatile organic compound

EXECUTIVE SUMMARY

MWH Americas, Inc. (MWH) has been contracted under the Environmental Restoration Program (ERP) to complete a Remedial Investigation (RI) for the Missouri Air National Guard's (MOANG's) 157th Air Operations Group (AOG) at the Jefferson Barracks Air National Guard (ANG) Station (Station) in St. Louis, Missouri. This work is being performed under Contract No. DAHA-92-01-D0007, Delivery Order No. 0007.

The purpose of the RI is to determine the nature and extent of chemical constituents in soil and groundwater at ERP Site No. 2; and to evaluate the threat to public health, welfare, and the environment.

A Preliminary Assessment started in 1993 by Operational Technologies Corporation (OpTech) identified four sites at the Station as Areas of Concern (AOCs), and recommended AOC-A through AOC-D (now referred to as ERP Sites No. 1 through 4) for further investigation. The four AOCs were further investigated by OpTech during the Site Inspection (SI) phase of their investigation, the purpose of which was to determine if chemical constituents were present at each AOC.

The SI phase, conducted in December 1994, consisted of a geophysical survey at AOC-A and AOC-D, a soil vapor survey at the four AOCs used to develop the optimum locations of borings, and soil borings at the four AOCs to confirm and to attempt to delineate chemical constituents in soil. Piezometer installation was planned as part of the SI activities to determine groundwater flow direction in the vicinity of the AOCs, but as groundwater was not encountered above the bedrock in the majority of borings, piezometers were not installed.

AOC-A, AOC-C, and AOC-D (ERP Sites No. 1, 3, and 4) received a No Further Response Action Planned designation from the Missouri Department of Natural Resources (MDNR) and are not addressed further in this RI Report.

The PA determined AOC-B (ERP Site No. 2) to be a relatively small area storage area adjacent to the south side of Building 51. Building 51 was constructed in the late 1960s and utilized for vehicle maintenance. The used oil generated by these activities was

disposed east of Building 42 and south of Building 51 during the 1960s and 1970s. A 3,000-gallon aboveground storage tank (AST) was used to store used motor oil in the southwestern portion of ERP Site No. 2. The AST replaced 55-gallon drums that had previously been used for storage of the used oil. Other materials such as hydraulic fluid, new motor oil, and cleaning compounds were stored in 55-gallon drums on gravel within ERP Site No. 2. The gravel was periodically replaced because of staining from spilled materials. The AST was subsequently removed.

During the SI, soil vapor survey points were advanced at ERP Site No. 2, to screen for chemical constituents associated with possible spillage from used oil and solvent storage. Total petroleum hydrocarbons (TPH) were detected in three soil vapor samples; and toluene, ethylbenzene, and xylene were detected in one soil vapor sample. Four soil borings were advanced at ERP Site No. 2, and three soil samples were collected from each boring for laboratory analysis for volatile organic compounds, semivolatile organic compounds (SVOCs), TPH, and metals. SVOCs were detected in two soil samples, and TPH was detected in four soil samples. Six metals were detected in the soil samples, namely arsenic, beryllium, copper, lead, nickel, and zinc. TPH, benzo(a)pyrene, and beryllium were the only chemical constituents detected in soil above the current MDNR soil cleanup action levels.

In September 2003, MWH finalized the *ERP Site No. 2 Remedial Investigation Work Plan* describing procedures of the additional investigation sampling and analysis activities at this site. The technical approach was to use data gathered during previous investigations to streamline and focus the RI field data collection activities. The purpose of the RI investigative activities was to verify the soil and groundwater conditions noted during the SI; to provide the additional information necessary to delineate the areal extent, depth, and concentration of chemicals present in soil and groundwater; and to determine the apparent direction of groundwater flow beneath ERP Site No. 2. The proposed RI activities included the advancement of eight soil probeholes to collect near-surface soil samples; the drilling of boreholes to facilitate installation of four groundwater monitoring wells; and two separate rounds of groundwater monitoring at the newly-installed wells. The RI fieldwork was conducted during October and December 2003.

The Station is located along the western bank of the Mississippi River, approximately 10 miles south of the city of St. Louis, in St. Louis County, Missouri. The Station occupies approximately 135 acres and is bordered by the Mississippi River to the east. The shallow subsurface is comprised predominantly of clay, silty clay, and sand, with some gravel lenses. During the 2003 RI field activities, the apparent horizontal groundwater flow direction at ERP Site No. 2 was determined to be generally toward the east, in the direction of the Mississippi River, as was previously estimated. Horizontal hydraulic gradients calculated for the 2003 field activities were approximately 0.13 foot/foot across ERP Site No. 2.

2003 RI activities at ERP Site No. 2 detected soil contamination of SVOCs, total TPH, and arsenic in excess of MDNR soil cleanup action levels. SVOC exceedances were limited to the shallow soil intervals of SB-2 and SB-8 (east of the former location of the AST). The TPH exceedance was limited to the 6-10 foot below ground surface interval of boring SB-3 (off the southwest corner of the large concrete pad). Arsenic exceedances were detected in seven of the eight deep soil intervals (seven of the total sixteen samples) collected during the 2003 RI. It should be noted that high levels of arsenic are common in soils near the Station. These are likely normal background soil levels per the geochemical survey of Missouri agricultural soils undertaken in the 1970s (Tidball, 1984), as illustrated by a comparison of ERP Site No. 2 arsenic levels (ranging from 7.1 to 12.4 milligrams per kilogram [mg/kg]) to the geochemical survey arsenic levels nearest the Station (ranging from 7.0 to 70 mg/kg).

Based on the soil sampling completed to date at ERP Site No. 2, it appears natural attenuation has reduced the concentrations of many constituents in soil in the time since the SI fieldwork was completed.

The 2003 groundwater sampling activities indicated no chemicals of concern above MDNR Cleanup Levels for Missouri (CALM) standards. Although constituents are present in soil at ERP Site No. 2, they are not leaching to groundwater.

However, to address the SVOC and TPH constituents remaining in the soil at concentrations above the MDNR CALM standards, the soil will be overexcavated and

disposed at an off-site location. As part of the overexcavation activities, some additional delineation will be required at the areas near soil borings SB-2, SB-3, and SB-8. The proposed soil delineation and soil removal activities will be addressed in a Removal Action Work Plan, to be submitted and approved by MDNR.

1.0 INTRODUCTION

1.1 PROJECT PURPOSE AND SCOPE

MWH Americas, Inc. (MWH) received a contract delivery order (Contract No. DAHA-92-01-D0007, Delivery Order No. 0007) from the Air National Guard (ANG), under the provisions of the Environmental Restoration Program (ERP), to complete a Remedial Investigation (RI) and corresponding Decision Document for the 157th Air Operations Group (AOG) at the Jefferson Barracks ANG Station (Station) in St. Louis, Missouri (Figure 1). This RI Report summarizes soil and groundwater investigative activities at the final outstanding ERP site at the Station, namely ERP Site No. 2 (Figure 2), formerly designated as Area of Concern B (AOC-B).

The purpose of the RI is to determine the nature and extent of chemical constituents in soil and groundwater at ERP Site No. 2; and to evaluate the threat to public health, welfare, and the environment. The RI Report is intended to provide sufficient background of ERP Sit No. 2, including history, physical setting, and nature and extent of the chemical constituents, in order to evaluate the next step in the process toward closing ERP Site No. 2.

The RI Report has been prepared on behalf of the ANG by MWH and generally follows the format and content guidelines associated with applicable State of Missouri regulations, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, the National Oil and Hazardous Substances Pollution Contingency Plan, and the procedures set forth in the Guidance for Conducting Non-Time Critical Removal Actions Under CERCLA (Environmental Protection Agency [EPA]/540/R/92/057), the Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (EPA/540/G-89/004), and the basic Statement of Work (SOW).

1.2 INSTALLATION RESTORATION PROGRAM DESCRIPTION

The Department of Defense (DOD) developed the ERP to identify and evaluate sites on DOD property where contamination may be present due to past releases of hazardous

chemicals or hazardous waste storage, handling, or disposal practices. The purpose of the ERP is to confirm the presence or absence of suspected chemical constituents; and to mitigate hazards to health, welfare, or the environment that may result from the presence and migration of these chemicals. Additionally, the ERP process is designed to aid in remediation of contaminated sites. The steps in the ERP process are summarized below:

- Preliminary Assessment (PA) - A PA is performed to identify the locations of suspected areas of contamination at a site. Normally, this involves interviews with personnel familiar with operations at the site, historical record searches, and visual site inspections. A PA identifies AOCs that need further investigation, and possibly remediation.

- Site Investigation - After identification of AOCs from the PA, a Site Investigation is typically conducted to confirm or deny the existence of environmental contamination at the site. Activities involved in the Site Investigation include sampling various media for chemicals of concern and identifying the possibility for chemical migration. The Site Investigation identifies those areas from the PA that need further attention. Additional investigative activities can then be conducted at the site, leading to eventual cleanup of the impacted areas.

- RI - During an RI, additional data is collected, to define the extent of chemical constituents identified during the Site Investigation and to assess potential risks to human health and the environment. The RI determines the magnitude and extent of the constituents. The magnitude and extent of chemical constituents must be determined before proper remediation of the sites can be accomplished.

- Feasibility Study (FS) - An FS is conducted subsequent to the RI to evaluate possible remedial alternatives for the site. Based on the extent of chemical constituents determined during the RI, the FS evaluates a variety of factors (cost, ease of implementation, availability of technology, degree of remediation, etc.) to determine the most appropriate remedial alternative. Analysis of remedial alternatives is essential to proper

MAP SOURCE:

USGS TOPOGRAPHIC QUADRANGLES
OAKVILLE, MISSOURI–ILLINOIS
WEBSTER GROVES, MISSOURI–ILLINOIS

0 1000 2000
SCALE IN FEET

MWH DES MOINES IOWA	157TH AIR OPERATIONS GROUP JEFFERSON BARRACKS ST. LOUIS, MISSOURI	157TH AIR OPERATIONS GROUP LOCATION	FIGURE 1

Plot Date: 3/3/04

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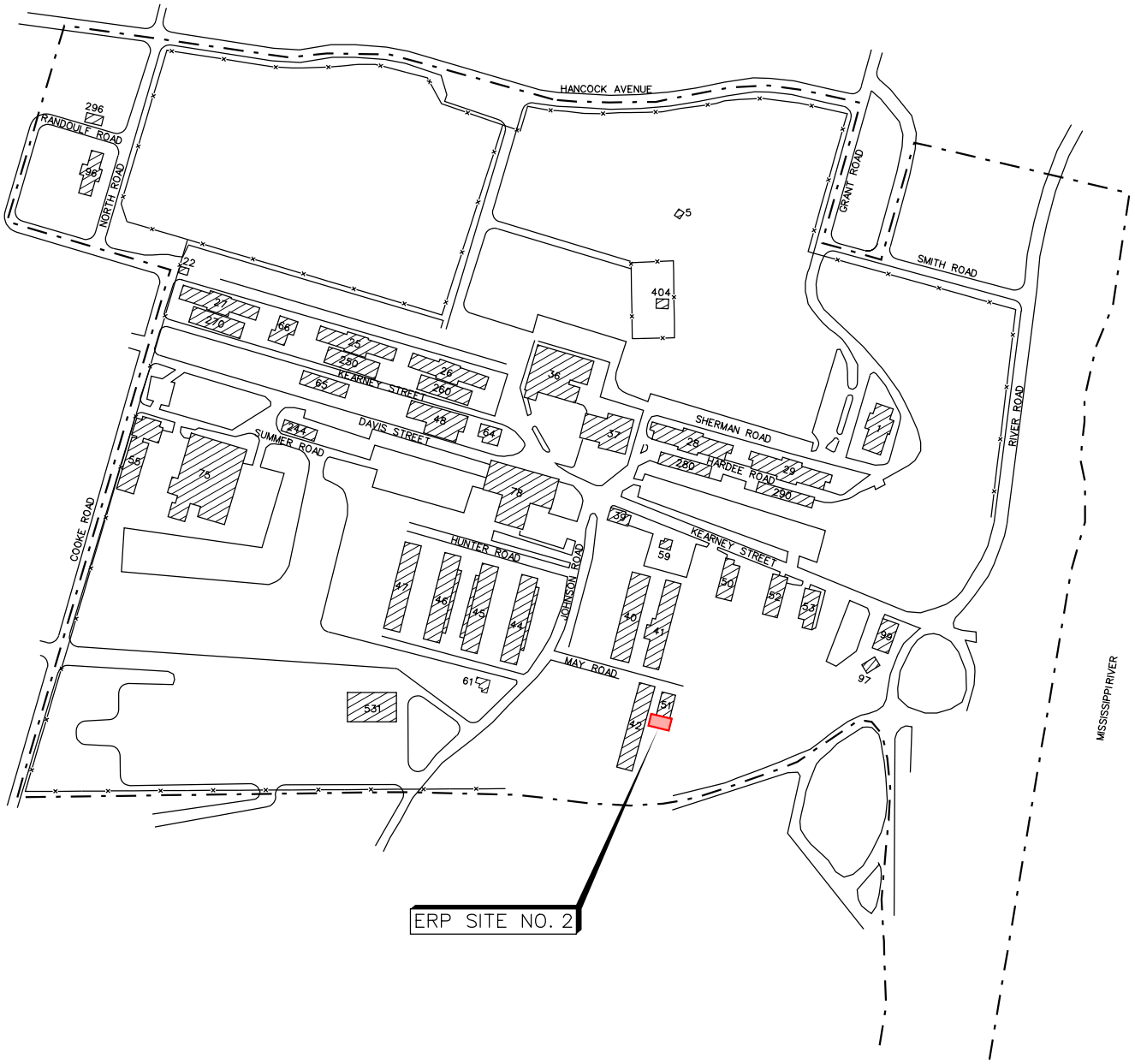


LEGEND:

- BUILDING
- FENCE
- PROPERTY BOUNDARY

0 500

APPROXIMATE SCALE IN FEET

SOURCE: IRP PA/SI REPORT FOR JEFFERSON BARRACKS ANG STATION, BY OPTECH CORP., MARCH 1997.

MWH Des Moines Iowa	157TH AIR OPERATIONS GROUP JEFFERSON BARRACKS ST. LOUIS, MISSOURI	ERP SITE NO. 2 LOCATION	FIGURE 2

P:\CAD\Guard\AIR\St. Louis\RI Work Plan\S2L-2.dgn 05-MAR-2004

cleanup of the site. The appropriate alternative (both technological and economical) must be selected to ensure proper remediation. Additional investigative studies, such as treatability studies, may be necessary to complete this phase.

- Remedial Design (RD) - The purpose of the RD is to produce design drawings and specifications for the selected alternative. The selected alternative is presented in the recommendations of the FS. A properly designed remediation system will allow effective site remediation.

- Remedial Action (RA) - The RA consists of the implementation of the RD. Implementation of the RD must be conducted thoroughly and in accordance with the RA Work Plan in order to ensure proper site remediation.

The above steps make remediation of the identified site, the ultimate goal of the ERP process, a reality.

1.3 GENERAL INVESTIGATIVE APPROACH

On-site RI activities at ERP Site No. 2, the Building 51 storage area, included the advancement of eight soil probeholes using Geoprobe® technology to collect near-surface soil samples; hollow-stem auger technology to drill borings to facilitate installation of four groundwater monitoring wells; and two separate rounds of groundwater monitoring at the newly-installed wells. The field activities, methods, and procedures followed those proposed in the *Final ERP Site No. 2 Remedial Investigation Work Plan* of September 2003.

1.4 REPORT ORGANIZATION

This RI Report has been prepared on behalf of the ANG by MWH and generally follows the organizational guidelines contained in the SOW and the United States (U.S.) EPA guidance documents. The RI Report has been organized into the following sections:

- Section 1 is an introduction and includes the purpose and scope of the RI Report.

- Section 2 presents information on the Station background and history, including previous investigations conducted at ERP Site No. 2.
- Section 3 summarizes the physical characteristics and setting of the Station including climate, topography, geology, hydrogeology, and surface water.
- Section 4 is a summary of the field activities and procedures conducted at ERP Site No. 2 by MWH in October and December 2003.
- Section 5 discusses the nature and extent of soil and groundwater chemical constituents at ERP Site No. 2.
- Section 6 summarizes the applicable or relevant and appropriate requirements (ARARs) to ERP Site No. 2.
- Section 7 presents the summary and conclusions of the RI Report.
- Section 8 includes the references used in the RI Report.

2.0 STATION BACKGROUND INFORMATION

This section provides background information for the Station and ERP Site No. 2, including location, adjacent land use, Station history, and previous and recent investigations conducted at ERP Site No. 2. The contents of this section are taken primarily from the March 1997 ERP PA/SI Report (Operational Technologies Corporation, 1997) prepared by Operational Technologies Corporation (OpTech) of San Antonio, Texas, and other documents discussed below.

2.1 LOCATION

The Station is situated in eastern Missouri, which includes the confluence of two of the nation's largest rivers, the Missouri and the Mississippi. As shown in Figure 1, the Station is located along the western bank of the Mississippi River, approximately 10 miles south of the city of St. Louis, in St. Louis County, Missouri. The Station occupies approximately 135 acres and is bordered by the Mississippi River to the east. The main entrance to the Station is currently through the north gate.

2.1.1 Adjacent Land Use

Land use in the vicinity of the Station is generally mixed residential and commercial. The Station is bounded by a county park to the north, a national veterans cemetery to the south, and an apartment complex to the west.

2.2 STATION HISTORY

Currently stationed at the Station are several ANG units including Headquarters 157th AOG, 218th Engineering Installation Squadron, 121st Air Control Squadron, and a Civil Engineering detachment. Also located at the Station are several Army National Guard (ARNG) units, components of the U.S. Army Reserve, National Guard Bureau Human Resources (eastern division), Defense Fuels Supply, and the U.S. Coast Guard. A full-time work force of approximately 140 people supports the Station's total unit training assembly population of over 2,000 soldiers.

On July 10, 1826, troops of the U.S. First Infantry Regiment encamped at the site later known as Jefferson Barracks. The military reservation of Jefferson Barracks was established on the edge of a vast expanse of wilderness known as the Louisiana Purchase. At the beginning, Jefferson Barracks was the largest military reservation in the country, covering over 1,700 acres and stretching 2 miles along the west bank of the Mississippi River. Jefferson Barracks was the first basic training camp of the U.S. Army and home of the First U.S. Cavalry. Throughout its history, Jefferson Barracks served as a U.S. Ordnance Depot, U.S. Army Engineers Depot, the largest U.S. Army General Hospital, U.S. Naval Munitions Storage Depot, Introduction and Separation Center, National Guard Mobilization Headquarters, Army Air Corps School, and as a training base. During the 1800s, Jefferson Barracks utilized mainly stone or wooden buildings. An extensive rebuilding program took place between 1890 and 1905, replacing the original stone and wooden buildings with red brick structures, which are still in use today. During World War I, Jefferson Barracks was designated as a clearing house for recruits. With the advent of World War II, there was a large increase in the population of Jefferson Barracks. Numerous temporary facilities and temporary wooden buildings were constructed to accommodate the increase in population.

On June 30, 1946, Jefferson Barracks was deemed unfavorable for use as a training site for a large modern army, and was declared surplus and erased from the muster roles as an active post. Elements of the Missouri National Guard then moved onto the base. On June 8, 1950, a tract of land containing 135 acres was transferred to the State of Missouri for use in training and maintaining reserve (National Guard) components of the armed forces. Hence, the former 1,700 acres of military reservation was reduced to 135 acres. In 1952, Missouri Guard units at Jefferson Barracks included the ANG's 157th Tactical Control Group, 181st Tactical Control Squadron, two Ground Electronic Engineering Installation Agency Squadrons, and ARNG Organizational Maintenance companies which provided vehicle maintenance to ARNG units in the St. Louis area. By 1970, most ARNG units in the St. Louis area had moved to Jefferson Barracks, and the majority of the maintenance activities at Jefferson Barracks were related to vehicle maintenance support or ARNG combat units.

In order for the Air Force to provide funds for the construction and maintenance of facilities used by the ANG at Jefferson Barracks, it required that the property be leased back to the Federal Government for a long term (at least 20 years). This lease was signed in 1970 and is effective until the year 2023. Since the lease was signed, the ANG has upgraded many of the 1890-1905 era buildings (red brick) to modern-day standards while maintaining their historical architectural features. The temporary wooden buildings from the World War II era have been demolished with the exception of one building. It has been upgraded and is currently in use as a carpenter shop for the ANG Civil Engineers. Some buildings under ARNG control have been improved, but most have not been maintained due to lack of funds. ANG units assigned to Jefferson Barracks provide radar support to both active and reserve organizations. ARNG units provide combat engineers, military police, and transportation and vehicle maintenance support. The size of the full-time work force, Air Force and Army technicians, active duty personnel, and Missouri State employees gives the Station the appearance of an active duty base.

2.3 PREVIOUS INVESTIGATIONS

The Air National Guard Readiness Center/Installation Restoration Branch authorized OpTech to conduct a PA/SI at the Station. The PA of the 157th AOG was initiated by ANG Readiness Center and OpTech personnel in November 1993. The PA consisted of interviews with personnel who were stationed at Jefferson Barracks at the time of the interview or who were retired or currently assigned to other military installations, all of whom were determined to be knowledgeable of the current and past waste disposal practices conducted at the Station. The PA also included a review of Station records and field observations.

The PA process revealed four AOCs at the Station, based on their historical use of hazardous materials and hazardous wastes; one of those AOCs was designated AOC-B, a storage area south of Building 51, now known as ERP Site No. 2 (Figure 2). The four AOCs (AOC-A through AOC-D) were further investigated by OpTech during the SI phase of their investigation, the purpose of which was to determine if contamination was present at each AOC, and, if so, if the presence of concentrations warranted further investigation as an ERP site.

The SI phase was conducted from December 5 through 15, 1994. It consisted of: a geophysical survey at AOC-A and AOC-D to provide information on possible buried sources of chemical constituents, and to verify no subsurface structures or hazards to drilling were present based on historical information obtained during the PA; a soil vapor survey at the four AOCs to delineate the extent of impacting benzene, toluene, ethylbenzene, and total xylenes (BTEX) or total petroleum hydrocarbon (TPH), the results of which were used to develop the optimum locations of borings; and soil borings at the four AOCs to confirm and to attempt to delineate chemical constituents in soil. A total of 14 soil borings were drilled at the AOCs to obtain soil samples for field screening, subsurface geological characterization, and laboratory analytical analyses. A total of 37 soil samples and three surface sediment samples were submitted for AOC-specific analytical analyses that included testing for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), TPH, and total metals. The soil samples were field-screened using a photoionization detector (PID) and a field gas chromatograph, then subsequently analyzed for the laboratory parameters related to the potential chemicals of concern identified in the PA. The historical analyte detections in soil from the 1994 SI are included as Appendix A.

Piezometer installation was planned as part of the SI activities to determine groundwater flow direction in the vicinity of the AOCs, but as groundwater was not encountered above the bedrock in the majority of borings during drilling, and at the direction of the ANG Readiness Center, piezometers were not installed.

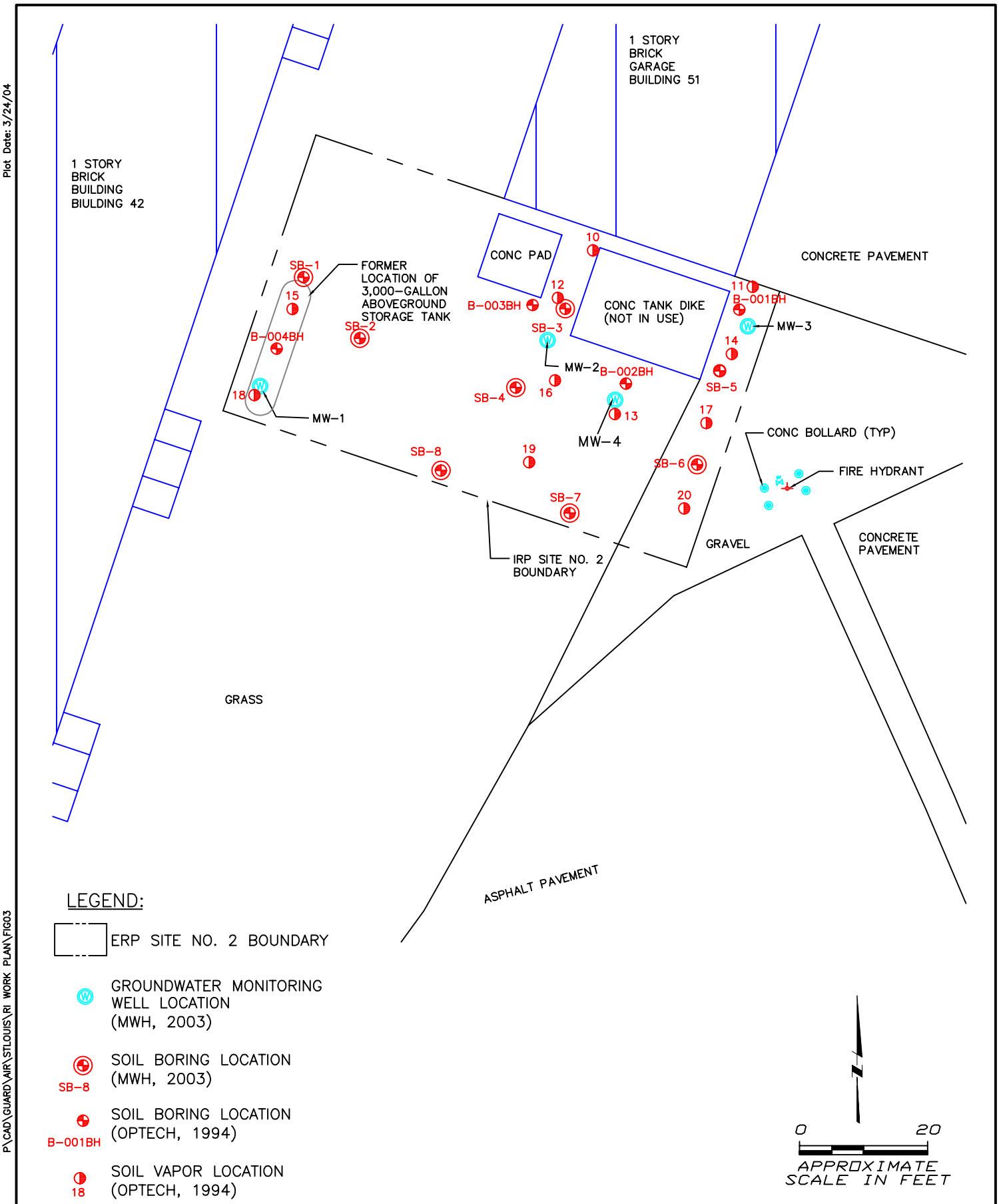
AOC-A, AOC-C, and AOC-D, designated by OpTech during the PA/SI, received a No Further Response Action Planned designation from the Missouri Department of Natural Resources (MDNR) in a letter dated May 28, 2003, and are thus not addressed further in this RI Report.

2.4 ERP SITE NO. 2 DESCRIPTION

Based on the PA conducted in 1993 and 1994, Building 51 was constructed in the late 1960s and was used for vehicle maintenance on a full-time basis until 1975. Building 51 had two maintenance bays where a combined total of two to four vehicles were serviced

weekly. The used oil generated by the vehicle maintenance activities at Building 51 was disposed east of Building 42 and south of Building 51 during the 1960s and 1970s. The PA determined the AOC at Building 51 to be the roughly 40- by 60-foot area adjacent to the building on the south side, surfaced by grass, gravel, and a small concrete pad. This area is currently used to store grounds maintenance vehicles and equipment, and other miscellaneous nonhazardous materials. A HAZ-STOR building is located in this area, adjacent to the southwest corner of Building 51; and a 15- by 18-foot concrete pad, constructed in 1991, is situated adjacent to the southeast corner of Building 51 (Figure 3). A 3,000-gallon aboveground storage tank (AST) was used to store waste motor oil in the southwestern portion of the storage area; the AST was removed, and no physical evidence of its previous location remains at the site. The AST replaced 55-gallon drums that had previously been used for storage of the used oil. It is estimated the AST was present from the early 1970s until the late 1980s and was used to store waste motor oil from all ARNG maintenance facilities. Other materials such as hydraulic fluid, new motor oil, and cleaning compounds were stored in 55-gallon drums on gravel within the storage area. The gravel was periodically replaced because of staining from spilled materials. No records documenting the disposition of the replaced gravel were found during the PA work completed by OpTech.

During the SI, eleven soil vapor survey points (labeled 10 through 20; Figure 3) were advanced at ERP Site No. 2, to screen for chemical constituents associated with possible spillage from used oil and solvent storage. Four soil borings (labeled B-001BH through B-004BH; Figure 3) were advanced at ERP Site No. 2, and three soil samples were collected from each boring for laboratory analysis. Each soil sample was analyzed for VOCs, SVOCs, TPH, and metals. TPH, benzo(a)pyrene, and beryllium were detected in soil above the current MDNR soil cleanup action levels.



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MWH DES MOINES IOWA	157TH AIR OPERATIONS GROUP JEFFERSON BARRACKS ST. LOUIS, MISSOURI	ERP SITE NO. 2 LAYOUT	FIGURE 3

3.0 ENVIRONMENTAL SETTING

The environmental setting of the Station is presented through discussions of physiography, climate, geology, soils, hydrogeology, and surface water. These discussions incorporate both regional and local perspectives. Information and results from this and other previous investigations have been used, where applicable, to describe the geologic setting and hydrogeologic characteristics of the Station and ERP Site No. 2.

3.1 CLIMATE

The climate of Missouri is essentially continental. There are frequent changes in weather, both from day to day and from season to season. Missouri is in the path of cold air moving down out of Canada, warm, moist air coming up from the Gulf of Mexico, and dry air from the west. While winters are cold and summers hot, prolonged periods of very cold or very hot weather are unusual.

In the summer, temperatures in eastern Missouri rise to 90 degrees Fahrenheit (° F) or higher on an average of 55 to 60 days each year. In the winter, there is an average of about 70 days with temperatures below 32° F. The annual average temperature in the St. Louis area is 55.3° F.

The majority of precipitation occurs during the fall, winter, and early spring months. Measurable precipitation occurs on an average of about 100 days each year; about half of those will be days with thunderstorms. Precipitation in the St. Louis area averages approximately 38 inches a year. Snowfall is the most common in December, January, and February, with a yearly average of approximately 17 inches. Major flooding occasionally occurs along the Missouri and Mississippi Rivers, normally from March through July. Tornadoes are also a danger in the area, mainly occurring from March through June.

3.2 TOPOGRAPHY

3.2.1 Regional Topography

The topography of St. Louis County varies widely in character, ranging from the flat, almost featureless floodplains of the Missouri and Mississippi Rivers, to the rugged,

intensely dissected uplands of the west county area. The area lies within the Dissected Till Plains physiographic province, a gently undulating region, with altitudes ranging from 500 to 700 feet above sea level.

3.2.2 Site Topography

The elevation of the Station ranges from approximately 390 (the general elevation of the Mississippi River at the Station) to 500 feet above mean sea level (msl). Construction of buildings, roads, and parking areas has altered the original topography of the Station where native soils have been cut and graded to provide flat construction surfaces.

The ERP Site addressed in this RI Report is a relatively level area. ERP Site No. 2 has a gentle slope from west to east. The elevation of ERP Site No. 2 ranges from approximately 452 to 456 feet above msl.

3.3 GEOLOGY

3.3.1 Soils

Soils at the Station consist primarily of the Urban Land-Harvester complex, which are deep, moderately drained silt loams. This complex consists of Urban Land and the intermingled areas of moderately well-drained Harvester soils on rolling and hilly uplands. Prior to urban development, these areas contained circular and elongated limestone sinks known as karst topography. Some sinks have been filled or altered during development and are no longer easily recognized. The karst areas are about 50 to 55 percent located in Urban Land and Harvester soils, and are so intermingled or in such intricate patterns that to separate them in mapping is not practical. The Urban Land part of this complex is covered by streets, parking lots, and other structures that so obscure or alter the soil that identification of the series is not feasible (United States Department of Agriculture Soil Conservation Service, 1979). Typically, the surface layer of the Harvester soil is mixed very dark grayish brown to brown silt loam about 2 inches thick. The next layer, to a depth of about 20 inches, consists of brown and pale brown silt loam and silty clay loam fill material. Below the reworked fill material to a depth of 60 inches is older, unworked, brown silt loam. In places, cuts and fills are several feet deep, and the cuts expose residual chert or limestone bedrock. In a few places, the surface layer is

silty clay loam. In some areas, slopes around the sinks are more than 20 percent. The Urban land soil is essentially impervious to water. Permeability is moderately slow in the Harvester soils, natural fertility is medium, and organic matter content is very low. The surface layer of the Harvester soils is friable. Surface runoff is rapid to very rapid.

The Harvester soils in the complex are in yards, open spaces around buildings, parks, and gardens, and in undeveloped random tracts that are primarily in and around sinks. Most of the sinks in the unit are deep and have steep sides. They are generally not suitable for building sites because soils on the sides of the sinks are generally not stable; also, the sink can become plugged, resulting in a saturated soil condition in the bottom of the sink during some parts of the year.

3.3.2 Regional Geology

Three major structural features have been noted in the vicinity of the Station: the St. Louis Fault, Dupo Anticline, and the Cheltenham Syncline. The St. Louis Fault trends northeast and the rock layers dip one to two degrees toward the northeast. The Dupo Anticline trends northwest from Illinois into Missouri. The Cheltenham Syncline is located directly west of the Dupo Anticline. Rock formations that crop out consist primarily of limestone and cherty limestone, although several shale units are present. Exposed formations that range in age from Ordovician to Mississippian are distributed throughout St. Louis County, Missouri. The geology of the region is characterized by up to 150 feet of unconsolidated material, which is underlain by bedrock. The unconsolidated material includes lacustrine and glacial till deposits, which consist primarily of silt and clay. The St. Louis and Salem Formations are subject to the development of karst (sinkhole) topography.

Eastern Missouri lies near the western margin of the Illinois Basin; bedrock was deposited in the Illinois Basin during the Mississippian Period, 360 million years ago, and lasted approximately 30 million years. The stratigraphic sequence preserved in the basin ranges from Cambrian to Upper Pennsylvanian in age. Regional bedrock is made up of the Meramecian Group, which consists of (in ascending order) the Warsaw, Salem, St. Louis, and St. Genevieve Formations. The St. Louis Formation is the uppermost

bedrock unit at Jefferson Barracks. In east-central Missouri, the total maximum thickness of the Meramecian Group ranges from 300 to 450 feet. The lithology of the Meramecian Group consists primarily of shale, shaley limestone, dolostone, and limestone. The St. Louis and St. Genevieve Formations are primarily massive, fine-grained limestones containing occasional thin shale beds and chert. Shale and shaley limestone occur primarily in the lower half of the Group, in the Warsaw and Salem Formations. The Salem Formation is the most argillaceous (contains clay material) of the group and grades into a shaley limestone at its base.

3.3.3 Site Geology

Soil lithologic information obtained by MWH from wells drilled and boreholes advanced during the October and December 2003 RI activities indicate the shallow subsurface is comprised predominantly of clay, silty clay, and sand, with some gravel lenses.

3.4 HYDROGEOLOGY

3.4.1 Regional Hydrogeology

In addition to surface-water sources, a large amount of water is available from bedrock and alluvial aquifers that underlie the region. Though some groundwater is too mineralized to use, much of it is fresh and of good quality. Throughout much of St. Louis County, potable groundwater supplies are available from Mississippian limestones, but water yields are highly variable and unpredictable. However, these bedrock and alluvial aquifers account for only one to two percent of the total pumpage, respectively (United States Geological Survey and Missouri Geological Survey and Water Resources, 1974).

Large amounts of fresh water are stored in the bedrock and alluvium underlying the area. The bedrock aquifers are primarily dolomite and limestone with one notable exception, the St. Peter Sandstone. Groundwater occurs along fractures, bedding planes, in solution openings in the limestone and dolomite, and in voids between the grains in sandstone. The principal bedrock aquifers are the St. Peter, the Roubidoux, the Gasconade, and the Potosi. Shallow bedrock aquifers that are hydraulically connected with the rivers also receive recharge from natural infiltration of the rivers during sustained high-river stage

and flooding. Most private water wells are only drilled deep enough to encounter the St. Louis Limestone, Salem Formation, or Warsaw Formation, which are minor aquifers (MDNR, October 1996).

Areas having the greatest potential for development of groundwater are in the Mississippi and Missouri River floodplains. Water from the alluvial deposits generally is a very hard calcium-magnesium-bicarbonate type with iron and manganese content commonly being high. Saline water has moved upward from the underlying bedrock into the alluvial aquifers at Valley Park and Times Beach in the Meramec River valley and in the Mississippi River valley near St. Peters. Alluvial aquifers in the area are recharged by infiltration of stream water during sustained high-river stage flooding, by direct precipitation, and by underflow from underlying and adjacent bedrock.

An undetermined amount of discharge from deeper aquifers into shallow aquifers is taking place in the St. Louis area. In areas such as Valley Park, where deep wells have been improperly cased or where casings have deteriorated, mineralized water from deeper aquifers has moved up into shallower horizons and, where head differences permit, some waters move from shallower aquifers into deeper ones through wells (United States Geological Survey and Missouri Geological Survey and Water Resources, 1974). The unconsolidated deposits in the vicinity of the Station are not considered to be an aquifer due to the low water-bearing capacity of the deposits. Well yields from these deposits are described as "essentially not water yielding" (PEER Consultants, P.C., 1993). Logs of wells drilled in the general area show total depth completions ranging from approximately 200 to 325 feet below ground surface (bgs), with yields from 0.5 to 4 gallons per minute. According to the MDNR, there are no active public water supply wells within a 4-mile radius of the Station.

A zone of karst terrain occurs in a discontinuous belt surrounding the Station on the northeast, west, and southwest. Karst terrain is characterized by the development of caves and sinkholes, and groundwater flow in karst terrain occurs principally in solution-enlarged joints and fractures. Consequently, the direction of groundwater flow in bedrock in the vicinity of the Station is difficult to ascertain.

3.4.2 Site Hydrogeology

Due to the lack of geologic data from geotechnical or RI activities conducted at the Station in the past, it was not possible to accurately estimate site-specific groundwater conditions. Although no groundwater was encountered during excavations for removal of underground storage tanks (USTs) at the SS-1 site west of Building 40, groundwater was encountered in some of the borings drilled during the 1994 SI fieldwork (OpTech, 1997). It was previously estimated that local shallow groundwater flow direction is generally toward the Mississippi River.

The measured depths to groundwater at ERP Site No. 2 were approximately 17 to 23 feet bgs during October 2003, and 14.5 to 23 feet bgs in December 2003 (Table 1).

During the 2003 RI field investigation activities, the apparent horizontal groundwater flow direction at ERP Site No. 2 was generally toward the east, in the direction of the Mississippi River, as was previously estimated for the SI. Shallow groundwater contour maps, for October and December 2003, are included as Figures 4 and 5, respectively. Horizontal hydraulic gradients calculated for the 2003 field activities were approximately 0.13 foot/foot across ERP Site No. 2.

3.5 SURFACE WATER

The City of St. Louis, near the confluence of the Missouri and Mississippi Rivers, has abundant access to surface-water supplies. According to the MDNR, the City of St. Louis draws 100 percent of surface water from the Missouri River (Missouri Department of Natural Resources, October 1996). Flooding can occur in the area during all months, but is most common in March through July.

Federal Emergency Management Agency floodplain maps were reviewed by OpTech personnel to determine the extent of the 100-year floodplain in the vicinity of the Station. The majority of the Station is not situated within the 100-year floodplain, but is located in Zone C, or "areas of minimal flooding." Only a small portion of the Station, along the riverbank, is impacted by the 100-year floodplain. All natural drainage from the Station flows directly to the Mississippi River.

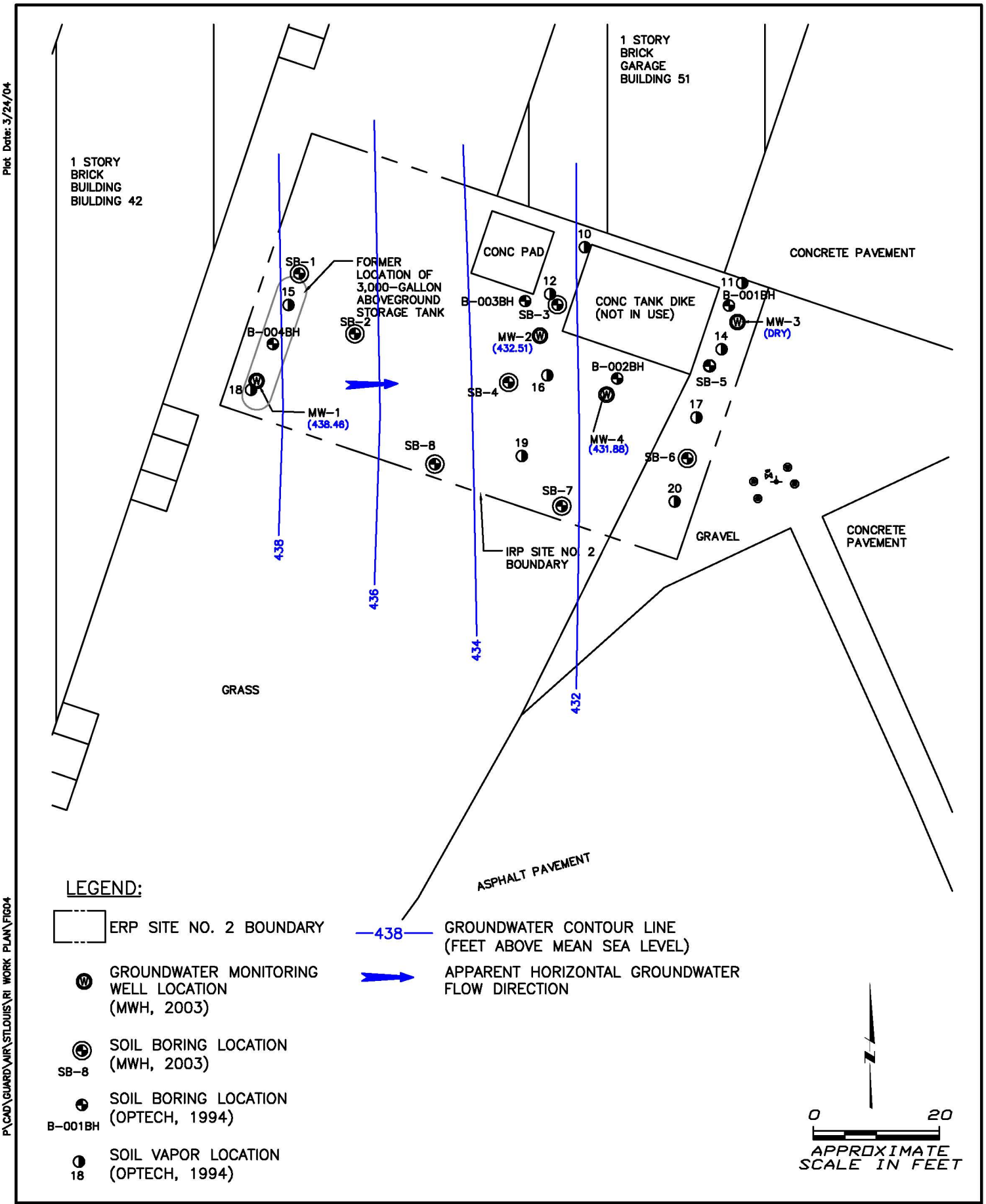
TABLE 1

WATER LEVEL MEASUREMENTS, OCTOBER AND DECEMBER 2003
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION

			10/9/2003 and 10/10/2003			12/4/2003 and 12/5/2003		
Location / Well Identification	**Well Completion**	**Elevation of TOC (feet msl)**	**Depth to Water (feet) from TOC**	**Groundwater Elevation (feet msl)**	**Total Depth of Well (feet msl)**	**Depth to Water (feet) from TOC**	**Groundwater Elevation (feet msl)**	**Total Depth of Well (feet msl)**
IRP Site No. 2								
MW-1	Flushmount	455.28	16.82	438.46	25.1	14.51	440.77	25.1
MW-2	Flushmount	455.06	22.55	432.51	24.9	20.00	435.06	25.0
MW-3	Flushmount	453.45	---	---	25.1	22.72	430.73	24.9
MW-4	Flushmount	454.52	22.64	431.88	25.0	21.41	433.11	25.0

Notes:
TOC = Top of casing.
msl = Above mean sea level.
--- = Essentially no groundwater in well.

A drainage ditch lies between the southern boundary of the Station and the Jefferson Barracks National Cemetery, carrying surface drainage to the Missouri River to the east. The drainage ditch is located approximately 120 feet south of ERP Site No. 2.



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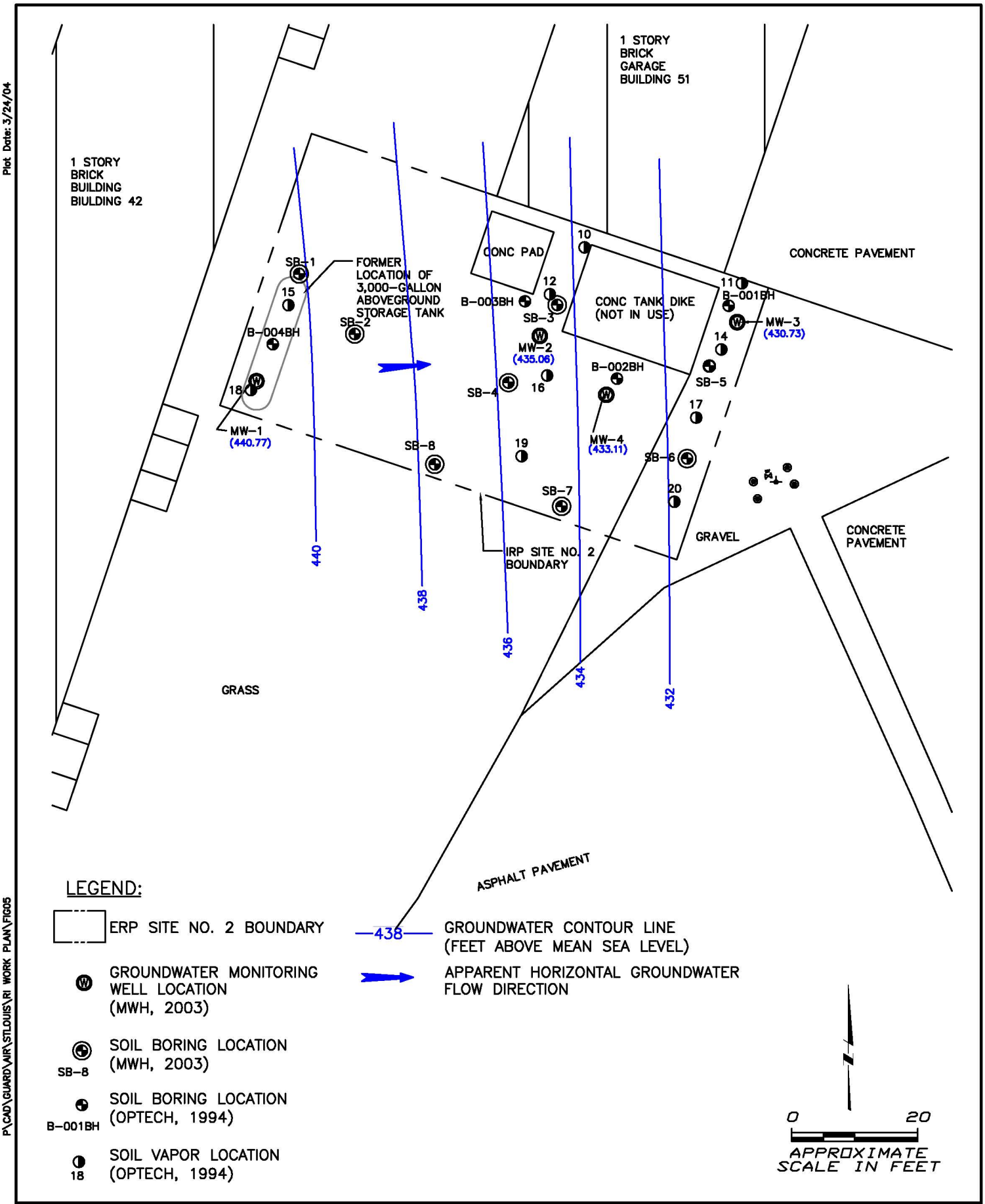
MWH DES MOINES IOWA	157TH AIR OPERATIONS GROUP JEFFERSON BARRACKS ST. LOUIS, MISSOURI	ERP SITE NO. 2 GROUNDWATER CONTOUR MAP OCTOBER 2003	FIGURE 4



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MWH DES MOINES IOWA	157TH AIR OPERATIONS GROUP JEFFERSON BARRACKS ST. LOUIS, MISSOURI	ERP SITE NO. 2 GROUNDWATER CONTOUR MAP DECEMBER 2003	FIGURE 5

4.0 2003 REMEDIAL INVESTIGATION PROGRAM AT ERP SITE NO. 2

This section summarizes monitoring well installation and sampling activities performed at the Station during the RI, as proposed in the *Final ERP Site No. 2 Remedial Investigation Work Plan* (MWH, 2003). These activities were selected based on results of the PA/SI and subsequent meetings and discussions.

4.1 TECHNICAL APPROACH AND SCOPE OF WORK

The technical approach for conducting the RI at ERP Site 2 No. 2 was to use data gathered during previous investigations to streamline and focus data collection activities during the 2003 field activities. The purpose of the RI investigative activities was to verify the soil and groundwater conditions noted during the SI, and to provide the additional information necessary to delineate the areal extent, depth, and concentration of chemicals present in soil and groundwater at ERP Site No. 2.

The following activities were completed as part of the 2003 RI program:

- Eight Geoprobe® boreholes were advanced, including soil sampling, logging, and PID readings, in order to further define the extent of soil impact.
- Four groundwater monitoring wells were installed in the immediate vicinity of the highest soil impacts noted during the SI.
- Soil was logged and PID readings measured during well installation.
- Groundwater samples were collected over two rounds at the four newly installed monitoring wells to verify current groundwater conditions.
- Water level measurements were taken in the four new wells in order to determine the apparent direction of groundwater flow beneath the site (Table 1).

Locations of boreholes advanced and monitoring wells installed as part of the 2003 activities are illustrated in Figure 3.

4.1.1 Soil Boring and Monitoring Well Depths

The eight soil borings at ERP Site No. 2 were advanced to 10 feet bgs during the 2003 RI field activities. This maximum depth was selected as it permitted shallow soil stratigraphy to be assessed. Additionally, the greatest concentrations of chemical constituents detected during the 1994 SI ended at approximately 10 feet bgs, and concentrations below that depth were less than MDNR soil cleanup action levels.

The four groundwater monitoring wells installed at ERP Site No. 2 during the 2003 RI activities were constructed so that the screen would intersect wet zones noted during previous investigations, to a depth of 25 to 26 feet bgs. This depth permitted the groundwater to be sampled and shallow soil stratigraphy to be assessed, in order to verify current groundwater conditions and determine the apparent direction of groundwater flow beneath the Site.

4.1.2 Sample Collection and Analysis

Borings were continuously cored to 10 feet, and soil samples were collected from the sleeves in 2-foot intervals for in-field vapor screening (i.e., PID readings). Two soil samples were submitted for laboratory analysis from each borehole, from the intervals exhibiting the greatest apparent impact, based on field observations. Where no impact was observed, the soil samples were collected from the uppermost and lowermost soil intervals recovered during probing.

Drill holes were drilled 25 feet (26 feet for MW-3), and soil samples were collected from the continuous-core sampler in 2-foot intervals for in-field vapor screening (i.e., PID readings). No soil samples were submitted for laboratory analysis from the drill holes, per the *RI Work Plan*.

Groundwater samples were to be collected from the four newly installed monitoring wells over two rounds. Groundwater samples were collected from wells MW-1 and MW-2 no less than 24 hours following completion of well development. Wells MW-3 and MW-4 recharge slowly and thus did not have sufficient water for sampling during the first round. Groundwater samples were collected from all four monitoring wells during the second round.

4.2 INVESTIGATION PROCEDURES

4.2.1 Borehole and Drilling Procedures

4.2.1.1 Site Safety and Permits. A site-specific Site Safety Plan (SSP) was prepared for MWH personnel designated for field activities. Site safety during the 2003 field activities was conducted in accordance with pertinent Occupational Safety and Health Administration requirements to ensure the health and safety of field workers. A copy of the site-specific SSP was presented in Appendix A of the *Final ERP Site No. 2 Remedial Investigation Work Plan* (MWH, 2003).

The Station Civil Engineer (CE) coordinated the location and marking of utilities in the vicinity of the proposed borings and new monitoring wells. The Station Environmental Officer obtained the required dig permits from the Station CE prior to commencement of field activities.

4.2.1.2 Soil Borings. Soil borings advanced at ERP Site No. 2 were completed by Brotcke Well & Pump, Inc. (Brotcke) of Fenton, Missouri using a small track-mounted Geoprobe® hydraulic direct-push system. During probing, soil was collected in disposable acetate-lined sleeves at intervals of 4 feet. The borings were abandoned in accordance with the Missouri Well Construction Rules. The borings were backfilled with chipped bentonite to within 2 to 3 inches of the surface to provide a proper seal, immediately following soil sampling activities. The remaining opening was covered with native soil to match the surface where the probehole was placed.

4.2.1.3 Drill Holes. Drilling for monitoring wells installed at ERP Site No. 2 was completed by Brotcke using a truck-mounted 8-inch outside diameter (OD) hollow-stem auger (HSA) drilling system. A 4-foot split-barrel continuous-core sampler was advanced to collect soil throughout the depth of each drill hole. Each drill hole was completed as a groundwater monitoring well.

4.2.1.4 Equipment Decontamination. Decontamination procedures, as outlined in the *RI Work Plan*, were implemented. Before use, the nondedicated drilling, boring, groundwater, and soil sampling equipment was decontaminated. Large equipment was

steam cleaned. Small downhole equipment was washed with a nonphosphate detergent and rinsed with deionized water prior to use at subsequent sample locations.

4.2.2 Soil Sampling Activities

4.2.2.1 Boring Logs. Boring logs were prepared during advancement of each boring and drill hole. The recovered soil was used to construct lithologic logs that include texture, color, moisture content, and consistency. The boring logs are included as Appendix B.

4.2.2.2 Laboratory Sample Collection. Two grab soil samples were collected directly from the acetate-lined sleeve during each borehole advancement and placed in clean, labeled, laboratory-supplied containers. The soil was packed in a manner as to minimize the amount of void space within the container. The sample collection activities were documented in the project field book. The sample was accompanied by completed chain-of-custody (COC) documentation.

4.2.2.3 Soil Sample Field Screening. As each lift of soil was removed and exposed for logging during the borehole and drilling advancement, a portion of the soil from each sampling interval was placed in a small, labeled, plastic bag. After sealing the bag and allowing the soil sample to stabilize at ambient temperature, headspace readings were measured using a PID. The PID readings are indicated on the soil boring logs in Appendix B. Field screening was conducted to help determine the vertical extent of any volatile chemical constituents that may be present, and to aid in the selection of the samples for laboratory analysis.

4.2.3 Groundwater Investigation

4.2.3.1 Monitoring Well Construction. The four drill holes were completed as groundwater monitoring wells (MW-1 through MW-4) as specified in the *RI Work Plan*. The wells were constructed so that the screen intercepted the wet zones encountered during previous investigations and to a total depth of 25 to 26 feet bgs. Upon completion of drilling activities at each well location, monitoring well materials were installed through the drilling augers. Each well was constructed of flush-threaded 2-inch

inner-diameter (ID) Schedule 40 polyvinyl chloride (PVC) well screen, 10 feet in length, and 2-inch ID Schedule 40 PVC riser pipe. The well screens were factory slotted, with a slot width of 0.010 inches. The bottom of the screens were plugged with a threaded cap. Appropriately sized filter pack sand was placed in the annular space surrounding the well screens by slowly pouring as the augers were withdrawn from the drill hole. The filter pack extended to approximately 3 feet above the top of the screens. Bentonite chips were placed to a depth of approximately 4 feet above the filter pack and hydrated. Neat cement was mixed and slurried into the drill hole to within 1 foot of the ground surface.

The four wells were completed flush with the surrounding grade. The area around the well casings was dug out to accommodate a reinforced, flushmount, metal well box set into a concrete pad. The metal well boxes were supplied with bolt-down metal covers. A tight-fitting PVC cap was installed on the end of the riser pipe of each well. The monitoring well construction diagrams are included in Appendix B. The wells were properly certified with the State of Missouri, and the Monitoring Well Certification Records are included as Appendix C.

4.2.3.2 Monitoring Well Survey. Surveying was completed for each newly installed monitoring well. The locations of the four new wells were determined relative to other facility features. The elevations of the tops of the well casings were surveyed to within 0.01 foot relative to an on-site benchmark.

4.2.3.3 Monitoring Well Development. The four new wells were developed no sooner than 24 hours following construction. Each well was developed using a new disposable bailer. The minimum amount of water purged from each well during development was three times the amount of any water used during well construction plus three times the standing water volume in the well, except for those wells that purged dry. Purging continued until the silt and sand at the bottom of the well was removed, or the well was purged dry three times. During the development process, pH, temperature, and conductivity of the water were periodically measured and recorded.

4.2.3.4 Monitoring Well Groundwater Sample Collection. Two of the newly installed groundwater monitoring wells were sampled during the first round of the 2003

field activities. Wells MW-1 and MW-2 recovered sufficiently following development for sampling, whereas wells MW-3 and MW-4 did not. All four wells were sampled during the second round of the 2003 field activities.

The two wells that recovered sufficiently were sampled no sooner than 24 hours following well development, for the first round of groundwater sampling, using low-flow techniques with a QED® bladder pump and new dedicated tubing. At the time of sampling, the cap on the well casings was removed and the wells were allowed to equilibrate. The water level was measured using an electronic water level probe to the nearest 0.01 foot. To reduce sample turbidity, the total depth of each well was measured following collection of the groundwater samples. All water level measurements were measured from a permanent reference point marked on the top each monitoring well casing.

The monitoring wells were purged prior to sampling, using the QED® bladder pump, in an effort to remove stagnant water and ensure a representative groundwater sample was collected. Field parameters (pH, temperature, and conductivity) were measured using a Horiba flow-through cell during purging and prior to sample collection. Each well was purged until the measured parameters had stabilized. The parameters were considered stable if there was less than a 10 percent change in conductivity and pH, and less than a one degree Celsius change in temperature. Final parameters were recorded before sampling, and are included as Table 2.

Groundwater samples were collected using the QED® bladder pump immediately following the purging of that well. The groundwater was collected directly into clean, labeled, laboratory-supplied containers. Care was exercised while obtaining samples to be analyzed for VOCs and TPH, to ensure no headspace existed in the sample containers. All sample collection activities were documented in the project field book. All samples were accompanied by completed COC documentation.

TABLE 2

FIELD PARAMETERS
2003 REMEDIAL INVESTIGATION PROGRAM
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION

Monitoring Well ID:		**MW-1**		**MW-2**		**MW-3 [a]**	**MW-4 [a]**
Date Collected:		**10/10/2003**	**12/4/2003**	**10/10/2003**	**12/5/2003**	**12/4/2003**	**12/5/2003**
Parameter	**Units**						
Temperature	^{o}C	17.7	14.6	17.4	14.9	15.3	14.0
pH	S.U.	5.84	6.07	6.20	6.43	6.75	6.50
Conductivity	µS/cm	0.228	0.242	0.427	0.454	0.557	0.527

Notes:
[a] There was insufficient groundwater during the first round of field work to permit sampling.
^{o}C = Degrees Celsius.
µS/cm = Microsiemens per centimeter.
S.U. = Standard units.

A second round of water level measurements and groundwater sampling, following the procedures outlined above, was conducted. The second round of groundwater sampling was completed nine weeks after completion of the first round.

4.2.4 Quality Assurance and Quality Control

The quality assurance/quality control (QA/QC) procedures for the 2003 field activities were followed as specified in the *RI Work Plan*. Field and laboratory QA/QC checks were performed, to evaluate the performance of the field sampling procedures and laboratory analytical procedures.

Field QA/QC checks included the collection and analysis of field duplicates and trip blanks for the purpose of evaluating quality assurance in field sampling methods. Field duplicate soil samples were collected from two probeholes. Field duplicate groundwater samples were collected from monitoring well MW-1 during each round of groundwater sampling. Precision was evaluated in field duplicates by calculating the relative percent difference (RPD) of chemical concentrations detected in the primary sample and its duplicate. The RPD reflects the combined precision of field and laboratory procedures for the associated samples. An RPD goal of 35 percent was chosen for this project.

Analysis of trip blanks provides a means of assessing potential cross-contamination of groundwater samples during field sampling, handling, and/or transport. Each cooler used to ship groundwater samples collected for VOC analyses was accompanied by a trip blank that was also analyzed for VOCs.

4.2.5 Investigation-Derived Waste

Personal protective and other disposal equipment was placed in polyethylene trash bags and disposed with the Station municipal solid waste. Soil cuttings produced during advancement of the borings or during drilling activities that did not appear to be impacted were thin-spread in a nearby low area, as approved by the Station Environmental Officer. Impacted soil cuttings were containerized in a drum. All decontamination, development, and purge waters were containerized in a drum. The drums were labeled and staged south of ERP Site No. 2, as approved by the Station Environmental Officer, until laboratory analysis is reviewed and a final disposal option is determined.

4.2.6 Land Surveying

The locations of each of the four newly installed monitoring wells were determined relative to other Station features. The elevations of the tops of the well casings were surveyed to within 0.01 foot relative to an on-site benchmark.

4.3 SAMPLE ANALYSES, HANDLING, AND DOCUMENTATION

Once a desired soil or groundwater sample was retrieved and logged by field personnel, the sample was prepared for shipment to the laboratory. Sample analysis methods are summarized in Table 3. Handling procedures used during the 2003 field activities are presented below.

4.3.1 Soil Sample Analyses

Two soil samples from each borehole at ERP Site No. 2 were submitted for laboratory analysis. The soil samples were submitted to Keystone Laboratories, Inc. (Keystone) of Newton, Iowa, for analysis of VOCs, SVOCs, polychlorinated biphenyls (PCBs), TPH, and the eight Resource Conservation and Recovery Act (RCRA) metals.

4.3.2 Groundwater Sample Analyses

Groundwater samples collected from monitoring wells during the first and second rounds of the 2003 field activities at ERP Site No. 2 were analyzed for VOCs, SVOCs, PCBs, TPH, and the eight RCRA total metals. During the second round of groundwater sampling, well MW-3 produced only enough water to analyze for VOCs, SVOCs, and TPH. The groundwater samples were submitted to Keystone for analysis.

4.3.3 Sample Containers

A summary of sample types, number of samples, and respective reference methods were presented as Table 1 of the *Final ERP Site No. 2 Remedial Investigation Work Plan* (MWH, 2003). All sample containers were provided by the laboratory.

TABLE 3

ANALYTICAL METHODS FOR SOIL AND GROUNDWATER SAMPLES
2003 REMEDIAL INVESTIGATION PROGRAM
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION

Chemical Constituent	Method Number	Reference
Soil		
Volatile Organic Compounds	EPA Method 8260B	SW-846
Semivolatile Organic Compounds	EPA Method 8270C	SW-846
Total Petroleum Hydrocarbons	EPA Method 8015	SW-846
Total Extractable Hydrocarbons	EPA Method 8015	SW-846
Polychlorinated Biphenyls	EPA Method 8082	SW-846
Metals, Total	EPA Method 6010/7000	SW-846
Groundwater		
Volatile Organic Compounds	EPA Method 8260B	SW-846
Semivolatile Organic Compounds	EPA Method 8270C	SW-846
Total Petroleum Hydrocarbons	EPA Method 8015	SW-846
Total Extractable Hydrocarbons	EPA Method 8015	SW-846
Polychlorinated Biphenyls	EPA Method 8082	SW-846
Metals, Total	EPA Method 6010/7000	SW-846

Notes:
EPA = Environmental Protection Agency.

4.3.4 Sample Preservation and Holding Times

Most of the parameters that were measured or evaluated are not chemically stable under some conditions. In these cases, sample preservation was required. Methods of sample preservation are relatively simple and are generally intended to: 1) retard biological action, 2) retard hydrolysis, and 3) reduce sorption effects. Prepreserved bottles were provided by the laboratory. In addition, all sample holding times were met.

4.3.5 Sample Handling

Immediately following collection, samples were placed in coolers with ice. In preparation for transport, samples were packed in coolers in such a way as to prevent breakage of samples. Ice was packed with the samples in order to maintain sample temperature during transport.

Samples were shipped to Keystone, and the coolers and accompanying COC documentation were transferred from MWH to the receiving laboratory employee.

4.3.6 Chain-of-Custody Documentation

COC procedures provide an accurate written record tracing the possession of individual samples from the time of field collection through laboratory analysis. The COC record was used to document the samples taken and the analyses requested. Information recorded on the COC by field personnel included the following:

- Project name
- Sampling location
- Sample designation
- Date and time of collection
- Sample matrix
- Sample analyses required
- Signature of sampler
- Signature of individuals involved in the custody transfer.

Copies of the signed COC documents for the 2003 field activities are included as Appendix D.

5.0 NATURE AND EXTENT OF CHEMICAL CONSTITUENTS

This section summarizes the chemical constituents in soil and groundwater at ERP Site No. 2, and compares the analytical results to current MDNR soil cleanup action levels. The historical analyte detections in soil from the 1994 SI are included as Appendix A. The soil boring logs and monitoring well construction diagrams (with PID readings) are included as Appendix B, COC documentation is included as Appendix D, and laboratory analytical reports are included as Appendix E, for the 2003 field investigative activities.

5.1 SOIL INVESTIGATIONS

5.1.1 1993-1994 PA/SI Results

This investigation began with a soil vapor survey, which was performed at 11 points across ERP Site No. 2 (labeled 10 through 20; Figure 3). The soil vapor samples were collected to screen for chemical constituents associated with possible spillage from used oil and solvent storage, and to develop the optimum locations of borings. The soil gas was collected from a depth of 5 feet bgs and immediately analyzed on site for BTEX and TPH in a mobile laboratory. TPH was detected in three soil vapor samples (1,371 parts per million by volume [ppmv] at soil vapor location 12; 33 ppmv at soil vapor location 17; and 13 ppmv at soil vapor location 18); and toluene, ethylbenzene, and xylene were detected in one soil vapor sample (8.7, 4.0, and 22.5 micrograms per liter (µg/L), respectively, at soil vapor location 12).

Four soil borings (labeled B-001BH through B-004BH; Figure 3) were advanced at ERP Site No. 2, and three soil samples were collected from each boring for laboratory analysis. Each soil sample was analyzed for VOCs, SVOCs, TPH, and metals. VOCs were not detected in any soil sample from the Site. SVOCs were detected in two soil samples (B-003BH in the 1- to 2.5-foot bgs interval, and B-004BH in the 0.5- to 2-foot bgs interval) in concentrations ranging from 240 to 2,500 micrograms per kilogram (µg/kg). TPH was detected in a total of four soil samples (B-001BH in the 3.5- to 5- and 30- to 31.5-foot bgs intervals, B-003BH in the 5- to 6.5-foot bgs interval, and B-004BH in the 0.5- to 2-foot bgs interval) in concentrations ranging from 0.89 (reported as gasoline) to 440 (reported as #2 fuel oil) milligrams per kilogram (mg/kg). Antimony,

mercury, selenium, silver, and thallium were not detected in concentrations above method reporting limits in the soil samples collected at ERP Site No. 2. Six metals were detected in the soil samples: arsenic concentrations ranged from 2.0 to 10.6 mg/kg; beryllium ranged from 8.6 to 39.6 mg/kg; copper ranged from 14.7 to 54.3 mg/kg; lead ranged from 7.1 to 133 mg/kg, nickel ranged from 10.7 to 38.9 mg/kg, and zinc ranged from 38.6 to 710 mg/kg.

TPH, benzo(a)pyrene, and beryllium were detected in soil above the current MDNR soil cleanup action levels. TPH was detected above the soil cleanup action level of 200 mg/kg in one soil sample (B-001BH in the 3.5- to 5-foot bgs interval). Benzo(a)pyrene was detected above the MDNR Cleanup Levels for Missouri (CALM) standard of 200 µg/kg in two shallow soil samples (B-003BH in the 1- to 2.5-foot bgs interval, and B-004BH in the 0.5- to 2-foot bgs interval). Beryllium was detected above the CALM standard of 0.05 mg/kg in ten of the twelve soil samples.

5.1.2 2003 Fieldwork Results

Eight soil borings were advanced at ERP Site No. 2 to further delineate the vertical and areal extent of soil impact. To check for the chemicals of concern established from the PA/SI work (TPH, BTEX, SVOCs, and metals) and other constituents that may be associated with used oil, the soil samples from each boring were analyzed for VOCs, SVOCs, PCBs, TPH, and the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver).

The eight soil borings (SB-1 through SB-8) were placed in the locations at ERP Site No. 2 shown in Figure 3, and advanced to a depth of 10 feet bgs. Two soil samples from each boring were selected for laboratory analysis. The soil intervals exhibiting the greatest apparent impact were to be selected for analysis, but such impact was noted in only one borehole; soil from boring SB-3 exhibited apparent impact (as a petroleum-like odor, green staining, and elevated PID readings) in the 6- to 10-foot bgs interval (6-10'). The remaining soil samples were collected from the uppermost and lowermost intervals, where enough soil was recovered during probing to fulfill the sampling requirements.

A total of eight VOCs were detected in soil from ERP Site No. 2, with one or more of the VOCs found in twelve of the fourteen soil samples. However, no VOCs were detected above MDNR CALM standards.

SVOCs were detected in four soil samples. Three or more SVOCs were detected in borings SB-2 (0-4'), SB-4 (0-8'), SB-5 (0-4'), and SB-8 (0-4'). The shallow soil samples from borings SB-2 and SB-8 were the only ones to have SVOC detections greater than MDNR CALM standards; both of these samples had exceedances of benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene. PCBs were not detected in any soil sample from ERP Site No. 2 during the 2003 RI fieldwork.

Total TPH (the sum of TPH and total extractable hydrocarbons [TEH]) was detected in nine of the fourteen soil samples. Of these, the only exceedance of the soil cleanup action level for total TPH was in both soil samples collected from boring SB-3 (6-8' and 8-10').

Mercury and selenium were not detected in any of the soil boring samples. The remaining six of the eight RCRA metals were detected in most samples, at very low levels, with the exception of arsenic. Arsenic was detected above the MDNR CALM standard in seven of the eight deep samples collected from each borehole.

A summary of the soil constituent detections is provided in Table 4, and the soil cleanup action level exceedances for the 2003 RI fieldwork are illustrated in Figure 6.

No soil samples were collected from the four holes drilled for the installation of monitoring wells at ERP Site No. 2, but the soil was logged and PID readings were collected for the full length of the drill holes. No apparent impact was observed in the soil removed from the four drill holes.

5.1.3 Extent of Chemical Constituents in Soil

Based on the soil sampling completed to date at ERP Site No. 2, it appears natural attenuation has reduced the concentrations of chemical constituents in soil in the time since the SI fieldwork was completed. As of the RI in 2003, chemical constituents in soil

TABLE 4

CHEMICAL CONSTITUENT DETECTIONS IN SOIL
2003 REMEDIAL INVESTIGATION PROGRAM
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION

	Sample Identification:	**SB-1**		**SB-2**		**SB-3**		**SB-4**	
	Sample Date:	**10/8/2003**		**10/8/2003**		**10/8/2003**		**10/9/2003**	
	Sample Depth (feet):	**0-8**	**8-10**	**0-4**	**8-10**	**6-8**	**8-10**	**0-8**	**8-10**
Constituent (mg/kg)	**Soil Cleanup Action Level [a]**								
Volatile Organic Compounds									
Acetone	2,700 mg/kg	**0.111**	<0.050	<0.050	**0.077**	**0.316**	<0.076	**0.147**	<0.050
Benzene	1 mg/kg [b]	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	<0.001	<0.001
2-Butanone (MEK)	7,400 mg/kg	<0.005	<0.005	<0.005	<0.005	**0.061**	<0.008	**0.021**	<0.005
Carbon Disulfide	630 mg/kg	<0.005	<0.005	<0.005	<0.005	**0.099**	<0.008	**0.016**	**0.005**
Ethylbenzene	10 mg/kg [b]	<0.001	<0.001	<0.001	<0.001	**0.008**	**0.002**	<0.001	<0.001
Tetrachloroethene	40 mg/kg	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	<0.001	<0.001
Toluene	5 mg/kg [b]	**0.002**	<0.001	<0.001	**0.003**	**0.010**	**0.005**	**0.002**	<0.001
Xylenes, Total	10 mg/kg [b]	<0.002	<0.002	<0.002	**0.004**	**0.020**	**0.014**	<0.002	<0.002
Semivolatile Organic Compounds									
Acenaphthene	1,700 mg/kg	<0.33	<0.33	**0.58** (J)	<0.33 (J)	<1.65	<0.33	<0.33	<0.33
Anthracene	8,500 mg/kg	<0.33	<0.33	**0.75** (J)	<0.33	<1.65	<0.33	<0.33	<0.33
Benzo(a)anthracene	1 mg/kg	<0.33	<0.33	**2.23** (J)	<0.33	*<1.65*	<0.33	<0.33	<0.33
Benzo(a)pyrene	0.2 mg/kg	*<0.33*	*<0.33*	**0.72** (J)	*<0.33*	*<1.65*	*<0.33*	*<0.33*	*<0.33*
Benzo(b)fluoranthene	0.9 mg/kg	<0.33	<0.33	**2.42** (J)	<0.33	*<1.65*	<0.33	<0.33	<0.33
Benzo(g,h,i)perylene	Not Established	<0.33	<0.33	**0.47** (J)	<0.33	<1.65	<0.33	<0.33	<0.33
Benzo(k)fluoranthene	8 mg/kg	<0.33	<0.33	**0.86** (J)	<0.33	<1.65	<0.33	<0.33	<0.33
Chrysene	36 mg/kg	<0.33	<0.33	**2.31** (J)	<0.33	<1.65	<0.33	<0.33	<0.33
Dibenzofuran	110 mg/kg	<0.33	<0.33	**0.35** (J)	<0.33 (J)	<1.65	<0.33	<0.33	<0.33
Fluoranthene	1,600 mg/kg	<0.33	<0.33	**4.49** (J)	<0.33	<1.65	<0.33	**0.43**	<0.33
Fluorene	1,100 mg/kg	<0.33	<0.33	**0.44** (J)	<0.33 (J)	<1.65	<0.33	<0.33	<0.33
Indeno(1,2,3-cd)pyrene	3 mg/kg	<0.33	<0.33	**0.5** (J)	<0.33	<1.65	<0.33	<0.33	<0.33
2-Methylnaphthalene	Not Established	<0.33	<0.33	<0.33 (J)	<0.33	<1.65	<0.33	<0.33	<0.33
Naphthalene	120 mg/kg	<0.33	<0.33	<0.33 (J)	<0.33	<1.65	<0.33	<0.33	<0.33
Phenanthrene	Not Established	<0.33	<0.33	**3.56** (J)	<0.33	<1.65	<0.33	**0.34**	<0.33
Pyrene	2,100 mg/kg	<0.33	<0.33 (J)	**3.66** (J)	<0.33	<1.65	<0.33	**0.35**	<0.33
Polychlorinated Biphenyls	Varies	No Detections		No Detections		No Detections		No Detections	
Total Extractable Hydrocarbons									
as Gasoline	Not Established	<5	**7**	<5	<5	**339** (J)	**39** (J)	<5	<5
as #2 Diesel Fuel	Not Established	<5	<5	**42** (J)	<5	<5	<5	**13**	<5
as Waste Oil	Not Established	<5	<5	<5	<5	**63**	**19**	<5	**9**
TPH as Gasoline	Not Established	<5	<5	<5	<5	**1,880**	**177**	<5	<5
Total TPH [c]	200 mg/kg [b]	No Detections	**7**	**42** (J)	No Detections	**2,282** (J)	**235** (J)	**13**	**9**
Total Metals									
Arsenic	11 mg/kg	**8.6**	**11.0**	**9.4**	**10.3**	**7.4**	**12.2**	**7.9**	**11.5**
Barium	14,000 mg/kg	**437**	**179**	**200**	**214**	**157**	**176**	**158**	**189**
Cadmium	110 mg/kg	<0.6	<0.6	<0.6	<0.6	**1.3**	<0.6	**0.6**	**0.6**
Chromium	2,100 mg/kg	**15.9**	**18.0**	**15.2**	**10.3**	**13.4**	**9.3**	**14.3**	**9.7**
Lead	260 mg/kg	**72.1**	**13.2**	**11.6**	**17.1**	**40.7**	**16.3**	**90.7**	**11.2**
Mercury	0.6 mg/kg	<0.28	<0.31	<0.24	<0.35	<0.37	<0.26	<0.26	<0.28
Selenium	300 mg/kg	<1.1	<1.2	<1.2	<1.2	<1.3	<1.3	<1.2	<1.2
Silver	140 mg/kg	<0.6	**0.8**	**0.9**	**0.8**	**0.9**	**0.8**	**0.7**	**0.9**

Notes:

[a] Soil Cleanup Action Levels from the Soil Target Concentrations for Ingestion/Dermal Contact/Inhalation Pathway Scenario A, Missouri Department of Natural Resources (MDNR) Cleanup Levels for Missouri (CALM) Document, September 2001, except where noted.

[b] D for scored Table 4.

[c] Total total petroleum hydrocarbons (TPH) is the sum of all detected TPH and all detected total extractable hydrocarbons, per the MDNR.

ERP = Environmental Restoration Program.

mg/kg = Milligrams per kilogram.

Shaded = Chemical constituent equals or exceeds the MDNR Soil Cleanup Action Level.

Bold = Chemical constituent equals or exceeds the laboratory reporting limit.

Italicized = Laboratory reporting limit equals or exceeds the MDNR Soil Cleanup Action Level.

Data validated to Level II; (J) = estimated.

TABLE 4 (CONTINUED)

CHEMICAL CONSTITUENT DETECTIONS IN SOIL
2003 REMEDIAL INVESTIGATION PROGRAM
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION

	Sample Identification:	**SB-5**		**SB-6**		**SB-7**		**SB-8**	
	Sample Date:	**10/9/2003**		**10/8/2003**		**10/8/2003**		**10/8/2003**	
	Sample Depth (feet):	**0-4**	**8-10**	**0-4**	**7-10**	**0-4**	**8-10**	**0-4**	**8-10**
Constituent (mg/kg)	**Soil Cleanup Action Level [a]**								
Volatile Organic Compounds									
Acetone	2,700 mg/kg	**0.107**	<0.071	**0.115**	<0.072	<0.075	<0.069	**0.079**	<0.071
Benzene	1 mg/kg [b]	<0.001	<0.001	**0.002**	<0.001	<0.001	<0.001	<0.001	<0.001
2-Butanone (MEK)	7,400 mg/kg	**0.018**	**0.007**	**0.016**	<0.007	<0.007	<0.007	**0.014**	<0.007
Carbon Disulfide	630 mg/kg	<0.006	**0.007**	<0.007	<0.007	<0.007	**0.008**	<0.006	<0.007
Ethylbenzene	10 mg/kg [b]	<0.001	<0.001	**0.001**	<0.001	<0.001	<0.001	<0.001	<0.001
Tetrachloroethene	40 mg/kg	**0.043**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	5 mg/kg [b]	<0.001	<0.001	**0.004**	<0.001	**0.001**	<0.001	<0.001	<0.001
Xylenes, Total	10 mg/kg [b]	<0.003	<0.003	**0.003**	<0.003	<0.003	<0.003	<0.003	<0.003
Semivolatile Organic Compounds									
Acenaphthene	1,700 mg/kg	<0.33	<0.33	<0.33 (J)	<0.33 (J)	<0.33 (J)	<0.33 (J)	**2.57** (J)	<0.33 (J)
Anthracene	8,500 mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**2.95**	<0.33
Benzo(a)anthracene	1 mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**4.73**	<0.33
Benzo(a)pyrene	0.2 mg/kg	*<0.33*	*<0.33*	*<0.33*	*<0.33*	*<0.33*	*<0.33*	**2.03**	*<0.33*
Benzo(b)fluoranthene	0.9 mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**4.27**	<0.33
Benzo(g,h,i)perylene	Not Established	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**0.68**	<0.33
Benzo(k)fluoranthene	8 mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**1.62**	<0.33
Chrysene	36 mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**4.60**	<0.33
Dibenzofuran	110 mg/kg	<0.33	<0.33	<0.33 (J)	<0.33 (J)	<0.33 (J)	<0.33 (J)	**1.89** (J)	<0.33 (J)
Fluoranthene	1,600 mg/kg	**0.70**	<0.33	<0.33	<0.33	<0.33	<0.33	**13.1**	<0.33
Fluorene	1,100 mg/kg	<0.33	<0.33	<0.33 (J)	<0.33 (J)	<0.33 (J)	<0.33 (J)	**2.14** (J)	<0.33 (J)
Indeno(1,2,3-cd)pyrene	3 mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**0.72**	<0.33
2-Methylnaphthalene	Not Established	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**0.59**	<0.33
Naphthalene	120 mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**1.37**	<0.33
Phenanthrene	Not Established	**0.63**	<0.33	<0.33	<0.33	<0.33	<0.33	**15.0**	<0.33
Pyrene	2,100 mg/kg	**0.53**	<0.33	<0.33	<0.33	<0.33	<0.33	**15.7**	<0.33
Polychlorinated Biphenyls	Varies	No Detections		No Detections		No Detections		No Detections	
Total Extractable Hydrocarbons									
as Gasoline	Not Established	<5	<5	<5	<5	<5	<5	<5	<5
as #2 Diesel Fuel	Not Established	<5	<5	<5	<5	<5	<5	**22** (J)	<5
as Waste Oil	Not Established	**12**	<5	<5	<5	**29**	<5	<5	<5
TPH as Gasoline	Not Established	<5	<5	<5	<5	<5	<5	<5	<5
Total TPH [c]	200 mg/kg [b]	**12**	No Detections	No Detections	No Detections	**29**	No Detections	**22** (J)	No Detections
Total Metals									
Arsenic	11 mg/kg	**7.1**	**11.2**	**8.1**	**11.7**	**7.6**	**12.0**	**7.5**	**12.4**
Barium	14,000 mg/kg	**168**	**173**	**158**	**185**	**126**	**204** (J)	**132**	**191**
Cadmium	110 mg/kg	<0.6	<0.7	**0.7**	**0.6**	<0.6	<0.6	<0.6	<0.6
Chromium	2,100 mg/kg	**13.4**	**10.3**	**11.4**	**9.4**	**16.3**	**11.9**	**11.9**	**11.2**
Lead	260 mg/kg	**26.0**	**11.4**	**69.0**	**9.7**	**72.0**	**14.8**	**34.2**	**12.4**
Mercury	0.6 mg/kg	<0.34	<0.23	<0.34	<0.32	<0.32	<0.29	<0.33	<0.33
Selenium	300 mg/kg	<1.2	<1.3	<1.2	<1.1	<1.2	<1.3	<1.3	<1.2
Silver	140 mg/kg	**0.9**	**0.8**	**1.0**	**0.8**	**0.6**	**0.8**	**0.7**	**0.9**

Notes:

[a] Soil Cleanup Action Levels from the Soil Target Concentrations for Ingestion/Dermal Contact/Inhalation Pathway Scenario A, Missouri Department of Natural Resources (MDNR) Cleanup Levels for Missouri (CALM) Document, September 2001, except where noted.

[b] D for scored Table 4.

[c] Total total petroleum hydrocarbons (TPH) is the sum of all detected TPH and all detected total extractable hydrocarbons, per the MDNR.

ERP = Environmental Restoration Program.

mg/kg = Milligrams per kilogram.

Shaded = Chemical constituent equals or exceeds the MDNR Soil Cleanup Action Level.

Bold = Chemical constituent equals or exceeds the laboratory reporting limit.

Italicized = Laboratory reporting limit equals or exceeds the MDNR Soil Cleanup Action Level.

Data validated to Level II; (J) = estimated.

above MDNR soil cleanup action levels are generally limited to total TPH in the 6- to 10-foot bgs interval of boring SB-3 (off the southwest corner of the large concrete pad), and SVOCs in the shallow intervals of SB-2 and SB-8 (east of the former AST).

Beryllium was detected above the MDNR CALM standard of 0.05 mg/kg in ten of the twelve soil samples collected during the 1994 SI activities. Arsenic was detected above the CALM standard of 11 mg/kg in seven of the eight deep soil samples (seven of the total sixteen samples) collected during the 2003 RI.

It is likely that natural levels of arsenic are high in soils underlying the Station. A geochemical survey of Missouri agricultural soils was undertaken in the 1970s, which involved the collection of ten soil samples from each of Missouri's 114 counties for analyses of total concentrations of 43 elements. This survey provides a reference for background concentrations of metals in Missouri agricultural soils. The samples analyzed for this survey were collected from the surface soil horizon (plow zone, 0 to 15 centimeters in depth; Tidball, 1984). In the table directly below, data obtained in this geochemical survey of Missouri agricultural soils, from samples collected nearest the Station, are compared to the concentration ranges of soil samples collected during the 2003 RI, and to the MDNR CALM standard.

GEOCHEMICAL SURVEY OF MISSOURI ARSENIC SOIL BACKGROUND CONCENTRATIONS COMPARED TO ERP SITE NO. 2 DETECTIONS AND THE MDNR CALM STANDARD

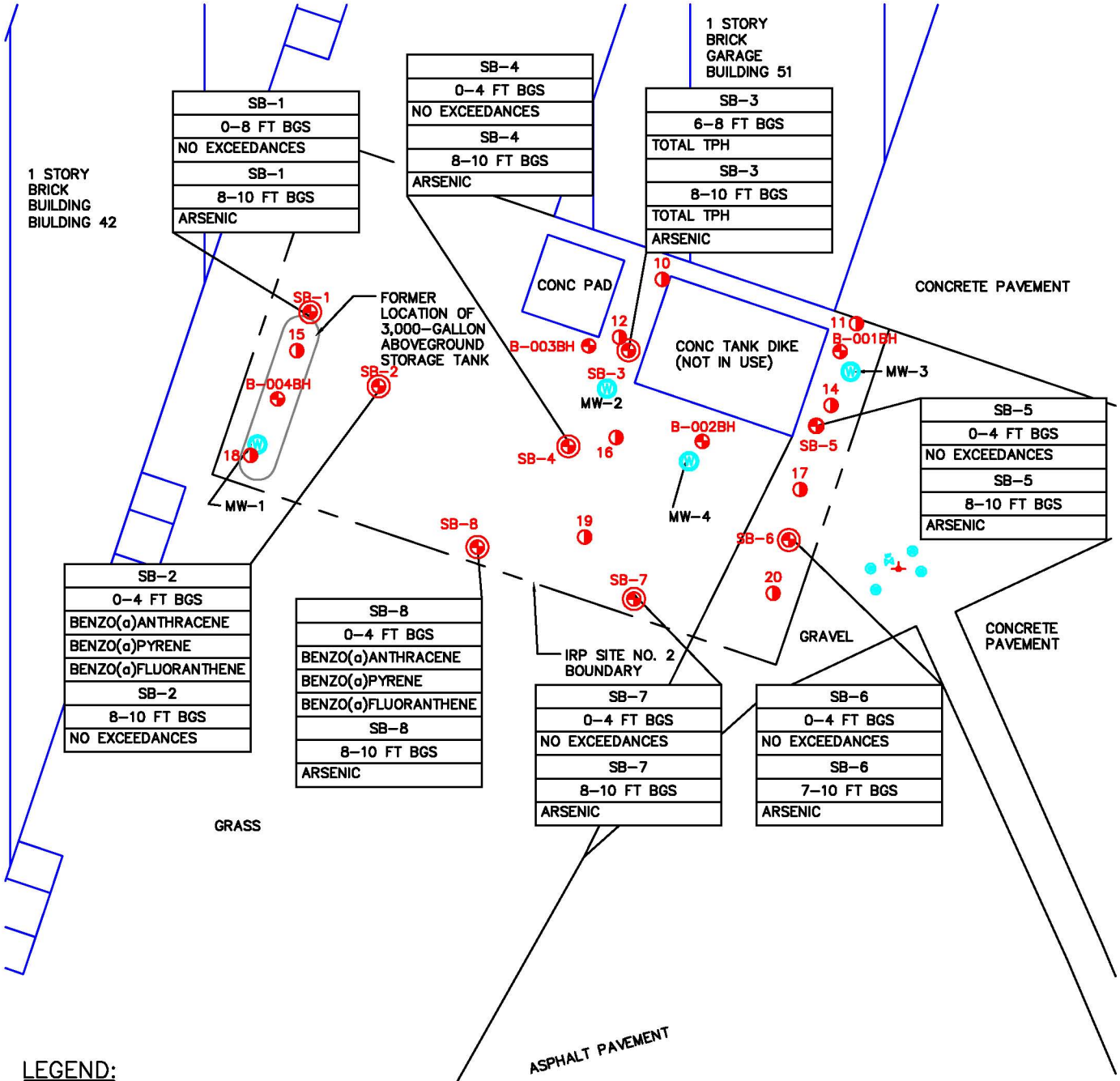
Analyte	Geochemical Survey of Missouri [a]	Sample Range [b] 2003 RI	MDNR CALM Value [c]
Arsenic	7.0 to 70 mg/kg	7.1 to 12.4 mg/kg	11 mg/kg

Notes:

[a] Element concentration range detected in soil samples collected within St. Louis and Jefferson Counties, Missouri nearest the Station. Data interpreted from Tidball, Ronald R., 1984. "Geochemical Survey of Missouri, Geography of Soil Geochemistry of Missouri Agricultural Soils." Geological Survey Professional Paper 954-H, I. United States Government Printing Office, Washington.

[b] Range of the 16 samples collected during the 2003 RI.

[c] Soil Cleanup Action Level from the Soil Target Concentrations for Ingestion/Dermal Contact/Inhalation Pathway Scenario A, MDNR CALM Document, September 2001.



LEGEND:

ERP SITE NO. 2 BOUNDARY

GROUNDWATER MONITORING WELL LOCATION (MWH, 2003)

SB-8 SOIL BORING LOCATION (MWH, 2003)

B-001BH SOIL BORING LOCATION (OPTECH, 1994)

18 SOIL VAPOR LOCATION (OPTECH, 1994)

FT BGS = FEET BELOW GROUND SURFACE

TPH = TOTAL PETROLEUM HYDROCARBONS

N

0 20

APPROXIMATE SCALE IN FEET

Plot Date: 3/24/04

P:\CAD\GUARD\AIR\STLOUIS\RI WORK PLAN\FIG06

MWH DES MOINES IOWA	157TH AIR OPERATIONS GROUP JEFFERSON BARRACKS ST. LOUIS, MISSOURI	ERP SITE NO. 2 SOIL SAMPLING LOCALITIES AND CLEANUP LEVEL EXCEEDANCES OCTOBER 2003	FIGURE 6

5.2 GROUNDWATER INVESTIGATION

5.2.1 2003 Fieldwork Results

Well locations were chosen based on prior sampling results and reported locations of former storage, in order to verify current groundwater conditions at ERP Site No. 2. As with the soil samples, groundwater samples from each well where enough water was available were analyzed for VOCs, SVOCs, PCBs, TPH, and the eight RCRA metals.

One VOC, tetrachloroethylene, was detected in the groundwater collected from monitoring well MW-3 during the second round of sampling in December 2003 (there was no groundwater in MW-3 during the first round), below the groundwater CALM standard. No other VOCs were detected in any of the groundwater samples.

No SVOCs, PCBs, or total TPH were detected in any of the groundwater samples collected from the monitoring wells in either round of sampling.

Barium was detected in the groundwater collected from monitoring wells MW-1, MW-2, and MW-4, below the MDNR CALM standard of 2,000 µg/L. MW-3 did not have enough water present during either round to analyze for metals. Lead was detected in the groundwater from the first round of sampling at MW-2, below the groundwater CALM standard of 15 µg/L. No other metals were detected in the groundwater sampled at ERP Site No. 2.

A summary of the soil constituent detections is provided in Table 5, and the groundwater analytical results for the 2003 RI fieldwork are illustrated in Figure 7.

5.2.2 Extent of Chemical Constituents in Groundwater

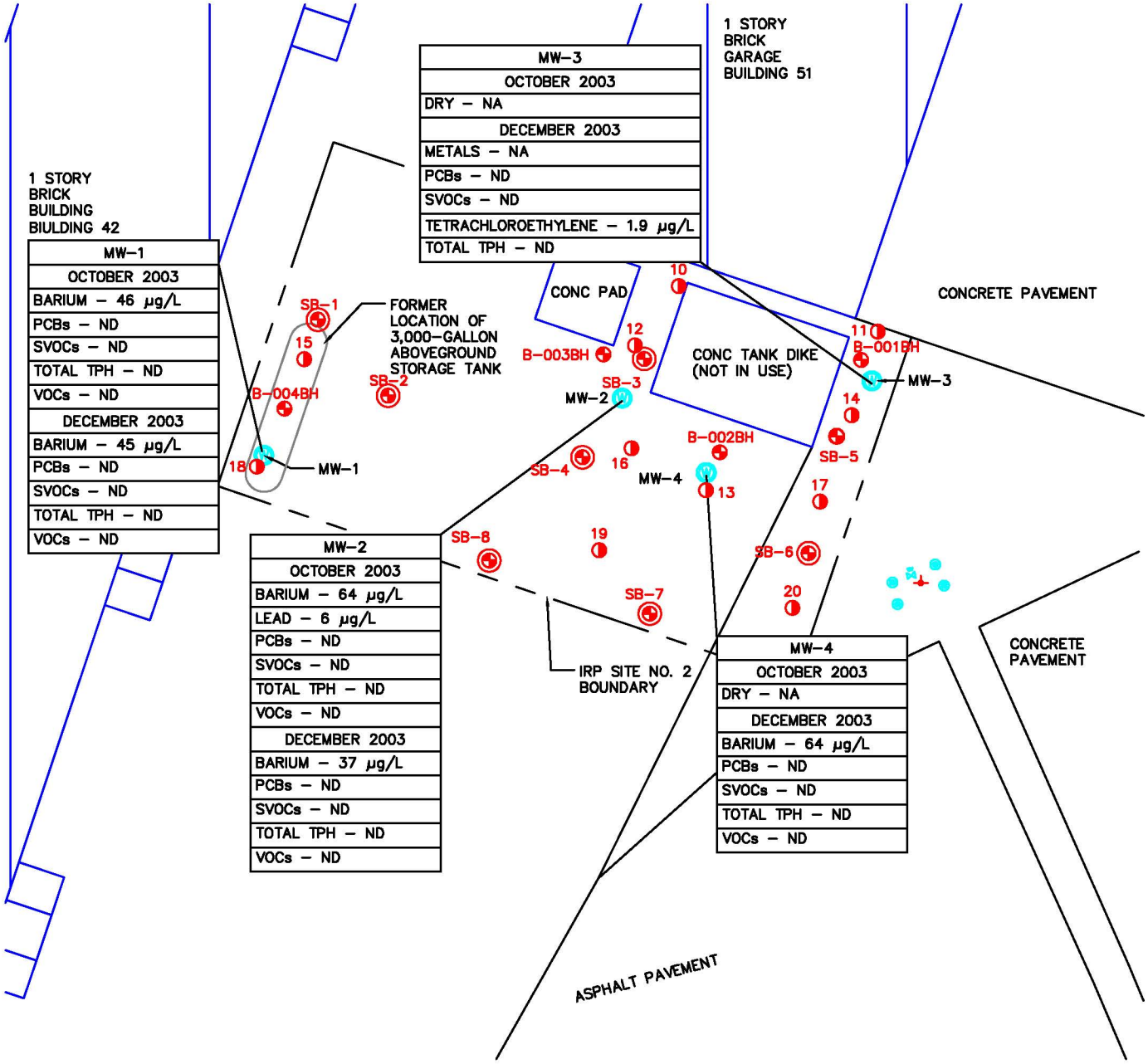
The RI groundwater sampling activities conducted over two rounds in 2003 indicated no chemical constituents above MDNR CALM standards. No previous groundwater sampling had been conducted at ERP Site No. 2.

TABLE 5

CHEMICAL CONSTITUENT DETECTIONS IN GROUNDWATER
2003 REMEDIAL INVESTIGATION PROGRAM
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION

	Sample Identification:	**MW-1**		**MW-2**		**MW-3** [b]	**MW-4** [b]
	Sample Date:	**10/10/2003**	**12/04/2003**	**10/10/2003**	**12/04/2003**	**12/04/2003**	**12/04/2003**
Constituent (µg/L)	**Groundwater Cleanup Action Level** [a]						
Volatile Organic Compounds	Varies	No Detections	No Detections	No Detections	No Detections		No Detections
Tetrachloroethylene	5 µg/L					**1.9**	
Semivolatile Organic Compounds	Varies	No Detections	No Detections	No Detections	No Detections	No Detections	No Detections
Polychlorinated Biphenyls	Varies	No Detections	No Detections	No Detections	No Detections	Not Analyzed [d]	No Detections
Total Extractable Hydrocarbons							
as Gasoline	Not Established	<100	<100	<100	<100	<100	<100
as #2 Diesel Fuel	Not Established	<100	<100	<100	<100	<100	<100
as Waste Oil	Not Established	<100	<100	<100	<100	<100	<100
TPH as Gasoline	Not Established	<10	<10	<10	<10	<10	<10
Total TPH [c]	10,000 µg/L	No Detections	No Detections	No Detections	No Detections	No Detections	No Detections
Total Metals							
Arsenic	50 µg/L	<5	<5	<5	<5	Not Analyzed [d]	<5
Barium	2,000 µg/L	**46**	**45**	**64**	**37**	Not Analyzed [d]	**64**
Cadmium	5 µg/L	<1	<1	<1	<1	Not Analyzed [d]	<1
Chromium	100 µg/L	<5	<5	<5	<5	Not Analyzed [d]	<5
Lead	15 µg/L	<5	<5	**6**	<5	Not Analyzed [d]	<5
Mercury	2 µg/L	<0.50	<0.50	<0.50	<0.50	Not Analyzed [d]	<0.50
Selenium	50 µg/L	<5	<5	<5	<5	Not Analyzed [d]	<5
Silver	100 µg/L	<10	<10	<10	<10	Not Analyzed [d]	<10

Notes:
[a] September 2001.
[b] There was insufficient groundwater during the first round of field work to permit sampling.
[c] Total total petroleum hydrocarbons (TPH) is the sum of all detected TPH and all detected total extractable hydrocarbons, per the MDNR.
[d] There was insufficient groundwater during the second round of field work to allow for analysis of all constituents.
ERP = Environmental Restoration Program.
µg/L = Micrograms per liter.
Bold = Chemical constituent equals or exceeds the laboratory reporting limit.
Data validated to Level II; no qualifiers required for data on this table.



LEGEND:

ERP SITE NO. 2 BOUNDARY

GROUNDWATER MONITORING WELL LOCATION (MWH, 2003)

SB-8 SOIL BORING LOCATION (MWH, 2003)

B-001BH SOIL BORING LOCATION (OPTECH, 1994)

18 SOIL VAPOR LOCATION (OPTECH, 1994)

PCBs = POLYCHLORINATED BIPHENYLS
TPH = TOTAL PETROLEUM HYDROCARBONS
SVOCs = SEMIVOLATILE ORGANIC COMPOUNDS
VOCs = VOLATILE ORGANIC COMPOUNDS

ND = NO DETECTIONS
NA = NOT ANALYZED
µg/L = MICROGRAMS PER KILOGRAM

N

0 20
APPROXIMATE SCALE IN FEET

MWH
DES MOINES IOWA

157TH AIR OPERATIONS GROUP
JEFFERSON BARRACKS
ST. LOUIS, MISSOURI

ERP SITE NO. 2
GROUNDWATER SAMPLING LOCALITIES AND ANALYTICAL RESULTS
OCTOBER AND DECEMBER 2003

FIGURE 7

Plot Date: 3/24/04

P:\CAD\GUARD\AIR\STLOUIS\RI WORK PLAN\FIG07

5.3 QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

Field QA/QC checks included the collection and analysis of field duplicates and trip blanks for the purpose of evaluating quality assurance in field sampling methods. Laboratory QA/QC checks included calibration of instruments, analyses of method blanks, matrix spike/matrix spike duplicate (MS/MSD) samples, laboratory control standards (LCSs), and routine analysis of surrogate compounds. Results of the field and laboratory QA/QC evaluations for the October and December 2003 sampling events are presented below.

5.3.1 Field Duplicates

Precision was evaluated in field duplicates by calculating the RPD of chemical concentrations detected in the primary sample and its duplicate. The RPD reflects the combined precision of field and laboratory procedures for the associated samples. An appropriate RPD goal is 35 percent.

Field duplicate samples were collected from borehole samples SB-4 (0-8') and SB-6 (0-4'). The detected analytes for these soil samples are summarized in Table 6. The primary and field duplicate soil samples from borehole SB-4 contained reportable concentrations of four VOCs, three SVOCs, total TPH, and six metals in common. The primary and field duplicate soil samples from borehole SB-6 contained reportable concentrations of six VOCs and five metals in common. Of the twenty-five RPD calculations completed for the two field duplicate samples, sixteen were within the appropriate RPD goal. Duplicate soil samples outside of the RPD goal were likely primarily due to the heterogeneity of the soil samples, which results from both the natural condition of soils and the packing of sample jars.

Field duplicate samples were collected from monitoring well MW-1 during both the first and second rounds of groundwater sampling, as this well produced sufficient water for the large number of sample containers that had to be filled. The detected analytes for these groundwater samples are summarized in Table 6. The primary and field duplicate groundwater samples from the first and second round sampling of well MW-1 both

TABLE 6

QUALITY ASSURANCE/QUALITY CONTROL RESULTS
2003 REMEDIAL INVESTIGATION PROGRAM
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION

	Medium:	Soil						Medium:	Groundwater					
	Sample Identification:	SB-4	Dup-2		SB-6	Dup-1		Sample Identification:	MW-1	Dup-1		MW-1	Dup-1	
	Sample Date:	10/10/2007			10/9/2007			Date Analyzed:	10/10/2003			12/04/2003		
	Sample Depth (feet):	0-8			0-4									
Detected Constituents	**Soil Units**			**RPD**			**RPD**	**Groundwater Units**			**RPD**			**RPD**
Volatile Organic Compounds														
Acetone	mg/kg	0.147	0.102	**36.1**	0.115	0.071	**47.3**	µg/L	<10.0	<10.0	--	<10.0	<10.0	--
Benzene	mg/kg	<0.001	<0.001	--	0.002	0.002	0.0	µg/L	<1.0	<1.0	--	<1.0	<1.0	--
2-Butanone (MEK)	mg/kg	0.021	0.015	33.3	0.016	0.016	0.0	µg/L	<5.0	<5.0	--	<5.0	<5.0	--
Carbon Disulfide	mg/kg	0.016	0.016	0.0	<0.007	0.010	--	µg/L	<1.0	<1.0	--	<1.0	<1.0	--
Ethylbenzene	mg/kg	<0.001	<0.001	--	0.001	0.002	**66.7**	µg/L	<1.0	<1.0	--	<1.0	<1.0	--
Toluene	mg/kg	0.002	0.002	0.0	0.004	0.005	22.2	µg/L	<1.0	<1.0	--	<1.0	<1.0	--
Xylenes, Total	mg/kg	<0.002	<0.002	--	0.003	0.004	28.6	µg/L	<2.0	<2.0	--	<2.0	<2.0	--
Semivolatile Organic Compounds														
Benzo(a)anthracene	mg/kg	<0.33	0.60	--	<0.33	<0.33	--	µg/L	<10	<10	--	<10	<10	--
Chrysene	mg/kg	<0.33	0.63	--	<0.33	<0.33	--	µg/L	<10	<10	--	<10	<10	--
Fluoranthene	mg/kg	0.43	1.76	**121.5**	<0.33	<0.33	--	µg/L	<10	<10	--	<10	<10	--
Phenanthrene	mg/kg	0.34	1.70	**133.3**	<0.33	<0.33	--	µg/L	<10	<10	--	<10	<10	--
Pyrene	mg/kg	0.35	1.37	**118.6**	<0.33	<0.33	--	µg/L	<10	<10	--	<10	<10	--
Total Extractable Hydrocarbons														
as Gasoline	mg/kg	<5	11	--	<5	<5	--	µg/L	<1.0	<1.0	--	<1.0	<1.0	--
as #2 Diesel Fuel	mg/kg	13	<5	--	<5	<5	--	µg/L	<1.0	<1.0	--	<1.0	<1.0	--
as Waste Oil	mg/kg	<5	20	--	<5	<5	--	µg/L	<1.0	<1.0	--	<1.0	<1.0	--
TPH as Gasoline	mg/kg	<5	<5	--	<5	<5	--	µg/L	<1.0	<1.0	--	<1.0	<1.0	--
Total TPH [a]	mg/kg	13	31	**81.8**	No Detections	No Detections	--	µg/L	No Detections	No Detections	--	No Detections	No Detections	--
Total Metals														
Arsenic	mg/kg	7.9	8.7	9.6	8.1	7.5	7.7	mg/L	<0.005	<0.005	--	<0.005	<0.005	--
Barium	mg/kg	158	151	4.5	158	171	7.9	mg/L	0.046	0.046	0.0	0.045	0.046	2.2
Cadmium	mg/kg	0.6	0.6	0.0	0.7	<0.6	--	mg/L	<0.001	<0.001	--	<0.001	<0.001	--
Chromium	mg/kg	14.3	18.9	27.7	11.4	11.4	0.0	mg/L	<0.005	<0.005	--	<0.005	<0.005	--
Lead	mg/kg	90.7	119	27.0	69.0	10.4	**147.6**	mg/L	<0.005	<0.005	--	<0.005	<0.005	--
Silver	mg/kg	0.7	0.7	0.0	1.0	0.7	**35.3**	mg/L	<0.010	<0.010	--	<0.010	<0.010	--

Notes:

[a] Total total petroleum hydrocarbons (TPH) is the sum of all detected TPH and all detected total extractable hydrocarbons, per the MDNR.

ERP = Environmental Restoration Program.
RPD = Relative percent difference.
mg/kg = Milligrams per kilogram.
µg/L = Micrograms per liter.
mg/L = Milligrams per liter.
Bold = Value outside RPD Goal.
Appropriate RPD Goal = 35 percent.
Data validated to Level II; no qualifiers required for data on this table.

contained reportable concentrations of barium in common. This analyte had an RPD of zero for the first round of groundwater sampling and an RPD of 2.2 for the second round, well below the appropriate RPD goal of 35.

5.3.2 Trip Blanks

Analysis of trip blanks provides a means of assessing potential cross-contamination of groundwater samples during field sampling, handling, and/or transport. Each cooler used to ship groundwater samples collected for VOC analyses was accompanied by a trip blank, also analyzed for VOCs. A total of two trip blanks were submitted for analysis. No detectable concentrations of VOCs were reported in the trip blanks that accompanied the samples.

5.3.3 Data Validation

Laboratory analytical results were evaluated in accordance with the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic Data Review (October 1999), U.S. EPA CLP NFG for Inorganic Data Review (July 2002), and the analytical methods. The analytical data were reviewed and qualified based on the results of the data evaluation parameters and/or the QC sample results provided by the laboratory.

The following summarizes the review of the analytical data that did not meet the QC criteria:

- The continuing calibration verification (CCV) associated with the VOC analysis of all samples in the laboratory work order number 13J0432 indicated a low biased recovery of 68.4 percent (QC limit: 70 to 130 percent) for naphthalene. Samples in this work order were qualified "J" as estimated for naphthalene.

- For the analysis of TEH (sum of TEH as gasoline, #2 diesel fuel, and used oil) results for samples SB-2 (0-4'), SB-8 (0-4'), SB-3 (6-8'), and SB-3 (8-10') are considered estimated (according to the laboratory) because the sample chromatogram does not resemble the fuel standard used for

quantitation. These samples within work order number 13J0432 were qualified "J" as estimated.

- Several surrogates associated with the SVOC analysis of samples in work order number 13J0432 were outside of acceptance criteria:

  - The surrogate 2-fluorobiphenyl associated with the analysis of sample SB-1 (8-10') had a recovery outside the acceptance criteria with a high bias. Since the SVOC results in this sample were nondetect, no qualification was necessary.

  - For the analysis of sample SB-2-0-4, the surrogates 2-fluorophenol, 2,4,6-tribromophenol, and phenol-d6 had low biased recoveries, and surrogate 2-fluorobiphenyl had a high biased recovery. Since four of the six surrogates were outside of their respective QC criteria, the compounds were qualified "J" as estimated.

  - The surrogates 2-fluorophenol, 2,4,6-tribromophenol, and phenol-d6 associated with the analysis of samples SB-2 (8-10'), SB-8 (0-4'), SB-7 (8-10'), SB-6 (7-10'), and Dup-1 indicated low biased recoveries. The associated compounds in these samples were qualified "J" as estimated.

  - The surrogates 2-fluorophenol and phenol-d6 associated with the analysis of sample SB-8 (8-10') indicated low biased recoveries. The associated compounds in this samples were qualified "J" as estimated.

  - The surrogates 2,4,6-tribromophenol and phenol-d6 associated with the analysis of samples SB-7 (0-4') and SB-6 (0-4') indicated low biased recoveries. The associated compounds in these samples were qualified "J" as estimated.

- The MS/MSD associated with the SVOC analysis of sample SB-1 (8-10') (work order number 13J0432) indicated low biased recoveries for phenol, n-nitroso-di-n-propylamine, 3&4-methylphenol, diethylphthalate, dimethylphthalate, 2,6-dinitrotoluene, and pyrene. Since these indicated low biased recoveries, these compounds were qualified "J" as estimated in this sample only.

- The MS associated with the metals analysis of barium in sample SB-7 (8-10') (work order number 13J0432) indicated a low biased recovery. This analyte was qualified "J" as estimated in this sample only.

- The CCV associated with the SVOC analysis of the samples in laboratory work order number 13J0548 indicated low biased recovery of 78.3 percent for 4-nitroaniline and a high biased recovery of 210 percent for pentachlorophenol (QC limit: 80 to 120 percent). Each sample in this work order was qualified "J" as estimated for 4-nitroaniline due to the low bias. No qualification was necessary for pentachlorophenol due to the high biased recovery and the sample results being nondetect.

- The CCV associated with the SVOC analysis of the samples in laboratory work order number 13L0340 indicated high biased recoveries for 2,4-dinitrophenol (145 percent), 4,6-dinitro-2-methylphenol (127 percent), indeno(1,2,3cd)pyrene (134 percent), dibenz(a,h)anthracene (124 percent) and benzo(g,h,i)perylene (134 percent). Since these are high biased and the sample results were nondetect, no qualification is necessary.

- The surrogate, terphenyl-d4, associated with sample MW-1 in work order 13J0548, indicated a high biased recovery. Since the SVOC results in this sample were nondetect, no qualification was necessary.

- The LCS associated with the samples in laboratory work order number 13L0340 indicated low biased recoveries for diethylphthalate and di-n-butylphthalate. Samples in this work order were qualified "J" as estimated for these compounds.

- The MS/MSD associated with the SVOC analysis of sample MW-1 in work order number 13J0548 indicated high biased spike recoveries for pentachlorophenol. Since this compound was nondetect, no qualification is necessary.

- The MS/MSD associated with the SVOC analysis of sample MW-1 in work order number 13L0340 indicated low biased spike recoveries for diethylphthalate, anthracene, and di-n-butyl phthalate. These compounds were qualified "J" as estimated in this sample only.

- The surrogate decachlorobiphenyl associated with the PCB analyses of samples DUP-1 and MW-2 in work order number 13J0548 indicated low biased recoveries. These samples were qualified "J" as estimated.

- The LCS associated with the mercury analysis of samples in work order number 13J0548 indicated a high biased recovery. Since this reflects a high bias and the sample results were non-detect, no qualification was necessary.

Based on the results of this data validation, the data are considered valid and complete as qualified.

6.0 REVIEW OF APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

The Superfund Amendments and Reauthorization Act of 1986 requires all remedial actions comply with ARARs of other environmental and public health statutes. Applicable requirements are those requirements or standards that specifically address a substance, action, or other circumstance found at a site. A relevant and appropriate requirement means a requirement or standard that while not addressing the specific circumstances at a given site, does address similar situations found at other sites.

Identification of ARARs is accomplished by determining if the ARARs are promulgated (that they are legally enforceable and of general applicability), more stringent, and applicable or relevant and appropriate (there must be a connection between the statute, regulation or provision, and the site characteristics/remedies).

ARARs can be divided up into three groups: chemical-specific, location-specific, and action-specific. Chemical-specific ARARs are usually health- or risk-based numerical values or methodologies which, when applied to site-specific conditions, result in the establishment of numerical values. These values establish the acceptable amount or concentration of a chemical that may be found in, or discharged to, the ambient environment. Action-specific ARARs are usually technology- or activity-based requirements or limitations on actions taken with respect to hazardous wastes. These requirements are triggered by the particular remedial activities that are selected to accomplish a remedy. A site's location is a fundamental determinant of its impact on human health and the environment. Location-specific ARARs are restrictions placed on the concentration of hazardous substances or the conductance of activities solely because they are in specific locations.

A review of the chemical-, location-, and action-specific ARARs identified for ERP Site No. 2, as presented in the *RI Work Plan*, are summarized in the following sections. As part of the evaluation for ARARs, selection of soil and groundwater evaluation criteria were established.

6.1 CHEMICAL-SPECIFIC ARARS

Chemical-specific ARARs include state and federal requirements regulating chemical constituent levels in various media. The chemical-specific ARARs are important in developing remedial objectives that comply with regulatory requirements or guidance (as appropriate). Chemicals detected or suspected during the PA/SI work were used as the basis for identification of potential chemical-specific ARARs. The ARARs to be used for soil and groundwater are provided below.

6.1.1 Soil

The Missouri UST Soil Remedial Goals are used as ARARs at ERP Site No. 2 due to the location of a historical storage tank in the Site's immediate vicinity. The site-specific soil cleanup levels for BTEX and total TPH have been determined by completing a matrix where the Site features are scored. This matrix, Table 4 of the UST Closure Guidance Document (MDNR, March 1996), in included as Appendix F with the current Station features scored.

The non-UST Soil Remedial Goals utilize Table B1 from the CALM policy document as a reference (MDNR, 2001). Because the current land use is not restricted to industrial, Scenario A is used as the initial evaluation criteria. The evaluation criteria for Scenario A indicate soil concentrations must meet the lesser of the ingestion/dermal contact/inhalation values (C_{IDI}) or the soil leaching to groundwater concentration values (C_{LEACH}) listed in Table B1 of the CALM policy document.

6.1.2 Groundwater

The cleanup action levels for groundwater are defined by the potential use of groundwater. Due to the lack of shallow groundwater above bedrock beneath the Station, it is unlikely the shallow groundwater could be used as a drinking water source. Thus the Missouri UST Non-Potable Groundwater Remedial Goals will be used as ARARs at ERP Site No. 2, which provide groundwater cleanup levels for BTEX and TPH (Table 5, MDNR, March 1996). The non-UST Groundwater Remedial Goals will also utilize Table B1 from the CALM policy document; the values associated with the Groundwater Target Concentrations in Table B1 will be used.

6.1.3 Site Cleanup Goals Screening Process

The soil and groundwater laboratory analytical data from ERP Site No. 2 activities have been compared to the evaluation criteria established in Sections 6.2.1 and 6.2.2, respectively.

6.2 LOCATION-SPECIFIC ARARS

No location-specific ARARs are considered to be potentially applicable to the RI activities conducted at the Station in 2003. However, location-specific ARARs may be evaluated further should there be a need for FS activities, depending on the selected remedial alternatives.

6.3 ACTION-SPECIFIC ARARS

Action-specific ARARs are regulatory requirements defining acceptable treatment and disposal procedures for the particular actions presented in the alternatives. Table 7 lists the potential action-specific ARARs for consideration during the investigation and remedial activities.

TABLE 7

ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION

Action Subject to Requirements	Requirement	Reason Why Requirement is Potentially Applicable	Regulatory Citation
Removal and disposal of soil.	Dispose of excavated soil in accordance with applicable Land Disposal Restrictions	This rule is a potential Applicable or Relevant and Appropriate Requirement (ARAR) because removal of impacted soil will be evaluated.	40 Code of Federal Regulations (CFR) Part 268, as incorporated by reference in 10 Code of State Regulations (CSR) 25-5.262.
Groundwater contamination.	Meet the Missouri Effluent Regulations, Groundwater (1996).	The impacts to groundwater documented in previous investigations will need to be addressed with this potential ARAR.	10 CSR 20.7.031(5)(D).
Protection of surface and groundwater quality and resources.	This requirement sets criteria for the protection of surface and groundwater quality and resources.	This rule is a potential ARAR because monitoring wells will be installed at the Site.	10 CSR 23-4.050 and 10 CSR 20-7.031.
Treatment of contaminated soils.	This requirement sets land application disposal restriction applicable to generators of hazardous waste.	This rule becomes a potential ARAR if it is necessary to dispose of excavated soil.	40 CFR Part 268, as incorporated by reference in 10 CSR 25-5.262.
Disposal of wastes at an approved solid waste disposal facility.	This requirement applies to disposal of regulated quantities of hazardous waste, polychlorinated biphenyls (PCBs), or bulk liquids.	This rule becomes a potential ARAR if hazardous waste, PCBs, or bulk liquids need to be disposed.	10 CSR 80-3.010 (3).
Disposal of PCB-contaminated materials.	This requirement applies to disposal of PCB-contaminated materials.	This rule becomes a potential ARAR if material or soil from releases of PCBs have been observed at the Station and subsequent disposal is required.	10 CSR 25-13.010.
Requirements of characterization of hazardous wastes.	Any materials generated during field activities shall be properly characterized.	This rule becomes a potential ARAR because waste materials may require disposal.	40 CFR Part 260 and 261.

TABLE 7
(CONTINUED)

ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION

Action Subject to Requirements	Requirement	Reason Why Requirement is Potentially Applicable	Regulatory Citation
Land disposal restrictions for hazardous waste.	Hazardous and mixed waste generated during field activities shall be disposed of according to the Resource Conservation and Recovery Act (RCRA) Land Disposal Restrictions.	This rule becomes a potential ARAR if hazardous or mixed waste is generated at the Station.	40 CFR 268.7 and 268.32, and 10 CSR 25-7.268.
Methods for identifying hazardous waste.	Test procedures and requirements for identification of materials as hazardous and regulated waste under RCRA shall be followed.	This rule becomes a potential ARAR if waste materials are generated.	10 CSR 25-4.261.
Standard health and safety requirements.	Field activities shall be conducted in accordance with the cited requirements of appropriate Air National Guard requirements and will be documented.	This rule becomes a potential ARAR because field activities will be conducted at the Site.	29 CFR Part 1904, 29 CFR
Health and safety training requirements.	The cited health and safety training requirements shall be adhered to.	This rule becomes a potential ARAR because field activities will be conducted at the Site.	29 CFR 1910: 1910.100 Subpart Z, Toxic and Hazardous Substances.
Groundwater monitoring well construction and abandonment.	Missouri Well Construction Code sets standards for monitoring well installation permit requirements, and for the renewal and placement of permit number.	This rule becomes a potential ARAR when groundwater monitoring wells are constructed or abandoned.	10 CSR 23-1.010–1.060 and 10 CSR 23-1.090, 10 CSR 23-1.105, 10 CSR 23-1.140.
Groundwater monitoring well construction and abandonment.	Missouri Well Construction Code sets standards for the general protection of groundwater during monitoring well construction and abandonment.	This rule becomes a potential ARAR if groundwater monitoring wells are constructed or abandoned at the Site.	10 CSR 23-3020–3.080 and 10 CSR 23-3.110.

TABLE 7
(CONTINUED)

ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION

Action Subject to Requirements	Requirement	Reason Why Requirement is Potentially Applicable	Regulatory Citation
Installation of monitoring well(s) or piezometers.	Monitoring Well Construction Code (Chapter 4 of the Missouri Well Construction Rules) sets standards for monitoring well and piezometer construction.	All sections of the Monitoring Well Construction Code are potential ARARs for this project.	Missouri Well Construction Rules 10 CSR 23-4.010-10 CSR 23-4.080.
Installation of monitoring well(s).	This requirement provides criteria for the locations where monitoring wells should be placed.	This rule becomes a potential ARAR because monitoring well(s) is to be installed at this Site which is located in a floodplain. Special criteria will be determined for specific site.	10 CSR 23-4.030 (1) (C).
Installation of monitoring well(s).	Minimum standards for properly constructed monitoring wells are described by this requirement.	This rule becomes a potential ARAR due to the possible presence of volatile organic compounds (VOCs) and petroleum products in Site groundwater. This rule requires special consideration in the selection of riser pipe, casing materials, and polymer additives for bentonite slurry-grout.	10 CSR 23-4.060 (1) (A) and (11) (A).
Installation of monitoring well(s).	Minimum standards for properly constructed monitoring wells are described by this requirement.	This rule becomes a potential ARAR if piezometers are installed at this Site in the future.	10 CSR 23-4.060 (1) (D) (1), (2), and (3).
Installation of monitoring well(s).	Minimum standards for properly constructed monitoring wells are described by this requirement.	This rule becomes a potential ARAR if monitoring wells and piezometers are installed at this Site which is located in a floodplain. Elevation of riser assembly is required.	10 CSR 23-4.060 (7).

TABLE 7
(CONTINUED)

ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS
JEFFERSON BARRACKS AIR NATIONAL GUARD STATION

Action Subject to Requirements	Requirement	Reason Why Requirement is Potentially Applicable	Regulatory Citation
Installation of monitoring well(s).	Minimum standards for properly constructed monitoring wells are described by this requirement.	This rule becomes a potential ARAR if monitoring wells are installed at this Site which is located in a floodplain. Additional well protection is necessary.	10 CSR 23-4.060 (12) (A) (3).
Installation of monitoring well(s).	Minimum standards for properly constructed monitoring wells are described by this requirement.	This rule becomes a potential ARAR due to the possible presence of VOCs and petroleum products in Site groundwater, because of compatibility concerns between groundwater and grout used to plug the monitoring well.	10 CSR 23-4.080 (4).
Abandonment (plugging) of monitoring well(s).	Minimum standards for properly constructed monitoring wells are described by this requirement.	This rule becomes a potential ARAR if monitoring wells or piezometers are abandoned at this Site in the future.	10 CSR 23-4.080 (6).

7.0 SUMMARY AND CONCLUSIONS

7.1 BACKGROUND

MWH has been contracted under the ERP to complete an RI for MOANG's 157th AOG at the Station in St. Louis, Missouri. The purpose of the RI is to determine the nature and extent of chemical constituents in soil and groundwater at ERP Site No. 2. The investigation at the Site detected constituents in soil and groundwater samples, with concentrations of SVOCs, TPH, and arsenic exceeding MDNR soil cleanup action levels in soil.

A previous investigation at ERP Site No. 2 (the 1994 SI) detected VOCs, SVOCs, TPH as gasoline and diesel, and beryllium in soil above MDNR soil cleanup action levels. No groundwater samples were collected during that investigation. The source of the soil constituents is most likely associated with former AST and drum storage at the site.

In September 2003, MWH finalized an *RI Work Plan*, which described the rationale and procedures for investigation sampling and analysis activities. The investigative fieldwork was conducted during October and December 2003.

During the 2003 fieldwork at ERP Site No. 2, a total of eight soil borings were advanced and four monitoring wells were installed. Soil screening and sampling, groundwater sampling of the new monitoring wells, and water level measurements were completed during the 2003 fieldwork.

7.2 HYDROGEOLOGY

The Station is located along the western bank of the Mississippi River. The average ground elevation of ERP Site No. 2 is approximately 455 feet msl. The shallow subsurface is comprised predominantly of clay, silty clay, and sand, with some gravel lenses.

The unconsolidated deposits in the vicinity of the Station are not considered to be an aquifer due to the low water-bearing capacity of the deposits, and they are not used as a drinking water source in the area. A zone of karst terrain occurs in a discontinuous belt

surrounding the Station on the northeast, west, and southwest. Consequently, the direction of groundwater flow in bedrock in the vicinity of the Station is difficult to ascertain.

Due to the lack of resulting geologic data from any geotechnical or RI activities conducted at the Station in the past several years, it was not possible to accurately estimate site-specific groundwater conditions. Although no groundwater was encountered during excavations for removal of USTs at the SS-1 site west of Building 40, groundwater was encountered in several of the borings drilled during the 1994 SI activities. During the 2003 RI field investigation activities, the apparent horizontal groundwater flow direction at ERP Site No. 2 was determined to be generally toward the east, in the direction of the Mississippi River, as was previously estimated for the SI. Horizontal hydraulic gradients calculated for the 2003 field activities were approximately 0.13 foot/foot across ERP Site No. 2.

7.3 NATURE AND EXTENT OF CHEMICAL CONSTITUENTS

7.3.1 Soil Investigations

Based on the soil sampling completed to date at ERP Site No. 2, it appears natural attenuation has reduced the concentrations of chemical constituents in soil over time. As of the 2003 RI activities, chemical constituents in soil above MDNR cleanup action levels are generally limited to total TPH in the 6- to 10-foot bgs interval of boring SB-3 (near the southwest corner of the large concrete pad), and SVOCs in the shallow intervals of SB-2 and SB-8 (east of the former AST).

Beryllium was detected above the MDNR CALM standard in ten of the twelve soil samples collected during the 1994 SI activities. Arsenic was detected above the CALM standard in seven of the eight deep soil samples (seven of the total sixteen samples) collected during the 2003 RI. High levels of arsenic are common in soils near the Station, per the geochemical survey of Missouri agricultural soils undertaken in the 1970s, and are likely normal background levels.

7.3.2 Groundwater Investigations

The RI groundwater sampling activities conducted over two rounds in 2003 indicated no

chemical constituents above MDNR CALM standards. No previous groundwater sampling had been conducted at ERP Site No. 2.

7.4 CONCLUSIONS

Based on the investigative work conducted at ERP Site No. 2, the sources of chemical constituents are most likely associated with the former AST and drum storage. The former AST in the southwest corner of the Site and the drums and stained gravel were removed, and chemicals are no longer stored in this area.

Because approximately the northern one-third of ERP Site No. 2 is covered by concrete pads and a semipermanent connex storage building, and the remainder of the Site is covered with grass, migration of soil through other means (i.e., direct contact exposure, surface water runoff, wind blown dust, etc.) would be essentially eliminated in this area.

The chemicals of concern detected in soil at ERP Site No. 2 have had the potential to migrate to groundwater. However, no constituents were detected above groundwater cleanup levels during either round of groundwater sampling, providing the conclusion that leaching from soil to groundwater is not occurring.

Based upon results of the previous and recent investigations conducted at ERP Site No. 2, the following has been concluded:

- During the SI, soil vapor survey points advanced at ERP Site No. 2 detected TPH in three soil vapor samples; and toluene, ethylbenzene, and xylene were detected in one soil vapor sample.

- TPH, benzo(a)pyrene, and beryllium were the only chemical constituents detected in soil above the current MDNR soil cleanup action levels during the 1994 SI fieldwork.

- SVOC detections in soils above MDNR CALM standards during the 2003 RI were limited to the shallow soil intervals of borings SB-2 and SB-8, located east of the former AST).

- Total TPH detections above the MDNR soil cleanup action level during the 2003 RI were limited to the 6- to 10-foot bgs interval of soil boring SB-3, located adjacent to the southwest corner of the large concrete pad.

- Arsenic in soil exceeding the MDNR CALM standard was detected in seven of the eight deep soil intervals (seven of the total sixteen samples) collected during the 2003 RI. That is, this constituent is detected in exceedance of the standard in deep soils, far from human contact. Additionally, high levels of arsenic are common in soils near the Station, and thus these detections are likely normal background soil levels.

- Based on the soil sampling completed to date at ERP Site No. 2, it appears that natural attenuation has reduced the concentrations of many chemical constituents in soil in the time since the SI fieldwork was completed.

- Groundwater in unconsolidated sediments in the vicinity of the Station is not used as a source of drinking water.

- The 2003 groundwater sampling activities indicated no chemicals of concern above MDNR CALM standards.

Chemical constituents in groundwater at ERP Site No. 2 have been adequately delineated, and no further assessment of groundwater is necessary.

7.5 RECOMMENDATIONS

Additional soil characterization and removal is recommended. Steps to close out ERP Site No. 2 are as follows:

- Submit Work Plan to MDNR for additional site characterization activities.

- Conduct additional shallow soil sampling in the immediate vicinity of soil boring SB-3, where TPH was detected above MDNR CALM standards in the 6-8 and 8-10 feet bgs intervals during the 2003 RI.

- Conduct additional shallow soil sampling in the vicinity of soil borings SB-2 and SB-8, where SVOCs were detected above MDNR CALM standards in the 0-4 feet bgs interval during the 2003 RI.

- Overexcavate soil around the areas of SVOC and TPH exceedances.

- Collect additional soil samples in the sidewalls and floor of the excavation(s) to confirm the surrounding soil is clean.

- Backfill the excavation(s) with clean soil, and repair the excavated area to match the surrounding surface.

- Document the soil removal and clean closure activities.

- Following additional soil sampling, overexcavation, confirmation, backfill, and documentation activities, ERP Site No. 2 will be requested for No Further Action.

8.0 REFERENCES

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APPENDIX A

DCN: Jefferson Barracks 2 37941
Title: PA/SI Report, Volume I
ARF Final 02 Mar 1997

INSTALLATION RESTORATION PROGRAM

PRELIMINARY ASSESSMENT/ SITE INSPECTION REPORT

VOLUME I

157th AIR CONTROL GROUP
JEFFERSON BARRACKS
AIR NATIONAL GUARD
MISSOURI AIR NATIONAL GUARD
ST. LOUIS, MISSOURI

MARCH 1997

Prepared For

ANGRC/CEVR
ANDREWS AFB, MARYLAND

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Prepared By

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1315-105

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Table 6.3
AOC-B Drilling Summary Table
157th ACG, Jefferson Barracks ANGS, St. Louis, Missouri

Drilling Location/ Borehole Identification	Interval Submitted for Laboratory analysis (Feet BLS)
B-001BH	
INT-1	3.5 - 5.0
INT-2	10.0 - 11.5
INT-3	30.0 - 31.5
B-002BH	
INT-1	0.5 - 2.0
INT-2	5.0 - 6.5
INT-3	29.0 - 30.5
B-003BH	
INT-1	1.0 - 2.5
INT-2	5.0 - 6.5
INT-3	25.0 - 26.5
B-004BH	
INT-1	0.5 - 2.0
INT-2	10.0 - 11.5
INT-3	30.0 - 31.5

AOC – Area of Concern.
BLS – Below Land Surface.
INT – Interval.

benzo(a)pyrene were detected in soil from B-004BH (0.5-2.0) at concentrations shown on Table 6.4. Bis(2-ethylhexyl)phthalate was also detected at B-004BH. However this is attributed to laboratory-induced contamination. TPH results for AOC-B are shown in Table 6.5 and are presented on Figure 6.12. TPH analysis indicated #2 Fuel Oil was detected in B-001BH (3.5-5.0) and (30.0-31.5) at 440 and 100 mg/kg, respectively. Several other TPH quantities were reported as a particular hydrocarbon when the peak pattern did not match that of the reference standard. These quantities were detected in B-001BH (3.5-5.0) and reported TPH as lube oil at 39 mg/kg, and TPH as gasoline at 0.9 mg/kg. B-001BH (30.0-31.5) reported TPH as C20 at 4.1 mg/kg. B-003BH (5.0-6.5) reported TPH as C20 at 3.3 mg/kg.

Metals concentrations detected in soil samples from AOC-B are listed in Table 6.6 and shown on Figure 6.12. Antimony, mercury, selenium, silver, and thallium were not detected in concentrations above method reporting limits. Arsenic concentrations ranged from 2.0 to 10.6 mg/kg, beryllium ranged from non-detect to 1.3 mg/kg, cadmium ranged from non-detect to 2.6 mg/kg, chromium ranged from 8.6 to 39.6 mg/kg, copper ranged from 14.7 to 54.3 mg/kg, lead ranged from 7.1 to 133 mg/kg, nickel ranged from 10.7 to 38.9 mg/kg, and zinc ranged from 38.6 to 710 mg/kg.

Table 6.4
Semivolatile Organic Compounds Detected in Soil at AOC-B
157th ACG, Jefferson Barracks ANGS, St. Louis, Missouri

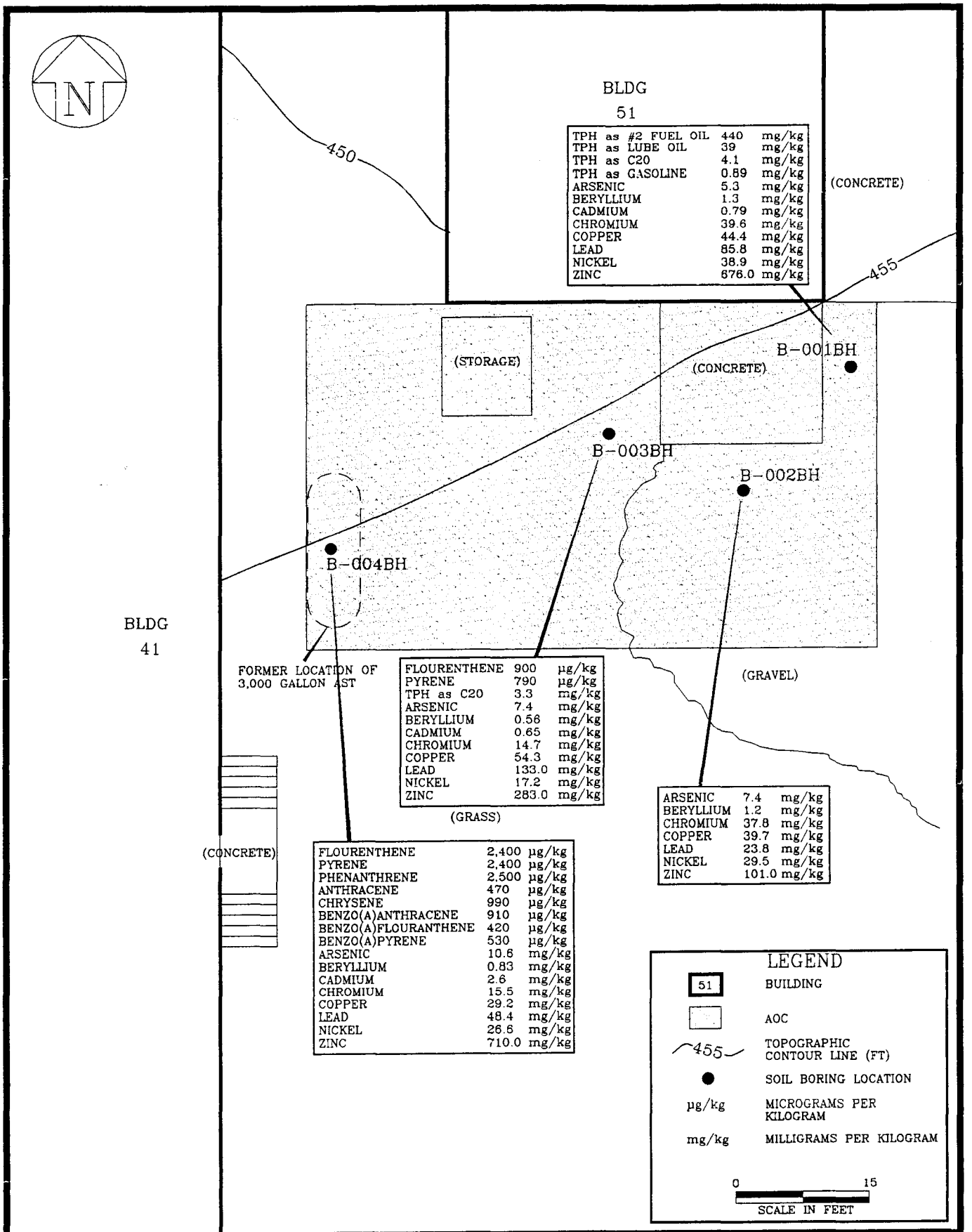
Analyte		Boring Identification/Interval (feet BLS)	
		B-003BH (1.0 - 2.5) (μg/kg)	B-004BH (0.5 - 2.0) (μg/kg)
SVOCs	Fluoranthene	900	2,400
	Pyrene	790	2,400
	Phenanthrene	620J	2,500
	Anthracene	110J	470
	Chrysene	400J	990
	Benzo(a)anthracene	350J	910
	Benzo(k)fluoranthene	190J	420
	Benzo(a)pyrene	220J	530
	Bis(2-ethylhexyl)phthalate*	780U	700

SVOCs – Semivolatile Organic Compounds by Method SW8270.
μg/kg – micrograms per kilogram.
BH – Borehole.
BLS – Below Land Surface.
U – Compound was analyzed for but was not detected. Detection limit is shown.
J – Indicates an estimated concentration. Indicates the presence of the compound that meets the identification criteria, but the result is less than the sample quantitation limit for the sample.
* – Common laboratory induced contaminant in SVOC analysis (USEPA, 1993).

Table 6.5
TPH Detected in Soil at AOC-B
157th ACG, Jefferson Barracks ANGS, St. Louis, Missouri

Analyte		Boring Identification/Interval (feet BLS)			
		B-001BH (3.5 - 5.0) (mg/kg)	B-001BH (30.0 - 31.5) (mg/kg)	B-003BH (5.0 - 6.5) (mg/kg)	B-004BH (0.5 - 2.0) (mg/kg)
TPH	TPH as #2 Fuel Oil	440	100	12U	12U
	TPH as Lube Oil	39	13U	12U	12U
	TPH as C20	11U	4.1	3.3	12U
	TPH as Gasoline	0.89	0.13U	0.12U	0.12U

TPH – Total Petroleum Hydrocarbons by Method CA. 8015 Modified.
BLS – Below Land Surface.
mg/kg – milligrams per kilogram.
BH – Borehole.
U – Compound was analyzed for but was not detected. Detection limit is shown.



TPH as #2 FUEL OIL	440	mg/kg
TPH as LUBE OIL	39	mg/kg
TPH as C20	4.1	mg/kg
TPH as GASOLINE	0.89	mg/kg
ARSENIC	5.3	mg/kg
BERYLLIUM	1.3	mg/kg
CADMIUM	0.79	mg/kg
CHROMIUM	39.6	mg/kg
COPPER	44.4	mg/kg
LEAD	85.8	mg/kg
NICKEL	38.9	mg/kg
ZINC	676.0	mg/kg

FLOURENTHENE	900	µg/kg
PYRENE	790	µg/kg
TPH as C20	3.3	mg/kg
ARSENIC	7.4	mg/kg
BERYLLIUM	0.56	mg/kg
CADMIUM	0.65	mg/kg
CHROMIUM	14.7	mg/kg
COPPER	54.3	mg/kg
LEAD	133.0	mg/kg
NICKEL	17.2	mg/kg
ZINC	283.0	mg/kg

(GRASS)

FLOURENTHENE	2,400	µg/kg
PYRENE	2,400	µg/kg
PHENANTHRENE	2,500	µg/kg
ANTHRACENE	470	µg/kg
CHRYSENE	990	µg/kg
BENZO(A)ANTHRACENE	910	µg/kg
BENZO(A)FLOURANTHENE	420	µg/kg
BENZO(A)PYRENE	530	µg/kg
ARSENIC	10.6	mg/kg
BERYLLIUM	0.83	mg/kg
CADMIUM	2.6	mg/kg
CHROMIUM	15.5	mg/kg
COPPER	29.2	mg/kg
LEAD	48.4	mg/kg
NICKEL	26.6	mg/kg
ZINC	710.0	mg/kg

ARSENIC	7.4	mg/kg
BERYLLIUM	1.2	mg/kg
CHROMIUM	37.8	mg/kg
COPPER	39.7	mg/kg
LEAD	23.8	mg/kg
NICKEL	29.5	mg/kg
ZINC	101.0	mg/kg

FIGURE 6.12

JEFF\INSPEC-B

RESULTS OF LABORATORY ANALYSES AT STORAGE AREA AOC (AOC B)

157th ACG, Jefferson Barracks ANGS
St. Louis, Missouri

OPTECH
OPERATIONAL TECHNOLOGIES CORPORATION

AUGUST 1996

Table 6.6
AOC-B Metals Analyses Summary Table
157th ACG, Jefferson Barracks ANGS, St. Louis, Missouri

Metals	B-001BH 3.5 - 5.0 (Ft BLS)	B-001BH 10.0 - 11.5 (Ft BLS)	B-001BH 30.0 - 31.5 (Ft BLS)	B-002BH 0.5 - 2.0 (Ft BLS)	B-002BH 5.0 - 6.5 (Ft BLS)	B-002BH 29.0 - 30.5 (Ft BLS)
Antimony	3.8U	4.7U	4.7U	5.6B	4.6U	5.1U
Arsenic	2.2	5.3	2.6	6.6	7.4	5.0
Beryllium	0.10U	0.42B	1.3	0.44B	0.47B	1.2
Cadmium	0.79	0.25U	0.43B	0.22U	0.24U	0.27U
Chromium	10.7	12.8	39.6	11.4	8.6	37.8
Copper	15.4	44.4	25.5	14.7	39.7	18.8
Lead	85.8	15.8	17.4	23.8	8.4	19.6
Nickel	12.1	20	38.9	14.1	23	29.5
Zinc	676	148	83.1	52.6	101	63.6
Metals	**B-003BH 1.0 - 2.5 (Ft BLS)**	**B-003BH 5.0 - 6.5 (Ft BLS)**	**B-003BH 25.0 - 26.5 (Ft BLS)**	**B-004BH 0.5 - 2.0 (Ft BLS)**	**B-004BH 10.0 - 11.5 (Ft BLS)**	**B-004BH 25.0 - 31.5 (Ft BLS)**
Antimony	4.2U	4.4U	4.5U	4.5U	4.5U	4.1U
Arsenic	7.4	7.2	4.7	7.1	10.6	2.0
Beryllium	0.56	0.46B	0.59B	0.79	0.83	0.22U
Cadmium	0.65	0.23U	0.24U	2.6	0.78	0.22U
Chromium	13.2	11.4	14.7	15.5	14.2	12.9
Copper	25.2	54.3	34.6	29.2	21.3	19.6
Lead	133	79.8	14.2	48.4	13.3	7.1
Nickel	15.6	15.1	17.2	22.2	26.6	10.7
Zinc	283	149	45.7	710	79.7	38.6

U – Indicates compound was analyzed for but was not detected.
B – Sample value range greater than the instrument detection limit, but less than the reporting limit.
AOC – Area of Concern.
BH – Borehole.
BLS – Below Land Surface.
Ft. – Feet.
Note: All analyte concentrations expressed in milligrams per kilogram (mg/kg). Analytical Methods: SW6010 with the exception of arsenic (SW7060), and lead (SW7421).

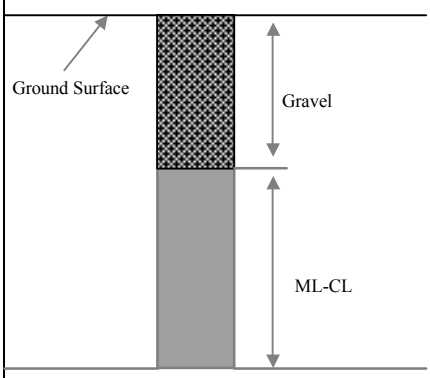
6.5 DRAINAGE DITCH AOC (AOC-C)

AOC-C is located approximately 150 feet south of Building 75 and is immediately north of a military vehicle parking area (see Figure 6.13). The AOC measures approximately 375 feet long and 10 feet wide and centers on the ditch that is the subject of the investigation. A large majority of the area is grass covered, with a culvert and gravel road passing over the ditch near the west end of the AOC. The soil boring locations for AOC-C are shown on Figure 6.13. Five soil borings were drilled at this AOC. Borings C-001BH, C-002BH, C-003BH, C-004BH,

APPENDIX B

SOIL BORING LOG

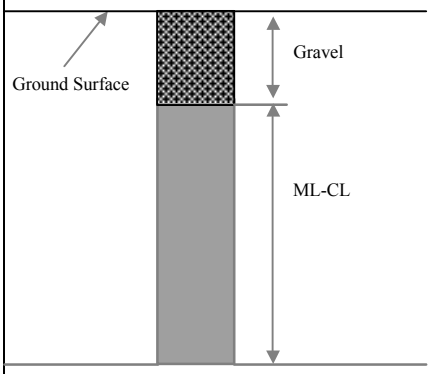
Boring / Well Number: SB-1	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Boring Depth (ft) X Diameter (in): 10 feet X 2 inch OD		**Drilling Method:** Geoprobe®
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): N/A	**Top of Casing Elevation (ASL):** DNA	
Date: 10/08/03 **Start Time:** 0923	**Date:** 10/08/03 **End Time:** 0950	**UST Number:** DNA **LUST Number:** DNA

Depth (feet)	Boring Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		N/A	0-4 4-8 8-10	2.5 2 2	0.0 0.0 0.0	0-3': GRAVEL AND SILTY CLAY, gray gravel and brown silty clay, dry, crumbly, no odor, roots. 3-8': SILTY CLAY WITH GRAVEL LAYERS, brown silty clay, gray gravel (fill from adjacent utility piping), moist, no odor. End of boring at 10'.

* SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply)

SOIL BORING LOG

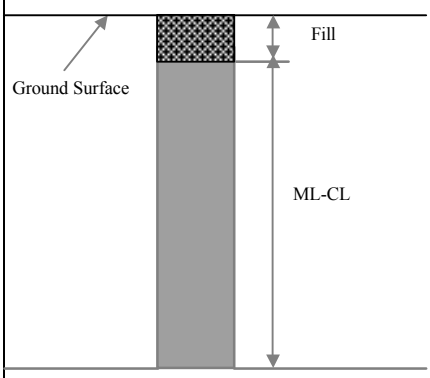
Boring / Well Number: SB-2	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Boring Depth (ft) X Diameter (in): 10 feet X 2 inch OD		**Drilling Method:** Geoprobe®
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): N/A	**Top of Casing Elevation (ASL):** DNA	
Date: 10/08/03 **Start Time:** 1020	**Date:** 10/08/03 **End Time:** 1040	**UST Number:** DNA **LUST Number:** DNA

Depth (feet)	Boring Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		N/A	0-4 4-8 8-10	3.6 3.4 2	0.0 0.0 0.0	0-2': GRAVEL AND SILTY CLAY, brown to gray, dry, crumbly, no odor, roots. 2-4.5': SILTY CLAY WITH SOME GRAVEL, gray to brown, dry, crumbly, no odor. 4.5-10': SILTY CLAY, brown, moist, slightly soft, no odor, low plasticity, coarse brown poorly-sorted sand layer from 6.5-6.9'. End of boring at 10'.

* SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply)

SOIL BORING LOG

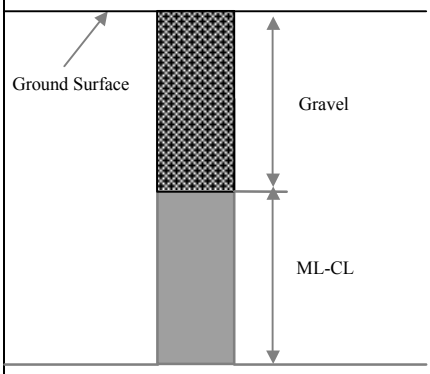
Boring / Well Number: SB-3	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Boring Depth (ft) X Diameter (in): 10 feet X 2 inch OD		**Drilling Method:** Geoprobe®
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): N/A	**Top of Casing Elevation (ASL):** DNA	
Date: 10/08/03 **Start Time:** 1317	**Date:** 10/08/03 **End Time:** 1340	**UST Number:** DNA **LUST Number:** DNA

Depth (feet)	Boring Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		N/A	0-4 4-8 8-10	3.2 3.2 2	0.0 * 74 * 4-6' PID reading = 0.0; 6-8' PID reading = 71.	0-1': FILL GRAVEL AND SILTY CLAY, gray gravel and brown silty clay, dry, crumbly, no odor, red brick pieces. 1-6': SILTY CLAY, brown, moist, soft to firm, low to medium plasticity, no odor. 6-10': SILTY CLAY WITH SAND LAYER, green, very coarse black sand horizon at 6', with strong odor ,moist, soft to firm, low to medium plasticity, petroleum-like odor. End of boring at 10'.

* SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply)

SOIL BORING LOG

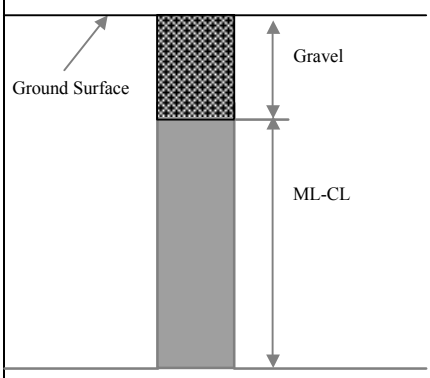
Boring / Well Number: SB-4	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Boring Depth (ft) X Diameter (in): 10 feet X 2 inch OD		**Drilling Method:** Geoprobe®
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): N/A	**Top of Casing Elevation (ASL):** DNA	
Date: 10/09/03 **Start Time:** 0915	**Date:** 10/09/03 **End Time:** 0930	**UST Number:** DNA **LUST Number:** DNA

Depth (feet)	Boring Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		N/A	0-4 4-8 8-10	2 3 1	0.0 0.0 0.0	0-4': GRAVEL WITH SILTY CLAY, gray gravel with brown silty clay, dry, crumbly, no odor. 4-10': SILTY CLAY, brown, moist, soft to firm, low to medium plasticity, no odor. End of boring at 10'.

* SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply)

SOIL BORING LOG

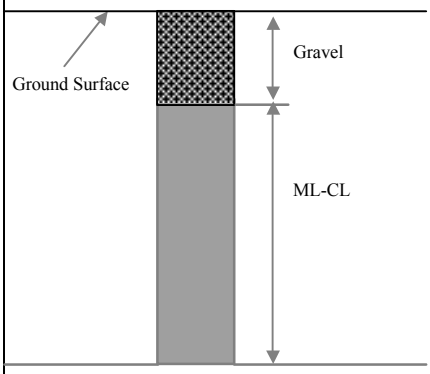
Boring / Well Number: SB-5	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Boring Depth (ft) X Diameter (in): 10 feet X 2 inch OD		**Drilling Method:** Geoprobe®
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): N/A	**Top of Casing Elevation (ASL):** DNA	
Date: 10/09/03 **Start Time:** 0840	**Date:** 10/09/03 **End Time:** 0900	**UST Number:** DNA **LUST Number:** DNA

Depth (feet)	Boring Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		N/A	0-4 4-8 8-10	3 4 2	1.7 0.0 4.7	0-2.2': GRAVEL AND SILTY CLAY, gray gravel and brown to gray silty clay, dry, crumbly, no odor. 2.2-10': SILTY CLAY, brown, moist, firm, medium plasticity, no odor. End of boring at 10'.

* SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply)

SOIL BORING LOG

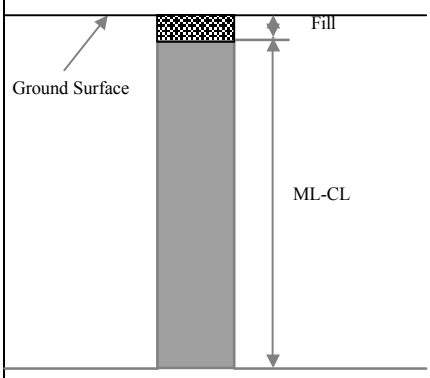
Boring / Well Number: SB-6	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Boring Depth (ft) X Diameter (in): 10 feet X 2 inch OD		**Drilling Method:** Geoprobe®
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): N/A	**Top of Casing Elevation (ASL):** DNA	
Date: 10/08/03 **Start Time:** 1515	**Date:** 10/08/03 **End Time:** 1540	**UST Number:** DNA **LUST Number:** DNA

Depth (feet)	Boring Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		N/A	0-4 4-8 8-10	3.7 4 2	0.0 0.0 0.0	0-2': GRAVEL AND SOME SILTY CLAY, gray and black gravel and brown silty clay, dry, crumbly, no odor. 2-10': SILTY CLAY, brown, moist, firm, medium plasticity, no odor. End of boring at 10'.

* SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply)

SOIL BORING LOG

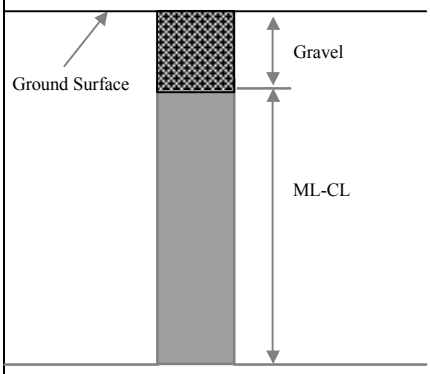
Boring / Well Number: SB-7	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Boring Depth (ft) X Diameter (in): 10 feet X 2 inch OD		**Drilling Method:** Geoprobe®
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): N/A	**Top of Casing Elevation (ASL):** DNA	
Date: 10/08/03 **Start Time:** 1408	**Date:** 10/08/03 **End Time:** 1425	**UST Number:** DNA **LUST Number:** DNA

Depth (feet)	Boring Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		N/A	0-4 4-8 8-10	3.7 4.8 2	0.0 0.0 0.0	0-0.5': FILL GRAVEL AND SILTY CLAY, gray gravel and brown silty clay, dry, crumbly, no odor, red brick pieces at 0.5'. 0.5-10': SILTY CLAY, brown, moist, soft to semi-firm, low to medium plasticity, no odor. End of boring at 10'.

* SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply)

SOIL BORING LOG

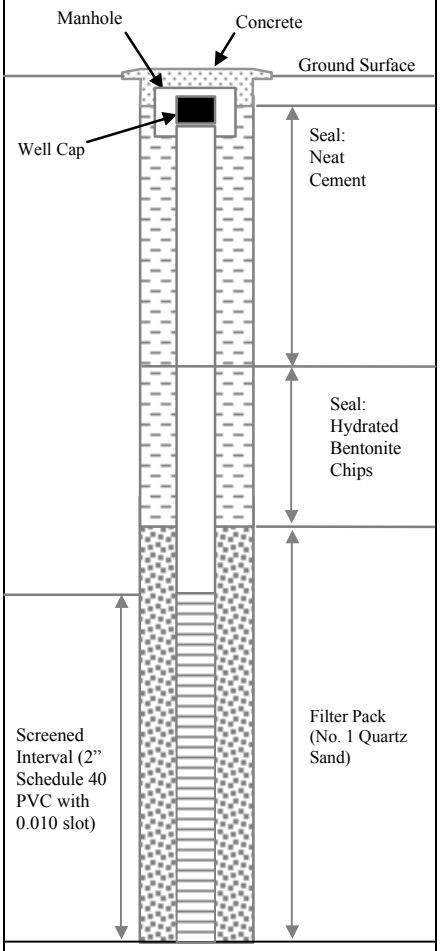
Boring / Well Number: SB-8	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Boring Depth (ft) X Diameter (in): 10 feet X 2 inch OD		**Drilling Method:** Geoprobe®
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): N/A	**Top of Casing Elevation (ASL):** DNA	
Date: 10/08/03 **Start Time:** 1125	**Date:** 10/08/03 **End Time:** 1140	**UST Number:** DNA **LUST Number:** DNA

Depth (feet)	Boring Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		N/A	0-4 4-8 8-10	3.7 4 2	0.0 0.0 0.0	0-1.8': GRAVEL AND SILTY CLAY, brown, dry, crumbly, no odor, roots. 1.8-4.2': SILTY CLAY WITH SOME GRAVEL, gray to brown, dry, crumbly, no odor, coarse poorly-sorted sand layer from 2.4-3'. 4.2-10': SILTY CLAY, brown, moist, slightly soft, low to medium plasticity, no odor. End of boring at 10'.

* SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply)

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: MW-1	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Well Depth (ft) X Diameter (in): 25 feet X 6 1/4 inch OD		**Drilling Method:** HSA
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): 455.88	**Top of Casing Elevation (ASL):** 455.58	
Date: 10/08/2003 **Start Time:** 1315	**Date:** 10/08/2003 **End Time:** 1525	**UST Number:** DNA **LUST Number:** DNA

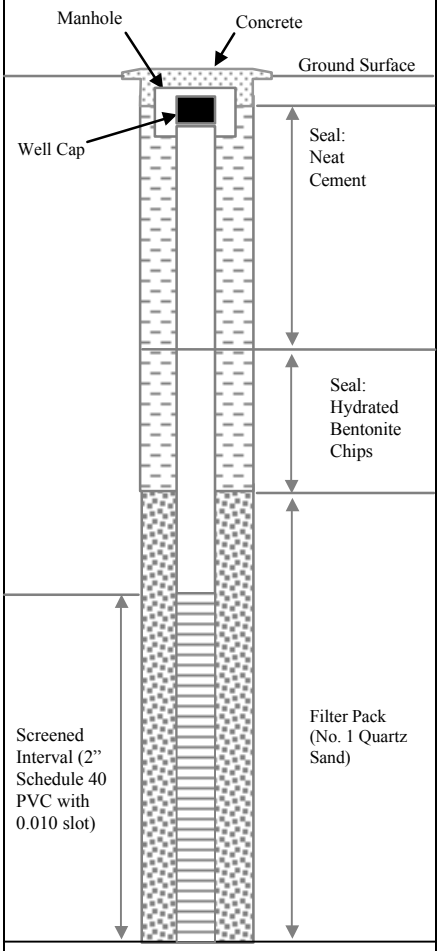
Depth (feet)	Well Construction Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25		N/A	0-2 2-4 4-6 6-8 8-10 10-12 12-14 14-16 16-18 18-20 20-22 22-24 24-25	1 1.3 1 0.2 2 2 2 2 2 2 2 2 1	.0 0.0 0.0 0.0 0.0 0.0 3.5 6.1 0.0 0.0 0.0 0.0 0.0	0-0.8': SILTY CLAY, brown, roots, moist, no odor. 0.8-2.5': GRAVEL FILL, gray, dry, no odor. 2.5-25': SILTY CLAY WITH SOME GRAVEL, brown, moist, firm to somewhat soft, low to medium plasticity, no odor, wet at 20', sand horizon at 24'. End of boring at 25'.

SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply) ASL (above mean sea level)

Observations	Date:	10/9/2003	12/4/2003			
Water Levels (ASL)	Level:	438.46	440.77			
	Time:	1030	1330			

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: MW-2	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Well Depth (ft) X Diameter (in): 25 feet X 6 1/4 inch OD		**Drilling Method:** HSA
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): 455.50	**Top of Casing Elevation (ASL):** 455.06	
Date: 10/07/2003 **Start Time:** 1345	**Date:** 10/07/2003 **End Time:** 1545	**UST Number:** DNA **LUST Number:** DNA

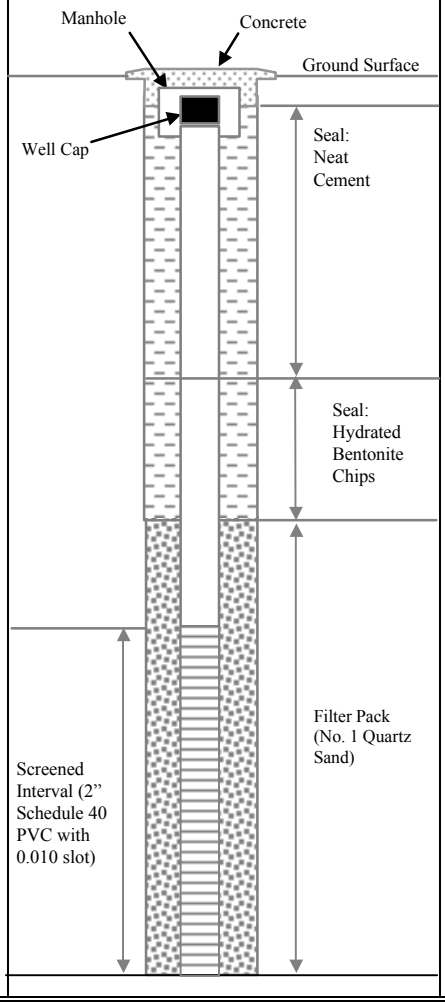
Depth (feet)	Well Construction Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25		N/A	0-2 2-4 4-6 6-8 8-10 10-12 12-14 14-16 16-18 18-20 20-22 22-24 24-25	1.3 1.2 1.4 2 2 2 2 2 2 2 2 2 1	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0-0.5': GRAVEL AND SOME SILTY SAND, gray gravely, brown silty sand, dry, crumbly, no odor. 0.5-12': SILTY CLAY WITH SOME GRAVEL, brown, dry to moist, trace gravel, pieces of brick at 0.5', some black organic horizons between 0.5 to 4', no odor, somewhat firm, crumbly to low plasticity, stickier and high plasticity below 6', wet below approximately 11'. 12-18': CLAY, primarily brown to gray, firm, with iron mottling, wet, no odor. 18-25': SILTY CLAY WITH SOME GRAVEL, brown, sticky, high plasticity wet, no odor. End of boring at 25'.

SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply) ASL (above mean sea level)

Observations	Date:	10/9/2003	12/4/2003			
Water Levels (ASL)	Level:	432.51	435.06			
	Time:	1030	1330			

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: MW-3	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Well Depth (ft) X Diameter (in): 26 feet X 6 1/4 inch OD		**Drilling Method:** HSA
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): 453.92	**Top of Casing Elevation (ASL):** 453.45	
Date: 10/07/2003 **Start Time:** 0855	**Date:** 10/07/2003 **End Time:** 1000	**UST Number:** DNA **LUST Number:** DNA

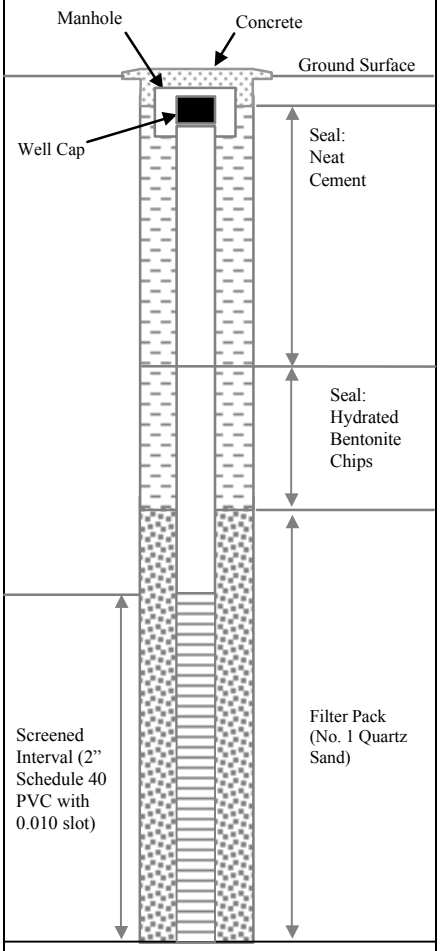
Depth (feet)	Well Construction Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26		N/A	0-2 2-4 4-6 6-8 8-10 10-12 12-14 14-16 16-18 18-20 20-22 22-24 24-26	1.5 0.3 1.5 2 0.3 2 2 2 2 2 2 2 2	106 104 253 229 67.5 30.4 1.3 * 0.0 0.0 0.0 0.0 0.0 0.0 * PID not working properly until this point. Shallower PID readings are suspect.	0-3.5': GRAVEL WITH SOME SILTY CLAY AND SAND, gray silty clay and sand, dry, no odor, some black organic horizons. 3.5-26': SILTY CLAY, brown, medium plasticity, dry to moist, no odor, gravel seam at 6', stickier and high plasticity below 9.5, water at 20-22'. End of boring at 26'.

SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply) ASL (above mean sea level)

Observations	Date:	10/9/2003	12/4/2003	12/5/2003		
Water Levels (ASL)	Level:	No water	430.73	430.69		
	Time:	1030	1330	1425		

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: MW-4	**Facility Name:** Jefferson Barracks ANG Station, IRP Site No. 2.	**Facility Street Address:** 65 Kearney Street, St. Louis, Missouri.
Well Depth (ft) X Diameter (in): 25 feet X 6 1/4 inch OD		**Drilling Method:** HSA
Well Contractor Name: Brotcke Well & Pump, Inc. **Registration Number:** 001189M		**Logged by:** Diane M. Krueger (MWH)
Ground Surface Elevation (ASL): 455.05	**Top of Casing Elevation (ASL):** 454.52	
Date: 10/08/2003 **Start Time:** 0840	**Date:** 10/08/2003 **End Time:** 1010	**UST Number:** DNA **LUST Number:** DNA

Depth (feet)	Well Construction Details	Blow Count	Sample No.	Recovery	PID Reading	Rock Formations, Soil, Color Classifications, Observations (moisture, odor, etc.), USCS.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25		N/A	0-2 2-4 4-6 6-8 8-10 10-12 12-14 14-16 16-18 18-20 20-22 22-24 24-25	0.5 0.8 2 2 2 2 2 2 2 2 2 2 1	0.0 0.0 0.0 5.7 0.0 3.5 0.0 0.0 0.0 2.7 0.0 6.3 0.0	0-3.5': SILTY CLAY AND GRAVEL, brown to gray, dry, crumbly, no odor. 3.5-3.8': SAND FILL, brown, medium- to coarse-grained, moist, poorly sorted, no odor. 3.8-25': SILTY CLAY, brown, moist, soft to slightly firm, medium plasticity, trace gravel, some iron mottling, stiff and firm with iron mottling from 9-16', back to softer silty clay below 16', wet from 22-24', no odor. End of boring at 25'.

SS (split spoon) HSA (hollow stem auger) N/A (not available) DNA (does not apply) ASL (above mean sea level)

Observations	Date:	10/9/2003	12/4/2003			
Water Levels (ASL)	Level:	431.88	433.11			
	Time:	1030	1330			

APPENDIX C

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGY AND LAND SURVEY
(573) 368-2165

MONITORING WELL CERTIFICATION RECORD

OFFICE USE ONLY	DATE RECEIVED
REF. NO. 267218	
C.R.NO.	CHECK NO.
STATE WELL NUMBER	REVENUE NO.
ENTERED Ph 1 Ph 2 Ph3	APPROVED BY / ROUTE /

INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR

OWNER NAME: Jefferson Barracks Int'l Guard Station
WELL NUMBER: MW1
VARIANCE GRANTED BY THE D.N.R.: ☒ NO ☐ YES, ATTACH A COPY OF THE VARIANCE
VARIANCE NUMBER:

OWNER ADDRESS: 65 Kearney St | CITY: St Louis | STATE: MO | ZIP CODE: 63125

SITE NAME: TKP #2 | CONTACT NAME: Arthur Schuermann

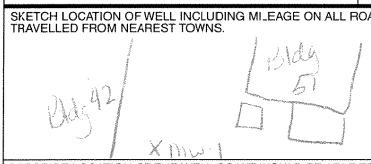
SITE ADDRESS: Building 51 Jefferson Barracks | CITY: St Louis | STATE: MO | ZIP CODE: 63125

PROPOSED USE OF WELL: ☐ GAS MONITORING WELL ☒ MONITORING WELL ☐ EXTRACTION WELL ☐ PIEZOMETERS

TYPE OF POTENTIAL SITE: ☐ HAZARDOUS MATERIAL ☐ LANDFILL ☐ INITIAL SITE ASSESSMENT ☒ L.U.S.T. ☐ WATER LEVEL DRAWDOWN

MONITORING FOR: (CHECK ALL THAT APPLY) ☐ RADIONUCLIDES ☐ PETROLEUM PRODUCTS ONLY ☐ EXPLOSIVES ☒ METALS ☒ V.O.C. ☒ SVOCS ☐ PESTICIDES/HERBICIDES

SKETCH LOCATION OF WELL INCLUDING MILEAGE ON ALL ROADS TRAVELLED FROM NEAREST TOWNS.



LOCATION OF WELL
LAT. 90° 16' 46"
LONG. 38° 30' 05"
AREA:
ELEV ≈455' amsl
COUNTY: St Louis
SMALLEST ____ 1/4 ____ 1/4 ____ 1/4 LARGEST
SEC. ____ TWN. ____ N RNG. ____ E OR W

DESCRIBE LOCATION OF THE WELL SO WE WOULD BE ABLE TO VISIT THE WELL SITE: 30' South and 12' west of Bldg 51's SW Corner
DRILLER NOTES:

TYPE OF SURFACE COMPLETION: ☐ ABOVE GROUND ☒ FLUSH MOUNT
LENGTH OF PROTECTIVE CASING: FT.
DIAMETER OF PROTECTIVE CASING: IN.
DIAMETER AND DEPTH OF THE HOLE PROTECTIVE CASING WAS PLACED: IN. FT.
PROTECTIVE CASING MATERIAL: ☐ STEEL ☐ ALUMINUM ☐ PLASTIC
LOCKING CAP? ☐ YES ☐ NO

WEEP HOLE? ☐ YES ☐ NO
VENTED CAP? ☐ YES ☐ NO
LENGTH OF FLUSH MOUNT: 1 FT.
DIAMETER OF FLUSH MOUNT: 8 IN.
DIAMETER AND DEPTH OF THE HOLE FLUSH MOUNT WAS PLACED: 10 IN. FT.
SURFACE COMPLETION GROUT: ☒ CONCRETE ☐ OTHER

RISER PIPE DETAIL
LENGTH: 15 FT. DIAMETER: 2 IN. WEIGHT OR SDR#: DIAMETER OF DRILL HOLE: 10" FT.
MATERIAL: ☐ STEEL ☒ THERMOPLASTIC (PVC) ☐ OTHER
GLUED: ☐ YES ☒ NO

BENTONITE SEAL
LENGTH OF SEAL: 4.4 FT.
MATERIAL: ☐ SLURRY ☐ PELLETS ☐ GRANULAR ☒ CHIPS

SECONDARY FILTER PACK
☐ SATURATED ZONE ☐ UNSATURATED ZONE HYDRATED ☐ YES ☐ NO
BOTH ZONES ☐ IF YES, HYDRATED ☐ YES ☐ NO

PRIMARY FILTER PACK
LENGTH: 12 FT.
DEPTH TO TOP OF PRIMARY FILTER PACK: 13 FT.
SECONDARY FILTER PACK LENGTH: FT.

ANNULAR SEAL
☐ BENTONITE SLURRY
☐ NON SLURRY BENTONITE TYPE
☒ CEMENT/BENTONITE SLURRY
BAGS OF CEMENT USED
% OF BENTONITE USED
WATER USED/BAG ____ GAL
LENGTH: 76 FT.

WELL SCREEN
LENGTH: 10 FT. DIAMETER: 2 IN. DIAMETER OF DRILL HOLE: 10 IN. DEPTH TO TOP OF SCREEN: 15 FT.
MATERIAL: ☐ STEEL ☒ THERMOPLASTIC (PVC) ☐ OTHER

MULTIPLE CASED WELLS ☐ YES ☒ NO PUMP INSTALLED FOR REMEDIATION ☐ YES ☒ NO
SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE AND SIZE OF ALL CASING, HOLE DIAMETERS AND GROUT USED

DEPTH FROM	DEPTH TO	FORMATION DESCRIPTION
0	25	Silty Clay

TOTAL DEPTH: 25

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER	STATIC WATER LEVEL	DATE WELL DRILLING WAS COMPLETED
Steve M Donegan	003568 M	17.12 ft bgs FEET FROM MEASURING POINT	10/09/2003

I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.

SIGNATURE (WELL DRILLER)	PERMIT NUMBER	DATE	SIGNATURE (PUMP INSTALLER)	PERMIT NUMBER	DATE
X Donald L. Houston	001189M	11/14/03	X		

MO 780-1415 (12-99)

DISTRIBUTION: WHITE/DIVISION **CANARY**/CONTRACTOR **PINK**/OWNER
MAIL WHITE COPY TO: DEPARTMENT OF NATURAL RESOURCES, P.O. BOX 250, ROLLA, MO 65402
ENCLOSE $35 MONITORING WELL CERTIFICATION FEE WITHIN 60 DAYS AFTER WELL COMPLETION

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGY AND LAND SURVEY
(573) 368-2165

MONITORING WELL CERTIFICATION RECORD

OFFICE USE ONLY	DATE RECEIVED
REF. NO. 267217	
C.R.NO.	CHECK NO.
STATE WELL NUMBER	REVENUE NO.
ENTERED Ph 1 Ph 2 Ph3	APPROVED BY / ROUTE /

INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR

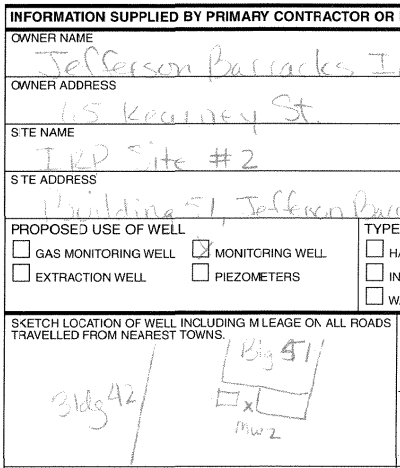
OWNER NAME: Jefferson Barracks Int'l Guard Stn.		WELL NUMBER: MW2	VARIANCE GRANTED BY THE D.N.R. ☒ NO ☐ YES, ATTACH A COPY OF THE VARIANCE
OWNER ADDRESS: 65 Kearney St.	CITY: St Louis	STATE: MO	ZIP CODE: 63125
SITE NAME: IRP Site #2	CONTACT NAME: Arthur Silverman		VARIANCE NUMBER
SITE ADDRESS: Building 51, Jefferson Barracks	CITY: St Louis	STATE: MO	ZIP CODE: 63125

PROPOSED USE OF WELL: ☐ GAS MONITORING WELL ☒ MONITORING WELL ☐ EXTRACTION WELL ☐ PIEZOMETERS

TYPE OF POTENTIAL SITE: ☐ HAZARDOUS MATERIAL ☐ LANDFILL ☐ INITIAL SITE ASSESSMENT ☒ L.U.S.T. ☐ WATER LEVEL DRAWDOWN

MONITORING FOR: (CHECK ALL THAT APPLY) ☐ RADIONUCLIDES ☐ PETROLEUM PRODUCTS ONLY ☐ EXPLOSIVES ☒ METALS ☒ V.O.C. ☒ SVOCS ☐ PESTICIDES/HERBICIDES

SKETCH LOCATION OF WELL INCLUDING MILEAGE ON ALL ROADS TRAVELLED FROM NEAREST TOWNS.



LOCATION OF WELL
LAT. 90 ° 16 ' 45 "
LONG. 38 ° 30 ' 05 "
AREA
ELEV. ≈ 455' msl
COUNTY: St Louis
SMALLEST ____ 1/4 ____ 1/4 LARGEST ____ 1/4
SEC. ____ TWN. ____ N RNG. ____ E OR W

DESCRIBE LOCATION OF THE WELL SO WE WOULD BE ABLE TO VISIT THE WELL SITE: Approx 15' south of Bldg 51

DRILLER NOTES:

TYPE OF SURFACE COMPLETION	LENGTH OF PROTECTIVE CASING	DIAMETER OF PROTECTIVE CASING	DIAMETER AND DEPTH OF THE HOLE PROTECTIVE CASING WAS PLACED	PROTECTIVE CASING MATERIAL	LOCKING CAP?
☐ ABOVE GROUND ☒ FLUSH MOUNT	FT.	IN	IN. FT.	☐ STEEL ☐ ALUMINUM ☐ PLASTIC	☐ YES ☐ NO

WEEP HOLE?	VENTED CAP?	LENGTH OF FLUSH MOUNT	DIAMETER OF FLUSH MOUNT	DIAMETER AND DEPTH OF THE HOLE FLUSH MOUNT WAS PLACED	SURFACE COMPLETION GROUT
☐ YES ☐ NO	☐ YES ☐ NO	1 FT.	8 IN.	10 IN. FT.	☒ CONCRETE ☐ OTHER

RISER PIPE DETAIL

LENGTH	DIAMETER	WEIGHT OR SDR#	DIAMETER OF DRILL HOLE	MATERIAL
15 FT.	2 IN.		10 FT.	☐ STEEL ☒ THERMOPLASTIC (PVC) ☐ OTHER

GLUED ☐ YES ☒ NO

SECONDARY FILTER PACK: ☐ SATURATED ZONE ☐ UNSATURATED ZONE HYDRATED ☐ YES ☐ NO; BOTH ZONES ☐ IF YES, HYDRATED ☐ YES ☐ NO

BENTONITE SEAL: LENGTH OF SEAL 4.2 FT. MATERIAL ☐ SLURRY ☐ PELLETS ☐ GRANULAR ☒ CHIPS

PRIMARY FILTER PACK: LENGTH 13 FT. DEPTH TO TOP OF PRIMARY FILTER PACK 12 FT. SECONDARY FILTER PACK LENGTH ____ FT.

ANNULAR SEAL: ☐ BENTONITE SLURRY ☐ NON SLURRY BENTONITE TYPE ____ ☒ CEMENT/BENTONITE SLURRY BAGS OF CEMENT USED ____ % OF BENTONITE USED ____ WATER USED/BAG ____ GAL LENGTH 11 FT.

WELL SCREEN

LENGTH	DIAMETER	DIAMETER OF DRILL HOLE	DEPTH TO TOP OF SCREEN	MATERIAL
10 FT.	2 IN.	10 IN.	15 FT.	☐ STEEL ☒ THERMOPLASTIC (PVC) ☐ OTHER

DEPTH FROM	DEPTH TO	FORMATION DESCRIPTION
0	25	Silty Clay

MULTIPLE CASED WELLS ☐ YES ☒ NO PUMP INSTALLED FOR REMEDIATION ☐ YES ☒ NO

SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE AND SIZE OF ALL CASING, HOLE DIAMETERS AND GROUT USED

TOTAL DEPTH: 25

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER	STATIC WATER LEVEL	DATE WELL DRILLING WAS COMPLETED
David M. Gheegan	003568 M	22.55 ft bgs FEET FROM MEASURING POINT	10/09/2003

I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.

SIGNATURE (WELL DRILLER)	PERMIT NUMBER	DATE	SIGNATURE (PUMP INSTALLER)	PERMIT NUMBER	DATE
X Donald L. Houston	CC1189M	11/3/03	X		

MO 780-1415 (12-99)

DISTRIBUTION: WHITE/DIVISION **CANARY**/CONTRACTOR **PINK**/OWNER
MAIL WHITE COPY TO: DEPARTMENT OF NATURAL RESOURCES, P.O. BOX 250, ROLLA, MO 65402
ENCLOSE $35 MONITORING WELL CERTIFICATION FEE WITHIN 60 DAYS AFTER WELL COMPLETION

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGY AND LAND SURVEY
(573) 368-2165

MONITORING WELL CERTIFICATION RECORD

OFFICE USE ONLY	DATE RECEIVED
REF. NO. 267220	
C.R.NO.	CHECK NO.
STATE WELL NUMBER	REVENUE NO.
ENTERED Ph 1 Ph 2 Ph3	APPROVED BY / ROUTE /

INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR

OWNER NAME: Jefferson Barracks Int'l Guard Station
WELL NUMBER: MW3
OWNER ADDRESS: 165 Kearney Street
CITY: St Louis
STATE: MO
ZIP CODE: 63125
SITE NAME: IRP Site #2
CONTACT NAME: Arthur Schuessler
SITE ADDRESS: Building 51 Jefferson Barracks
CITY: St Louis
STATE: MO
ZIP CODE: 63125

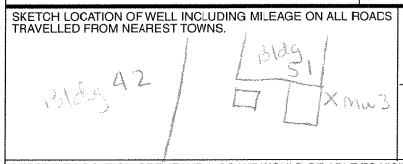
VARIANCE GRANTED BY THE D.N.R.: ☒ NO ☐ YES, ATTACH A COPY OF THE VARIANCE
VARIANCE NUMBER

PROPOSED USE OF WELL: ☐ GAS MONITORING WELL ☒ MONITORING WELL ☐ EXTRACTION WELL ☐ PIEZOMETERS

TYPE OF POTENTIAL SITE: ☐ HAZARDOUS MATERIAL ☐ LANDFILL ☐ INITIAL SITE ASSESSMENT ☒ L.U.S.T. ☐ WATER LEVEL DRAWDOWN

MONITORING FOR: (CHECK ALL THAT APPLY) ☐ RADIONUCLIDES ☐ PETROLEUM PRODUCTS ONLY ☐ EXPLOSIVES ☒ METALS ☒ V.O.C. ☒ SVOCS ☐ PESTICIDES/HERBICIDES

SKETCH LOCATION OF WELL INCLUDING MILEAGE ON ALL ROADS TRAVELLED FROM NEAREST TOWNS.



LOCATION OF WELL
LAT. 38° 40' 45"
LONG. 90° 30' 05"
AREA
ELEV. ≈455' amsl
COUNTY: St Louis
SMALLEST ____ 1/4 ____ 1/4 ____ 1/4 LARGEST
SEC. ____ TWN. ____ N RNG. ____ E OR W

DESCRIBE LOCATION OF THE WELL SO WE WOULD BE ABLE TO VISIT THE WELL SITE: South east corner of Bldg 51
DRILLER NOTES:

TYPE OF SURFACE COMPLETION ☐ ABOVE GROUND ☒ FLUSH MOUNT
LENGTH OF PROTECTIVE CASING FT.
DIAMETER OF PROTECTIVE CASING IN.
DIAMETER AND DEPTH OF THE HOLE PROTECTIVE CASING WAS PLACED IN. FT.
PROTECTIVE CASING MATERIAL ☐ STEEL ☐ ALUMINUM ☐ PLASTIC
LOCKING CAP? ☐ YES ☐ NO
WEEP HOLE? ☐ YES ☐ NO
VENTED CAP? ☐ YES ☐ NO
LENGTH OF FLUSH MOUNT 1 FT.
DIAMETER OF FLUSH MOUNT 8 IN.
DIAMETER AND DEPTH OF THE HOLE FLUSH MOUNT WAS PLACED 10 IN. FT.
SURFACE COMPLETION GROUT ☒ CONCRETE ☐ OTHER

RISER PIPE DETAIL
LENGTH 16 FT.
DIAMETER 2 IN.
WEIGHT OF SDR#
DIAMETER OF DRILL HOLE 10" FT.
MATERIAL ☐ STEEL ☒ THERMOPLASTIC (PVC) ☐ OTHER
GLUED ☐ YES ☒ NO

SECONDARY FILTER PACK
☐ SATURATED ZONE ☐ UNSATURATED ZONE HYDRATED ☐ YES ☐ NO
BOTH ZONES ☐ IF YES, HYDRATED ☐ YES ☐ NO

BENTONITE SEAL
LENGTH OF SEAL 4 FT.
MATERIAL ☐ SLURRY ☐ PELLETS ☐ GRANULAR ☒ CHIPS

PRIMARY FILTER PACK
LENGTH 13.2 FT.
DEPTH TO TOP OF PRIMARY FILTER PACK 12.8 FT.
SECONDARY FILTER PACK LENGTH FT.

ANNULAR SEAL
☐ BENTONITE SLURRY ☐ NON SLURRY BENTONITE TYPE ____
☒ CEMENT/BENTONITE SLURRY
BAGS OF CEMENT USED ____
% OF BENTONITE USED ____
WATER USED/BAG ____ ____ GAL
LENGTH 7.8 FT.

WELL SCREEN
LENGTH 10 FT.
DIAMETER 2 IN.
DIAMETER OF DRILL HOLE 10 IN.
DEPTH TO TOP OF SCREEN 16 FT.
MATERIAL ☐ STEEL ☒ THERMOPLASTIC (PVC) ☐ OTHER

DEPTH FROM	DEPTH TO	FORMATION DESCRIPTION
0	26	silty clay

MULTIPLE CASED WELLS ☐ YES ☒ NO PUMP INSTALLED FOR REMEDIATION ☐ YES ☒ NO
SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE AND SIZE OF ALL CASING, HOLE DIAMETERS AND GROUT USED

TOTAL DEPTH: 26

SIGNATURE (PRIMARY CONTRACTOR): Neal M. Krueger
PERMIT NUMBER: 003568 M
STATIC WATER LEVEL: 25.95 ft. bgs FEET FROM MEASURING POINT
DATE WELL DRILLING WAS COMPLETED: 11/19/03

I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.

SIGNATURE (WELL DRILLER)	PERMIT NUMBER	DATE	SIGNATURE (PUMP INSTALLER)	PERMIT NUMBER	DATE
X Donald L. Houston	001189M	11/3/03	X		

MO 780-1415 (12-99)

DISTRIBUTION: WHITE/DIVISION **CANARY**/CONTRACTOR **PINK**/OWNER
MAIL WHITE COPY TO: DEPARTMENT OF NATURAL RESOURCES, P.O. BOX 250, ROLLA, MO 65402
ENCLOSE $35 MONITORING WELL CERTIFICATION FEE WITHIN 60 DAYS AFTER WELL COMPLETION

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGY AND LAND SURVEY
(573) 368-2165

MONITORING WELL CERTIFICATION RECORD

OFFICE USE ONLY	DATE RECEIVED
REF. NO. 267215	
C.R.NO.	CHECK NO.
STATE WELL NUMBER	REVENUE NO.
ENTERED Ph 1 Ph 2 Ph3	APPROVED BY / ROUTE /

INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR

OWNER NAME: Jefferson Barracks Int'l Guard Station
WELL NUMBER: MW-4
OWNER ADDRESS: 165 Kearney St.
CITY: St Louis
STATE: MO
ZIP CODE: 63125
SITE NAME: TEP Site #2
CONTACT NAME: Arthur Schuermann
SITE ADDRESS: Building 51, Jefferson Barracks
CITY: St Louis
STATE: MO
ZIP CODE: 63125

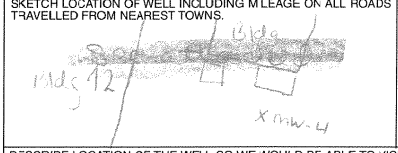
VARIANCE GRANTED BY THE D.N.R.
☒ NO
☐ YES, ATTACH A COPY OF THE VARIANCE
VARIANCE NUMBER

PROPOSED USE OF WELL
☐ GAS MONITORING WELL ☒ MONITORING WELL
☐ EXTRACTION WELL ☐ PIEZOMETERS

TYPE OF POTENTIAL SITE
☒ HAZARDOUS MATERIAL ☐ LANDFILL
☐ INITIAL SITE ASSESSMENT ☒ L.U.S.T.
☐ WATER LEVEL DRAWDOWN

MONITORING FOR: (CHECK ALL THAT APPLY)
☐ RADIONUCLIDES ☐ PETROLEUM PRODUCTS ONLY
☐ EXPLOSIVES ☒ METALS ☒ V.O.C.
☒ SVOCS ☐ PESTICIDES/HERBICIDES

SKETCH LOCATION OF WELL INCLUDING MILEAGE ON ALL ROADS TRAVELLED FROM NEAREST TOWNS.



LOCATION OF WELL
LAT. 30 ° 16 ' 45 "
LONG. 38 ° 20 ' 05 "
AREA:
ELEV ≈ 455' amsl
COUNTY: St Louis
SMALLEST ____ 1/4 ____ 1/4 ____ 1/4 LARGEST
SEC. ____ TWN. ____ N RNG. ____ E OR W

DESCRIBE LOCATION OF THE WELL SO WE WOULD BE ABLE TO VISIT THE WELL SITE: South of Building 51 south of concrete pad
DRILLER NOTES:

TYPE OF SURFACE COMPLETION
☐ ABOVE GROUND ☒ FLUSH MOUNT
LENGTH OF PROTECTIVE CASING: 1 FT.
DIAMETER OF PROTECTIVE CASING: IN.
DIAMETER AND DEPTH OF THE HOLE PROTECTIVE CASING WAS PLACED: IN. FT.
PROTECTIVE CASING MATERIAL ☐ STEEL ☒ ALUMINUM ☐ PLASTIC
LOCKING CAP? ☒ YES ☐ NO

WEEP HOLE? ☐ YES ☒ NO
VENTED CAP? ☐ YES ☒ NO
LENGTH OF FLUSH MOUNT: 1 FT.
DIAMETER OF FLUSH MOUNT: 18 IN.
DIAMETER AND DEPTH OF THE HOLE FLUSH MOUNT WAS PLACED: 10 IN. FT.

SURFACE COMPLETION GROUT
☒ CONCRETE
☐ OTHER

RISER PIPE DETAIL
LENGTH: 15 FT.
DIAMETER: 2 IN.
WEIGHT OR SDR#:
DIAMETER OF DRILL HOLE: 10" FT.
MATERIAL ☐ STEEL ☒ THERMOPLASTIC (PVC) ☐ OTHER
GLUED ☐ YES ☒ NO

BENTONITE SEAL
LENGTH OF SEAL: 3 FT.
MATERIAL ☒ SLURRY ☐ PELLETS ☐ GRANULAR ☒ CHIPS

SECONDARY FILTER PACK
☐ SATURATED ZONE ☐ UNSATURATED ZONE HYDRATED ☐ YES ☐ NO
BOTH ZONES ☐ IF YES, HYDRATED ☐ YES ☐ NO

PRIMARY FILTER PACK
LENGTH: 12.4 FT.
DEPTH TO TOP OF PRIMARY FILTER PACK: 12.6 FT.
SECONDARY FILTER PACK LENGTH: Ø FT.

ANNULAR SEAL
☐ BENTONITE SLURRY
☐ NON SLURRY BENTONITE TYPE ____
☒ CEMENT/BENTONITE SLURRY
BAGS OF CEMENT USED ____
% OF BENTONITE USED ____
WATER USED/BAG ____ ____ GAL
LENGTH: 6.8 FT.

WELL SCREEN
LENGTH: 10 FT.
DIAMETER: 2 IN.
DIAMETER OF DRILL HOLE: 10 IN.
DEPTH TO TOP OF SCREEN: 15.0 FT.
MATERIAL ☐ STEEL ☒ THERMOPLASTIC (PVC) ☐ OTHER

DEPTH FROM	DEPTH TO	FORMATION DESCRIPTION
0	25	Silty clay

MULTIPLE CASED WELLS ☐ YES ☒ NO PUMP INSTALLED FOR REMEDIATION ☐ YES ☒ NO
SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE AND SIZE OF ALL CASING, HOLE DIAMETERS AND GROUT USED

TOTAL DEPTH: 25

SIGNATURE (PRIMARY CONTRACTOR): Paul M. Bruegger
PERMIT NUMBER: 003568M
STATIC WATER LEVEL: 22.64 ft. bgs FEET FROM MEASURING POINT
DATE WELL DRILLING WAS COMPLETED: 10/09/03

I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.

SIGNATURE (WELL DRILLER)	PERMIT NUMBER	DATE	SIGNATURE (PUMP INSTALLER)	PERMIT NUMBER	DATE
X Donald L. Hirsch	001189M	11/3/03	X		

MO 780-1415 (12-99)

DISTRIBUTION: WHITE/DIVISION **CANARY**/CONTRACTOR **PINK**/OWNER
MAIL WHITE COPY TO: DEPARTMENT OF NATURAL RESOURCES, P.O. BOX 250, ROLLA, MO 65402
ENCLOSE $35 MONITORING WELL CERTIFICATION FEE WITHIN 60 DAYS AFTER WELL COMPLETION

APPENDIX D

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES, INC.

☒ 600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
Fax: 641-792-7989

☐ 3012 Ansborough Ave.
Waterloo, IA 50701
Phone: 319-235-4440
Fax: 319-235-2480

☐ 1304 Adams
Kansas City, KS 66103
Phone: 913-321-7856
Fax: 913-321-7937

PAGE 1 OF 2

PRINT OR TYPE INFORMATION BELOW

SAMPLER: Diane Krueger
SITE NAME: Jefferson Barracks
ADDRESS: St. Louis, MO
CITY/ST/ZIP:
PHONE:

REPORT TO:
NAME: Diane Krueger
COMPANY NAME: MWH
ADDRESS: 41551 Eleven Mile Road
CITY/ST/ZIP: Novi, MI 48375
PHONE: 248 ~~314~~ - 449-3417
FAX: ~~314~~ 248-344-0217

BILL TO:
NAME: Cathy Kuzdal
COMPANY NAME: MWH
ADDRESS: 41551 Eleven Mile Rd.
CITY/ST/ZIP: Novi, MI 48375
PHONE: 248-344-0205

Keystone Quote No.: (If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	VOC-8260	SVOC-8270	TPH-GRO/DRO	Total Metals*	PCBs-8082				SAMPLE CONDITION/COMMENTS	LABORATORY SAMPLE NUMBER
SB-1-0-8	10/8/03	0950		3	S	G	X	X	X	X	X					01
SB-1-8-10	10/8/03	1012		3	S	G	X	X	X	X	X					02
SB-2-0-4	↓	1040		↓	↓	↓	↓	↓	↓	↓	↓					03
SB-2-8-10	↓	1050		↓	↓	↓	↓	↓	↓	↓	↓					04
SB-8-0-4	↓	1140		↓	↓	↓	↓	↓	↓	↓	↓					05
SB-8-8-10	↓	1153		↓	↓	↓	↓	↓	↓	↓	↓					06
SB-3-0-8	↓	1340		↓	↓	↓	↓	↓	↓	↓	↓					07
SB-3-8-10	↓	1400		↓	↓	↓	↓	↓	↓	↓	↓					08
SB-7-0-4	↓	1425		↓	↓	↓	↓	↓	↓	↓	↓					09
SB-7-8-10	↓	1450		↓	↓	↓	↓	↓	↓	↓	↓					10

ANALYSES REQUIRED

LAB USE ONLY
LABORATORY WORK ORDER NO.: 1310432
SAMPLE TEMPERATURE UPON RECEIPT: °C

Relinquished by: (Signature)	Date	Received by: (Signature)	Date	Turn-Around:
Diane M. Krueger	10/8/03 Time 1700		Time	☒ Standard ☐ Rush ____ Contact Lab Prior to Submission
Relinquished by: (Signature)	**Date**	**Received for Lab by: (Signature)**	**Date**	**Remarks:**
	Time	[signature]	10-9-03 Time 11:50	* Total Metals = total 8 RCRA metals

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy

FORM: CCR 7-97

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES, INC.

☒ 600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
Fax: 641-792-7989

☐ 3012 Ansborough Ave.
Waterloo, IA 50701
Phone: 319-235-4440
Fax: 319-235-2480

☐ 1304 Adams
Kansas City, KS 66103
Phone: 913-321-7856
Fax: 913-321-7937

PRINT OR TYPE INFORMATION BELOW

SAMPLER: Diane Krueger
SITE NAME: Jefferson Barracks
ADDRESS:
CITY/ST/ZIP: St. Louis, MO
PHONE:

REPORT TO:
NAME: Diane Krueger
COMPANY NAME: MWH
ADDRESS:
CITY/ST/ZIP: Novi, MI
PHONE: 248-449-3417
FAX: 248-344-0217

BILL TO:
NAME: Cathy Kuzdal
COMPANY NAME: MWH
ADDRESS:
CITY/ST/ZIP: Novi, MI
PHONE: 248-344-0205
Keystone Quote No.: (If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	VOCs-8260	SVOCs-8270	TPH-GRO/DRO	Total Metals*	PCBs-8082				LABORATORY SAMPLE NUMBER
SB-6-0-4	10/8/03	1540		3	S	G	X	X	X	X	X				11
SB-6-7-10	↓	1555		↓	↓	↓	X	X	X	X	X				12
Dup-1	↓	0800		↓	↓	↓	X	X	X	X	X				13

DMK 10/8/03

LAB USE ONLY

LABORATORY WORK ORDER NO.: 13A043

SAMPLE TEMPERATURE UPON RECEIPT: °C

SAMPLE CONDITION/COMMENTS:

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Turn-Around:
Diane M. Krueger	10/8/03 / 700			☒ Standard ☐ Rush ____ Contact Lab Prior to Submission
Relinquished by: (Signature)	Date / Time	Received for Lab by: (Signature)	Date / Time	Remarks:
		[illegible]	10-9-03 / 11:50	* Total Metals = total 8 RCRA metals

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy

FORM: CCR 7-97

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES, INC.

☒ 600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
Fax: 641-792-7989

☐ 3012 Ansborough Ave.
Waterloo, IA 50701
Phone: 319-235-4440
Fax: 319-235-2480

☐ 1304 Adams
Kansas City, KS 66103
Phone: 913-321-7856
Fax: 913-321-7937

PRINT OR TYPE INFORMATION BELOW

SAMPLER: Diane Krueger
SITE NAME: Jefferson Barracks
ADDRESS:
CITY/ST/ZIP: St. Louis, MO
PHONE:

REPORT TO:
NAME: Diane Krueger
COMPANY NAME: MWH
ADDRESS: 41551 Eleven Mile Rd.
CITY/ST/ZIP: Novi, MI 48375
PHONE: 248-449-3417
FAX: 248-344-0217

BILL TO:
NAME: Cathy Kuzdal
COMPANY NAME: MWH
ADDRESS: 41551 Eleven Mile Rd.
CITY/ST/ZIP: Novi, MI 48375
PHONE: 248-344-0205

Keystone Quote No.: (If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	VOCs-8260	SVOCs-8270	TPH-GRO/DRO	Total Metals*	PCBs-8082				LABORATORY SAMPLE NUMBER
SB-5-0-4	10/9/03	0900		3	S	G	X	X	X	X	X				01
SB-5-8-10	↓	0910		↓	↓	↓	X	X	X	X	X				02
SB-4-0-8		0930					X	X	X	X	X				03
SB-4-8-10		1000					X	X	X	X	X				04
Dup-2	↓	0800					X	X	X	X	X				05

DMK 10/9/03

ANALYSES REQUIRED

LAB USE ONLY

LABORATORY WORK ORDER NO.: 130583

SAMPLE TEMPERATURE UPON RECEIPT: °C

SAMPLE CONDITION/COMMENTS

Relinquished by: (Signature)	Date	Received by: (Signature)	Date	Turn-Around:
Diane M. Krueger	10/9/03 Time 1900		Time	☒ Standard ☐ Rush ____ Contact Lab Prior to Submission
Relinquished by: (Signature)	Date / Time	Received for Lab by: (Signature) KLO	Date 10/10/03 Time 11:35	Remarks: *Total Metals = total 8 RCRA metals

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy

FORM: CCR 7-97

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES, INC.

☒ 600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
Fax: 641-792-7989

☐ 3012 Ansborough Ave.
Waterloo, IA 50701
Phone: 319-235-4440
Fax: 319-235-2480

☐ 1304 Adams
Kansas City, KS 66103
Phone: 913-321-7856
Fax: 913-321-7937

PAGE 1 OF 1

PRINT OR TYPE INFORMATION BELOW
SAMPLER: Diane Krueger
SITE NAME: Jefferson Barracks
ADDRESS:
CITY/ST/ZIP: St. Louis, MO
PHONE:

REPORT TO:
NAME: Diane Krueger
COMPANY NAME: MWH
ADDRESS: 41551 Eleven Mile Rd.
CITY/ST/ZIP: Novi, MI 48375
PHONE: 248-449-3417
FAX: 248-344-0217

BILL TO:
NAME: Cathy Kuzdal
COMPANY NAME: MWH
ADDRESS: (Same)
CITY/ST/ZIP:
PHONE: 248-344-0205

Keystone Quote No.: (If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	VOCs - 8260	TPH - GRO (8015)	SVOCs - 8270	PCBs - 8082	TPH - DRO (8015)	Total 8 RCRA Metals			SAMPLE CONDITION/COMMENTS	LABORATORY SAMPLE NUMBER
Dup-1	10/1/03	0800		11	GW	G	X	X	X	X	X	X				01
MW-1*		1200		15			X	X	X	X	X	X				02
MW-2		1015		11			X	X	X	X	X	X				03
Trip Blank	10/3/03	10:45	JRF Sealed	2	W	—	X									04

LAB USE ONLY
LABORATORY WORK ORDER NO. 130548
SAMPLE TEMPERATURE UPON RECEIPT: °C

Diane M. Krueger
10/1/03

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Turn-Around:
Diane M. Krueger	10/1/03 1600			☒ Standard ☐ Rush ____ Contact Lab Prior to Submission
Relinquished by: (Signature)	Date / Time	Received for Lab by: (Signature)	Date / Time	Remarks:
		JSD	10-3-03 1100 / 8:25 11:00	* Extra volume for MS/MSD

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy

FORM: CCR 7-97

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES, INC.

☒ 600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
Fax: 641-792-7989

☐ 3012 Ansborough Ave.
Waterloo, IA 50701
Phone: 319-235-4440
Fax: 319-235-2480

☐ 1304 Adams
Kansas City, KS 66103
Phone: 913-321-7856
Fax: 913-321-7937

PAGE 1 OF 1

(PRINT OR TYPE INFORMATION BELOW)
SAMPLER: Diane Krueger
SITE NAME: Jefferson Barracks
ADDRESS:
CITY/ST/ZIP: St. Louis, MO
PHONE:

REPORT TO:
NAME: Diane Krueger
COMPANY NAME: MWH
ADDRESS: 41551 Eleven Mile Rd.
CITY/ST/ZIP: Novi, MI 48375
PHONE: 248-449-3417
FAX: 248-344-0211

BILL TO:
NAME: Cathy Kuzdal
COMPANY NAME: MWH
ADDRESS: (same)
CITY/ST/ZIP:
PHONE: 248-344-0205

Keystone Quote No.: (If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	VOCs	SVOCs	PCBs	TPH GRO TPH DRO	Total & Reactivity	Oil & Grease	BTEX	TSS	COD	Lead & Zinc	SAMPLE CONDITION/COMMENTS	LABORATORY SAMPLE NUMBER
MW-1 *	12/4/03	1625	22 ft (Control MS/MSD)	11			X	X	X	X X	X							01
Dup-1	12/4/03	—		11			X	X	X	X X	X							02
MW-2	12/5/03	0920		11			X	X	X	X X	X							03
MW-3		1430		9			X	X		X X								04
MW-4		1130		11			X	X	X	X X	X							05
Drum water		1515		7								X	X	X	X	X		06
Trip Blank	12/2	7:30	GSD Sealed	2			X											07

~~TOMK 12/5/03~~

LAB USE ONLY
LABORATORY WORK ORDER NO.: 1320340
SAMPLE TEMPERATURE UPON RECEIPT: °C

Relinquished by: (Signature)	Date	Received by: (Signature)	Date	Turn-Around:
Diane M. Krueger	12/5/03 Time 900		Time	☒ Standard ☐ Rush ____ Contact Lab Prior to Submission
Relinquished by: (Signature)	Date / Time	Received for Lab by: (Signature)	Date 12-6-03 Time 1:00	Remarks: *complete extra set of MW-1 specifically for MS/MSDs

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy

FORM: CCR 7-97

APPENDIX E

Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Accreditations:
Iowa DNR: 095
New Jersey DEP: IA001
Kansas DHE: E-10287

ANALYTICAL REPORT

October 23, 2003

Work Order: 13J0432

Report To

Diane Krueger
Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order Information

Date Received: 10/09/2003 11:50AM
Collector: Krueger, Diane
Phone: (248) 344-0205
PO Number:

Project : Jefferson Barracks ANG
Project Number: Jefferson Barracks ANG

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-01 SB-1-0-8				Matrix:Soil		Collected: 10/08/03 09:50	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Acetone	**0.111 mg/kg dry**	**0.050**	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Carbon Disulfide	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Methylene Chloride	<0.050 mg/kg dry	0.050	1J31519	EPA 8260B	TVK	10/10/03 17:51	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Methyl-t-butyl Ether (MTBE)	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 17:51	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
2-Butanone (MEK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
4-Methyl-2-pentanone (MIBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Toluene	**0.002 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/10/03 17:51	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
2-Hexanone (MBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-01 SB-1-0-8				Matrix:Soil		Collected: 10/08/03 09:50	
Determination of Volatile Organic Compounds							
Xylenes, total	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 17:51	
Surrogate: Dibromofluoromethane	*104 %*			*68-136*	TVK	10/10/03 17:51	
Surrogate: 1,2-Dichloroethane-d4	*102 %*			*66-143*	TVK	10/10/03 17:51	
Surrogate: Toluene-d8	*103 %*			*72-131*	TVK	10/10/03 17:51	
Surrogate: 4-Bromofluorobenzene	*94.2 %*			*72-130*	TVK	10/10/03 17:51	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J31028	EPA 8015	JRF	10/15/03 14:21	
Surrogate: Chlorobenzene	*92.6 %*			*62.1-122*	JRF	10/15/03 14:21	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 15:32	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 15:32	
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 15:32	
Total Extractable Hydrocarbons	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 15:32	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-01 SB-1-0-8				Matrix:Soil		Collected: 10/08/03 09:50	
Determination of Base/Neutral/Acid Extractable Compounds							
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 12:18	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 12:18	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-01 SB-1-0-8				Matrix:Soil		Collected: 10/08/03 09:50	
Determination of Base/Neutral/Acid Extractable Compounds							
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:18	
Surrogate: 2-Fluorophenol	*48.2 %*			*41-110*	EPP	10/22/03 12:18	
Surrogate: 2-Fluorobiphenyl	*133 %*			*54-111*	EPP	10/22/03 12:18	S-04
Surrogate: 2,4,6-Tribromophenol	*115 %*			*67-139*	EPP	10/22/03 12:18	
Surrogate: Phenol-d6	*44.0 %*			*50-110*	EPP	10/22/03 12:18	S-04
Surrogate: Terphenyl-d14	*96.6 %*			*50-122*	EPP	10/22/03 12:18	
Surrogate: Nitrobenzene-d5	*72.7 %*			*50-110*	EPP	10/22/03 12:18	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 17:49	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 17:49	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 17:49	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 17:49	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 17:49	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 17:49	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 17:49	
Surrogate: Decachlorobiphenyl	*101 %*			*55-130*	EPP	10/22/03 17:49	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**80.7 %**	**0.1**	1J31032	% calculation	SNT	10/10/03 14:02	
Determination of Total Metals							
Barium, total	**437 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:11	
Silver, total	<0.6 mg/kg dry	0.6	1J31004	EPA 6010B	RVV	10/10/03 14:11	
Arsenic, total	**8.6 mg/kg dry**	**1.1**	1J31004	EPA 6010B	RVV	10/10/03 14:11	
Cadmium, total	<0.6 mg/kg dry	0.6	1J31004	EPA 6010B	RVV	10/10/03 14:11	
Chromium, total	**15.9 mg/kg dry**	**1.7**	1J31004	EPA 6010B	RVV	10/10/03 14:11	
Lead, total	**72.1 mg/kg dry**	**2.8**	1J31004	EPA 6010B	RVV	10/10/03 14:11	
Mercury, total	<0.28 mg/kg dry	0.28	1J31031	EPA 7471A	MAQ	10/13/03 14:28	
Selenium, total	<1.1 mg/kg dry	1.1	1J31004	EPA 6010B	RVV	10/10/03 14:11	
13J0432-02 SB-1-8-10				Matrix:Soil		Collected: 10/08/03 10:12	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-02 SB-1-8-10				Matrix:Soil		Collected: 10/08/03 10:12	
Determination of Volatile Organic Compounds							
Acetone	<0.050 mg/kg dry	0.050	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Carbon Disulfide	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Methylene Chloride	<0.050 mg/kg dry	0.050	1J31519	EPA 8260B	TVK	10/10/03 18:30	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Methyl-t-butyl Ether (MTBE)	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 18:30	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
2-Butanone (MEK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
4-Methyl-2-pentanone (MIBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Toluene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
2-Hexanone (MBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Xylenes, total	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 18:30	
Surrogate: Dibromofluoromethane	*103 %*			*68-136*	TVK	10/10/03 18:30	
Surrogate: 1,2-Dichloroethane-d4	*106 %*			*66-143*	TVK	10/10/03 18:30	
Surrogate: Toluene-d8	*104 %*			*72-131*	TVK	10/10/03 18:30	
Surrogate: 4-Bromofluorobenzene	*101 %*			*72-130*	TVK	10/10/03 18:30	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J31028	EPA 8015	JRF	10/15/03 15:05	
Surrogate: Chlorobenzene	*92.0 %*			*62.1-122*	JRF	10/15/03 15:05	
Determination of Extractable Petroleum Hydrocarbons							

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-02 SB-1-8-10				Matrix:Soil		Collected: 10/08/03 10:12	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	**7 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 16:20	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 16:20	
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 16:20	
Total Extractable Hydrocarbons	**7 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 16:20	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Phenol	5 <0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
n-Nitroso-di-n-propylamine	5 <0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
(3 & 4)-Methylphenol	5 <0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Dimethylphthalate	5 <0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2,6-Dinitrotoluene	5 <0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 12:53	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-02 SB-1-8-10				Matrix:Soil		Collected: 10/08/03 10:12	
Determination of Base/Neutral/Acid Extractable Compounds							
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 12:53	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 12:53	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 12:53	
Surrogate: 2-Fluorophenol	*65.4 %*			*41-110*	EPP	10/22/03 12:53	
Surrogate: 2-Fluorobiphenyl	*127 %*			*54-111*	EPP	10/22/03 12:53	S-04
Surrogate: 2,4,6-Tribromophenol	*120 %*			*67-139*	EPP	10/22/03 12:53	
Surrogate: Phenol-d6	*50.5 %*			*50-110*	EPP	10/22/03 12:53	
Surrogate: Terphenyl-dl4	*102 %*			*50-122*	EPP	10/22/03 12:53	
Surrogate: Nitrobenzene-d5	*73.6 %*			*50-110*	EPP	10/22/03 12:53	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:19	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-02 SB-1-8-10				Matrix:Soil		Collected: 10/08/03 10:12	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:19	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:19	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:19	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:19	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:19	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:19	
Surrogate: Decachlorobiphenyl	*81.7 %*			*55-130*	EPP	10/22/03 18:19	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**81.2 %**	**0.1**	1J31032	% calculation	SNT	10/10/03 14:02	
Determination of Total Metals							
Barium, total	**179 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:15	
Silver, total	**0.8 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:15	
Arsenic, total	**11.0 mg/kg dry**	**1.2**	1J31004	EPA 6010B	RVV	10/10/03 14:15	
Cadmium, total	<0.6 mg/kg dry	0.6	1J31004	EPA 6010B	RVV	10/10/03 14:15	
Chromium, total	**18.0 mg/kg dry**	**1.9**	1J31004	EPA 6010B	RVV	10/10/03 14:15	
Lead, total	**13.2 mg/kg dry**	**3.1**	1J31004	EPA 6010B	RVV	10/10/03 14:15	
Mercury, total	<0.31 mg/kg dry	0.31	1J31031	EPA 7471A	MAQ	10/13/03 14:28	
Selenium, total	<1.2 mg/kg dry	1.2	1J31004	EPA 6010B	RVV	10/10/03 14:15	
13J0432-03 SB-2-0-4				Matrix:Soil		Collected: 10/08/03 10:40	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Acetone	<0.050 mg/kg dry	0.050	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Carbon Disulfide	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Methylene Chloride	<0.050 mg/kg dry	0.050	1J31519	EPA 8260B	TVK	10/10/03 19:09	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Methyl-t-butyl Ether (MTBE)	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 19:09	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
2-Butanone (MEK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-03 SB-2-0-4				Matrix:Soil		Collected: 10/08/03 10:40	
Determination of Volatile Organic Compounds							
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
4-Methyl-2-pentanone (MIBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Toluene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
2-Hexanone (MBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Xylenes, total	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:09	
Surrogate: Dibromofluoromethane	*102 %*			*68-136*	TVK	10/10/03 19:09	
Surrogate: 1,2-Dichloroethane-d4	*104 %*			*66-143*	TVK	10/10/03 19:09	
Surrogate: Toluene-d8	*104 %*			*72-131*	TVK	10/10/03 19:09	
Surrogate: 4-Bromofluorobenzene	*103 %*			*72-130*	TVK	10/10/03 19:09	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J31028	EPA 8015	JRF	10/15/03 15:47	
Surrogate: Chlorobenzene	*91.1 %*			*62.1-122*	JRF	10/15/03 15:47	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 17:08	
TEH, as #2 diesel fuel	**42 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 17:08	D-06
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 17:08	
Total Extractable Hydrocarbons	**42 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 17:08	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-03 SB-2-0-4				Matrix:Soil		Collected: 10/08/03 10:40	
Determination of Base/Neutral/Acid Extractable Compounds							
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Acenaphthene	**0.58 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Dibenzofuran	**0.35 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Fluorene	**0.44 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 13:29	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 13:29	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Phenanthrene	**3.56 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-03 SB-2-0-4				Matrix:Soil		Collected: 10/08/03 10:40	
Determination of Base/Neutral/Acid Extractable Compounds							
Anthracene	**0.75 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Fluoranthene	**4.49 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Pyrene	**3.66 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Benzo(a)anthracene	**2.23 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Chrysene	**2.31 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Benzo(b)Fluoranthene	**2.42 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Benzo(k)Fluoranthene	**0.86 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Benzo(a)Pyrene	**0.72 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Indeno(1,2,3-cd)Pyrene	**0.50 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Benzo(g,h,i)perylene	**0.47 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 13:29	
Surrogate: 2-Fluorophenol	*31.5 %*			*41-110*	EPP	10/22/03 13:29	S-04
Surrogate: 2-Fluorobiphenyl	*114 %*			*54-111*	EPP	10/22/03 13:29	S-04
Surrogate: 2,4,6-Tribromophenol	*37.3 %*			*67-139*	EPP	10/22/03 13:29	S-04
Surrogate: Phenol-d6	*29.9 %*			*50-110*	EPP	10/22/03 13:29	S-04
Surrogate: Terphenyl-dl4	*92.1 %*			*50-122*	EPP	10/22/03 13:29	
Surrogate: Nitrobenzene-d5	*69.5 %*			*50-110*	EPP	10/22/03 13:29	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:49	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:49	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:49	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:49	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:49	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:49	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 18:49	
Surrogate: Decachlorobiphenyl	*72.7 %*			*55-130*	EPP	10/22/03 18:49	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**87.4 %**	**0.1**	1J31032	% calculation	SNT	10/10/03 14:02	
Determination of Total Metals							
Barium, total	**200 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:19	
Silver, total	**0.9 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:19	
Arsenic, total	**9.4 mg/kg dry**	**1.2**	1J31004	EPA 6010B	RVV	10/10/03 14:19	
Cadmium, total	<0.6 mg/kg dry	0.6	1J31004	EPA 6010B	RVV	10/10/03 14:19	
Chromium, total	**15.2 mg/kg dry**	**1.8**	1J31004	EPA 6010B	RVV	10/10/03 14:19	
Lead, total	**11.6 mg/kg dry**	**3.0**	1J31004	EPA 6010B	RVV	10/10/03 14:19	
Mercury, total	<0.24 mg/kg dry	0.24	1J31031	EPA 7471A	LKM	10/17/03 16:28	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-03 SB-2-0-4				Matrix:Soil		Collected: 10/08/03 10:40	
Determination of Total Metals							
Selenium, total	<1.2 mg/kg dry	1.2	1J31004	EPA 6010B	RVV	10/10/03 14:19	
13J0432-04 SB-2-8-10				Matrix:Soil		Collected: 10/08/03 10:50	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Acetone	**0.077 mg/kg dry**	**0.050**	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Carbon Disulfide	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Methylene Chloride	<0.050 mg/kg dry	0.050	1J31519	EPA 8260B	TVK	10/10/03 19:48	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Methyl-t-butyl Ether (MTBE)	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 19:48	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
2-Butanone (MEK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
4-Methyl-2-pentanone (MIBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Toluene	**0.003 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/10/03 19:48	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
2-Hexanone (MBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Xylenes, total	**0.004 mg/kg dry**	**0.002**	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-04 SB-2-8-10				Matrix:Soil		Collected: 10/08/03 10:50	
Determination of Volatile Organic Compounds							
1,2-Dichlorobenzene	<0 001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Naphthalene	<0 001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 19:48	
Surrogate: Dibromofluoromethane	*104 %*			*68-136*	TVK	10/10/03 19:48	
Surrogate: 1,2-Dichloroethane-d4	*103 %*			*66-143*	TVK	10/10/03 19:48	
Surrogate: Toluene-d8	*103 %*			*72-131*	TVK	10/10/03 19:48	
Surrogate: 4-Bromofluorobenzene	*96.4 %*			*72-130*	TVK	10/10/03 19:48	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J31028	EPA 8015	JRF	10/15/03 16:30	
Surrogate: Chlorobenzene	*87.5 %*			*62.1-122*	JRF	10/15/03 16:30	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 17:56	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 17:56	
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 17:56	
Total Extractable Hydrocarbons	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 17:56	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-04 SB-2-8-10				Matrix:Soil		Collected: 10/08/03 10:50	
Determination of Base/Neutral/Acid Extractable Compounds							
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 14:04	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 14:04	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-04 SB-2-8-10				Matrix:Soil		Collected: 10/08/03 10:50	
Determination of Base/Neutral/Acid Extractable Compounds							
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:04	
Surrogate: 2-Fluorophenol	*30.6 %*			*41-110*	EPP	10/22/03 14:04	S-04
Surrogate: 2-Fluorobiphenyl	*89.6 %*			*54-111*	EPP	10/22/03 14:04	
Surrogate: 2,4,6-Tribromophenol	*53.0 %*			*67-139*	EPP	10/22/03 14:04	S-04
Surrogate: Phenol-d6	*30.1 %*			*50-110*	EPP	10/22/03 14:04	S-04
Surrogate: Terphenyl-dl4	*84.9 %*			*50-122*	EPP	10/22/03 14:04	
Surrogate: Nitrobenzene-d5	*74.8 %*			*50-110*	EPP	10/22/03 14:04	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:19	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:19	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:19	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:19	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:19	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:19	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:19	
Surrogate: Decachlorobiphenyl	*79.5 %*			*55-130*	EPP	10/22/03 19:19	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**78.9 %**	**0.1**	1J31032	% calculation	SNT	10/10/03 14:02	
Determination of Total Metals							
Barium, total	**214 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:23	
Silver, total	**0.8 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:23	
Arsenic, total	**10.3 mg/kg dry**	**1.2**	1J31004	EPA 6010B	RVV	10/10/03 14:23	
Cadmium, total	<0.6 mg/kg dry	0.6	1J31004	EPA 6010B	RVV	10/10/03 14:23	
Chromium, total	**10.3 mg/kg dry**	**1.9**	1J31004	EPA 6010B	RVV	10/10/03 14:23	
Lead, total	**17.1 mg/kg dry**	**3.1**	1J31004	EPA 6010B	RVV	10/10/03 14:23	
Mercury, total	<0.35 mg/kg dry	0.35	1J31031	EPA 7471A	MAQ	10/13/03 14:28	
Selenium, total	<1.2 mg/kg dry	1.2	1J31004	EPA 6010B	RVV	10/10/03 14:23	
13J0432-05 SB-8-0-4				Matrix:Soil		Collected: 10/08/03 11:40	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Acetone	**0.079 mg/kg dry**	**0.063**	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Carbon Disulfide	<0.006 mg/kg dry	0.006	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Methylene Chloride	<0.063 mg/kg dry	0.063	1J31519	EPA 8260B	TVK	10/10/03 20:27	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Methyl-t-butyl Ether (MTBE)	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/10/03 20:27	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-05 SB-8-0-4				Matrix:Soil		Collected: 10/08/03 11:40	
Determination of Volatile Organic Compounds							
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
2-Butanone (MEK)	**0.014 mg/kg dry**	**0.006**	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
4-Methyl-2-pentanone (MIBK)	<0.006 mg/kg dry	0.006	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Toluene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
2-Hexanone (MBK)	<0.006 mg/kg dry	0.006	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Xylenes, total	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 20:27	
Surrogate: Dibromofluoromethane	*103 %*			*68-136*	TVK	10/10/03 20:27	
Surrogate: 1,2-Dichloroethane-d4	*103 %*			*66-143*	TVK	10/10/03 20:27	
Surrogate: Toluene-d8	*105 %*			*72-131*	TVK	10/10/03 20:27	
Surrogate: 4-Bromofluorobenzene	*100 %*			*72-130*	TVK	10/10/03 20:27	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J31028	EPA 8015	JRF	10/15/03 17:12	
Surrogate: Chlorobenzene	*91.4 %*			*62.1-122*	JRF	10/15/03 17:12	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 18:44	
TEH, as #2 diesel fuel	**22 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 18:44	D-06
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 18:44	
Total Extractable Hydrocarbons	**22 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 18:44	
Determination of Base/Neutral/Acid Extractable Compounds							

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-05 SB-8-0-4				Matrix:Soil		Collected: 10/08/03 11:40	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Naphthalene	**1.37 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2-Methylnaphthalene	**0.59 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Acenaphthene	**2.57 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Dibenzofuran	**1.89 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-05 SB-8-0-4				Matrix:Soil		Collected: 10/08/03 11:40	
Determination of Base/Neutral/Acid Extractable Compounds							
Fluorene	**2.14 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 14:39	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 14:39	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Phenanthrene	**15.0 mg/kg dry**	**1.65**	1J31639	EPA 8270C	EPP	10/23/03 11:39	
Anthracene	**2.95 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Fluoranthene	**13.1 mg/kg dry**	**1.65**	1J31639	EPA 8270C	EPP	10/23/03 11:39	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Pyrene	**15.7 mg/kg dry**	**1.65**	1J31639	EPA 8270C	EPP	10/23/03 11:39	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Benzo(a)anthracene	**4.73 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Chrysene	**4.60 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Benzo(b)Fluoranthene	**4.27 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Benzo(k)Fluoranthene	**1.62 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Benzo(a)Pyrene	**2.03 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Indeno(1,2,3-cd)Pyrene	**0.72 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Benzo(g,h,i)perylene	**0.68 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 14:39	
Surrogate: 2-Fluorophenol	*25.4 %*			*41-110*	EPP	10/22/03 14:39	S-04
Surrogate: 2-Fluorobiphenyl	*91.5 %*			*54-111*	EPP	10/22/03 14:39	
Surrogate: 2,4,6-Tribromophenol	*29.2 %*			*67-139*	EPP	10/22/03 14:39	S-04
Surrogate: Phenol-d6	*34.1 %*			*50-110*	EPP	10/22/03 14:39	S-04
Surrogate: Terphenyl-dl4	*73.1 %*			*50-122*	EPP	10/22/03 14:39	
Surrogate: Nitrobenzene-d5	*74.5 %*			*50-110*	EPP	10/22/03 14:39	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:49	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:49	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:49	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:49	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:49	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:49	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 19:49	
Surrogate: Decachlorobiphenyl	*83.3 %*			*55-130*	EPP	10/22/03 19:49	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-05 SB-8-0-4				Matrix:Soil		Collected: 10/08/03 11:40	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**84.9 %**	**0.1**	1J31032	% calculation	SNT	10/10/03 14:02	
Determination of Total Metals							
Barium, total	**132 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:27	
Silver, total	**0.7 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:27	
Arsenic, total	**7.5 mg/kg dry**	**1.3**	1J31004	EPA 6010B	RVV	10/10/03 14:27	
Cadmium, total	<0.6 mg/kg dry	0.6	1J31004	EPA 6010B	RVV	10/10/03 14:27	
Chromium, total	**11.9 mg/kg dry**	**1.9**	1J31004	EPA 6010B	RVV	10/10/03 14:27	
Lead, total	**34.2 mg/kg dry**	**3.2**	1J31004	EPA 6010B	RVV	10/10/03 14:27	
Mercury, total	<0.33 mg/kg dry	0.33	1J31031	EPA 7471A	MAQ	10/13/03 14:28	
Selenium, total	<1.3 mg/kg dry	1.3	1J31004	EPA 6010B	RVV	10/10/03 14:27	
13J0432-06 SB-8-8-10				Matrix:Soil		Collected: 10/08/03 11:53	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Acetone	<0.071 mg/kg dry	0.071	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Carbon Disulfide	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Methylene Chloride	<0.071 mg/kg dry	0.071	1J31519	EPA 8260B	TVK	10/10/03 21:05	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Methyl-t-butyl Ether (MTBE)	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/10/03 21:05	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
2-Butanone (MEK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
4-Methyl-2-pentanone (MIBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Toluene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
2-Hexanone (MBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 21:05	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-06 SB-8-8-10				Matrix:Soil		Collected: 10/08/03 11:53	
Determination of Volatile Organic Compounds							
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Xylenes, total	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 21:05	
Surrogate: Dibromofluoromethane	*101 %*			*68-136*	TVK	10/10/03 21:05	
Surrogate: 1,2-Dichloroethane-d4	*105 %*			*66-143*	TVK	10/10/03 21:05	
Surrogate: Toluene-d8	*104 %*			*72-131*	TVK	10/10/03 21:05	
Surrogate: 4-Bromofluorobenzene	*103 %*			*72-130*	TVK	10/10/03 21:05	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J31028	EPA 8015	JRF	10/15/03 17:53	
Surrogate: Chlorobenzene	*90.9 %*			*62.1-122*	JRF	10/15/03 17:53	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 19:34	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 19:34	
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 19:34	
Total Extractable Hydrocarbons	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 19:34	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-06 SB-8-8-10				Matrix:Soil		Collected: 10/08/03 11:53	
Determination of Base/Neutral/Acid Extractable Compounds							
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 15:15	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 15:15	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 15:15	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-06 SB-8-8-10				Matrix:Soil		Collected: 10/08/03 11:53	
Determination of Base/Neutral/Acid Extractable Compounds							
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 15:15	
Surrogate: 2-Fluorophenol	*37.6 %*			*41-110*	EPP	10/22/03 15:15	S-04
Surrogate: 2-Fluorobiphenyl	*97.9 %*			*54-111*	EPP	10/22/03 15:15	
Surrogate: 2,4,6-Tribromophenol	*75.6 %*			*67-139*	EPP	10/22/03 15:15	
Surrogate: Phenol-d6	*37.4 %*			*50-110*	EPP	10/22/03 15:15	S-04
Surrogate: Terphenyl-dl4	*94.9 %*			*50-122*	EPP	10/22/03 15:15	
Surrogate: Nitrobenzene-d5	*74.7 %*			*50-110*	EPP	10/22/03 15:15	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 20:19	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 20:19	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 20:19	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 20:19	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 20:19	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 20:19	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 20:19	
Surrogate: Decachlorobiphenyl	*93.1 %*			*55-130*	EPP	10/22/03 20:19	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**78.9 %**	**0.1**	1J31032	% calculation	SNT	10/10/03 14:02	
Determination of Total Metals							
Barium, total	**191 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:42	
Silver, total	**0.9 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:42	
Arsenic, total	**12.4 mg/kg dry**	**1.2**	1J31004	EPA 6010B	RVV	10/10/03 14:42	
Cadmium, total	<0.6 mg/kg dry	0.6	1J31004	EPA 6010B	RVV	10/10/03 14:42	
Chromium, total	**11.2 mg/kg dry**	**1.8**	1J31004	EPA 6010B	RVV	10/10/03 14:42	
Lead, total	**12.4 mg/kg dry**	**2.9**	1J31004	EPA 6010B	RVV	10/10/03 14:42	
Mercury, total	<0.33 mg/kg dry	0.33	1J31031	EPA 7471A	MAQ	10/13/03 14:28	
Selenium, total	<1.2 mg/kg dry	1.2	1J31004	EPA 6010B	RVV	10/10/03 14:42	
13J0432-07 SB-3-6-8				Matrix:Soil		Collected: 10/08/03 13:40	
Determination of Volatile Organic Compounds							
Chloromethane	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Vinyl Chloride	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-07 SB-3-6-8				Matrix:Soil		Collected: 10/08/03 13:40	
Determination of Volatile Organic Compounds							
Bromomethane	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Chloroethane	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
1,1-Dichloroethylene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Acetone	**0.316 mg/kg dry**	**0.258**	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Carbon Disulfide	**0.099 mg/kg dry**	**0.026**	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Methylene Chloride	<0.258 mg/kg dry	0.258	1J31519	EPA 8260B	TVK	10/11/03 1:35	
trans-1,2-Dichloroethylene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Methyl-t-butyl Ether (MTBE)	<0.010 mg/kg dry	0.010	1J31519	EPA 8260B	TVK	10/11/03 1:35	
1,1-Dichloroethane	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
cis-1,2-Dichloroethylene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
2-Butanone (MEK)	**0.061 mg/kg dry**	**0.026**	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Chloroform	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
1,1,1-Trichloroethane	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Carbon Tetrachloride	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Benzene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
1,2-Dichloroethane	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Trichloroethylene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
1,2-Dichloropropane	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Bromodichloromethane	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
cis-1,3-Dichloropropene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
4-Methyl-2-pentanone (MIBK)	<0.026 mg/kg dry	0.026	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Toluene	**0.010 mg/kg dry**	**0.005**	1J31519	EPA 8260B	TVK	10/11/03 1:35	
trans-1,3-Dichloropropene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
1,1,2-Trichloroethane	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Tetrachloroethylene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
2-Hexanone (MBK)	<0.026 mg/kg dry	0.026	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Dibromochloromethane	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Chlorobenzene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Ethylbenzene	**0.008 mg/kg dry**	**0.005**	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Xylenes, total	**0.020 mg/kg dry**	**0.010**	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Bromoform	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
1,1,2,2-Tetrachloroethane	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
1,3-Dichlorobenzene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
1,4-Dichlorobenzene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
1,2-Dichlorobenzene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Naphthalene	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 1:35	
Surrogate: Dibromofluoromethane	*107 %*			*68-136*	TVK	10/11/03 1:35	
Surrogate: 1,2-Dichloroethane-d4	*105 %*			*66-143*	TVK	10/11/03 1:35	
Surrogate: Toluene-d8	*103 %*			*72-131*	TVK	10/11/03 1:35	
Surrogate: 4-Bromofluorobenzene	*77.2 %*			*72-130*	TVK	10/11/03 1:35	
Determination of Volatile Petroleum Hydrocarbons							

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-07 SB-3-6-8				Matrix:Soil		Collected: 10/08/03 13:40	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	**1880 mg/kg**	**5.0**	1J31028	EPA 8015	JRF	10/15/03 18:35	
Surrogate: Chlorobenzene	*89.3 %*			*62.1-122*	JRF	10/15/03 18:35	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	**339 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 20:22	D-06
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 20:22	
TEH, as waste oil	**63 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 20:22	
Total Extractable Hydrocarbons	**402 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 20:22	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Phenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Aniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Bis(2-Chloroethyl) Ether	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2-Chlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
1,3-Dichlorobenzene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
1,4-Dichlorobenzene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Benzyl Alcohol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
1,2-Dichlorobenzene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
n-Nitroso-di-n-propylamine	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2-Methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Bis(2-Chloroisopropyl) Ether	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
(3 & 4)-Methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Hexachloroethane	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Nitrobenzene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Isophorone	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2-Nitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2,4-Dimethylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Bis(2-Chloroethoxy) Methane	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2,4-Dichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
1,2,4-Trichlorobenzene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Naphthalene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
4-Chloroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Hexachlorobutadiene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
4-Chloro-3-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2-Methylnaphthalene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Hexachlorocyclopentadiene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2,4,6-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2,4,5-Trichlorophenol	<8.25 mg/kg dry	8.25	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2-Chloronaphthalene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2-Nitroaniline	<8.25 mg/kg dry	8.25	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Dimethylphthalate	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Acenaphthylene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-07 SB-3-6-8				Matrix:Soil		Collected: 10/08/03 13:40	
Determination of Base/Neutral/Acid Extractable Compounds							
2,6-Dinitrotoluene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
3-Nitroaniline	<8.25 mg/kg dry	8.25	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Acenaphthene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2,4-Dinitrophenol	<8.25 mg/kg dry	8.25	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Dibenzofuran	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
2,4-Dinitrotoluene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
4-Nitrophenol	<3.30 mg/kg dry	3.30	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Diethyl Phthalate	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Fluorene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
4-Chlorophenyl Phenyl Ether	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
4-Nitroaniline	<3.30 mg/kg dry	3.30	1J31639	EPA 8270C	EPP	10/23/03 11:04	
4,6-Dinitro-2-methylphenol	<8.25 mg/kg dry	8.25	1J31639	EPA 8270C	EPP	10/23/03 11:04	
N-Nitrosodiphenylamine	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Azobenzene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
4-Bromophenyl Phenyl Ether	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Hexachlorobenzene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Pentachlorophenol	<3.30 mg/kg dry	3.30	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Phenanthrene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Anthracene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Di-n-butyl Phthalate	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Fluoranthene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Benzidine	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Pyrene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Butyl Benzyl Phthalate	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
3,3'-Dichlorobenzidine	<3.30 mg/kg dry	3.30	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Benzo(a)anthracene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Chrysene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Bis(2-Ethylhexyl) Phthalate	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Di-n-octyl Phthalate	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Benzo(b)Fluoranthene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Benzo(k)Fluoranthene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Benzo(a)Pyrene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Indeno(1,2,3-cd)Pyrene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Dibenzo(a,h)anthracene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Benzo(g,h,i)perylene	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/23/03 11:04	
Surrogate: 2-Fluorophenol	*59.0 %*			*41-110*	EPP	10/23/03 11:04	
Surrogate: 2-Fluorobiphenyl	*70.6 %*			*54-111*	EPP	10/23/03 11:04	
Surrogate: 2,4,6-Tribromophenol	*73.3 %*			*67-139*	EPP	10/23/03 11:04	
Surrogate: Phenol-d6	*57.5 %*			*50-110*	EPP	10/23/03 11:04	
Surrogate: Terphenyl-d14	*83.6 %*			*50-122*	EPP	10/23/03 11:04	
Surrogate: Nitrobenzene-d5	*75.3 %*			*50-110*	EPP	10/23/03 11:04	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-07 SB-3-6-8				Matrix:Soil		Collected: 10/08/03 13:40	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:41	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:41	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:41	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:41	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:41	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:41	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:41	
Surrogate: Decachlorobiphenyl	*81.7 %*			*55-130*	EPP	10/23/03 9:41	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**76.2 %**	**0.1**	1J31032	% calculation	SNT	10/10/03 14:02	
Determination of Total Metals							
Barium, total	**157 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:46	
Silver, total	**0.9 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:46	
Arsenic, total	**7.4 mg/kg dry**	**1.3**	1J31004	EPA 6010B	RVV	10/10/03 14:46	
Cadmium, total	**1.3 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:46	
Chromium, total	**13.4 mg/kg dry**	**1.9**	1J31004	EPA 6010B	RVV	10/10/03 14:46	
Lead, total	**40.7 mg/kg dry**	**3.2**	1J31004	EPA 6010B	RVV	10/10/03 14:46	
Mercury, total	<0.37 mg/kg dry	0.37	1J31031	EPA 7471A	LKM	10/17/03 16:28	
Selenium, total	<1.3 mg/kg dry	1.3	1J31004	EPA 6010B	RVV	10/10/03 14:46	
13J0432-08 SB-3-8-10				Matrix:Soil		Collected: 10/08/03 14:00	
Determination of Volatile Organic Compounds							
Chloromethane	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Vinyl Chloride	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Bromomethane	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Chloroethane	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
1,1-Dichloroethylene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Acetone	<0.076 mg/kg dry	0.076	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Carbon Disulfide	<0.008 mg/kg dry	0.008	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Methylene Chloride	<0.076 mg/kg dry	0.076	1J31519	EPA 8260B	TVK	10/10/03 21:44	
trans-1,2-Dichloroethylene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Methyl-t-butyl Ether (MTBE)	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/10/03 21:44	
1,1-Dichloroethane	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
cis-1,2-Dichloroethylene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
2-Butanone (MEK)	<0.008 mg/kg dry	0.008	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Chloroform	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
1,1,1-Trichloroethane	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Carbon Tetrachloride	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Benzene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
1,2-Dichloroethane	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Trichloroethylene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-08 SB-3-8-10				Matrix:Soil		Collected: 10/08/03 14:00	
Determination of Volatile Organic Compounds							
1,2-Dichloropropane	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Bromodichloromethane	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
cis-1,3-Dichloropropene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
4-Methyl-2-pentanone (MIBK)	<0.008 mg/kg dry	0.008	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Toluene	**0.005 mg/kg dry**	**0.002**	1J31519	EPA 8260B	TVK	10/10/03 21:44	
trans-1,3-Dichloropropene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
1,1,2-Trichloroethane	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Tetrachloroethylene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
2-Hexanone (MBK)	<0.008 mg/kg dry	0.008	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Dibromochloromethane	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Chlorobenzene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Ethylbenzene	**0.002 mg/kg dry**	**0.002**	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Xylenes, total	**0.014 mg/kg dry**	**0.003**	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Bromoform	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
1,1,2,2-Tetrachloroethane	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
1,3-Dichlorobenzene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
1,4-Dichlorobenzene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
1,2-Dichlorobenzene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Naphthalene	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/10/03 21:44	
Surrogate: Dibromofluoromethane	*107 %*			*68-136*	TVK	10/10/03 21:44	
Surrogate: 1,2-Dichloroethane-d4	*103 %*			*66-143*	TVK	10/10/03 21:44	
Surrogate: Toluene-d8	*103 %*			*72-131*	TVK	10/10/03 21:44	
Surrogate: 4-Bromofluorobenzene	*89.3 %*			*72-130*	TVK	10/10/03 21:44	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	**177 mg/kg**	**5.0**	1J31028	EPA 8015	JRF	10/18/03 7:51	
Surrogate: Chlorobenzene	*87.1 %*			*62.1-122*	JRF	10/18/03 7:51	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	**39 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 21:11	D-06
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 21:11	
TEH, as waste oil	**19 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 21:11	
Total Extractable Hydrocarbons	**58 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 21:11	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-08 SB-3-8-10				Matrix:Soil		Collected: 10/08/03 14:00	
Determination of Base/Neutral/Acid Extractable Compounds							
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Dibenzofuran #	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 16:25	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 16:25	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-08 SB-3-8-10				Matrix:Soil		Collected: 10/08/03 14:00	
Determination of Base/Neutral/Acid Extractable Compounds							
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 16:25	
Surrogate: 2-Fluorophenol	*75.9 %*			*41-110*	EPP	10/22/03 16:25	
Surrogate: 2-Fluorobiphenyl	*100 %*			*54-111*	EPP	10/22/03 16:25	
Surrogate: 2,4,6-Tribromophenol	*86.4 %*			*67-139*	EPP	10/22/03 16:25	
Surrogate: Phenol-d6	*67.3 %*			*50-110*	EPP	10/22/03 16:25	
Surrogate: Terphenyl-dl4	*89.0 %*			*50-122*	EPP	10/22/03 16:25	
Surrogate: Nitrobenzene-d5	*81.2 %*			*50-110*	EPP	10/22/03 16:25	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 8:43	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 8:43	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 8:43	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 8:43	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 8:43	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 8:43	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 8:43	
Surrogate: Decachlorobiphenyl	*96.0 %*			*55-130*	EPP	10/23/03 8:43	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**79.3 %**	**0.1**	1J31032	% calculation	SNT	10/10/03 14:02	
Determination of Total Metals							
Barium, total	**176 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:50	
Silver, total	**0.8 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:50	
Arsenic, total	**12.2 mg/kg dry**	**1.3**	1J31004	EPA 6010B	RVV	10/10/03 14:50	
Cadmium, total	<0.6 mg/kg dry	0.6	1J31004	EPA 6010B	RVV	10/10/03 14:50	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-08 SB-3-8-10				Matrix:Soil		Collected: 10/08/03 14:00	
Determination of Total Metals							
Chromium, total	**9.3 mg/kg dry**	**1.9**	1J31004	EPA 6010B	RVV	10/10/03 14:50	
Lead, total	**16.3 mg/kg dry**	**3.1**	1J31004	EPA 6010B	RVV	10/10/03 14:50	
Mercury, total	<0.26 mg/kg dry	0.26	1J31031	EPA 7471A	MAQ	10/13/03 14:28	
Selenium, total	<1.3 mg/kg dry	1.3	1J31004	EPA 6010B	RVV	10/10/03 14:50	
13J0432-09 SB-7-0-4				Matrix:Soil		Collected: 10/08/03 14:25	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Acetone	<0.075 mg/kg dry	0.075	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Carbon Disulfide	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Methylene Chloride	<0.075 mg/kg dry	0.075	1J31519	EPA 8260B	TVK	10/10/03 22:23	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Methyl-t-butyl Ether (MTBE)	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/10/03 22:23	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
2-Butanone (MEK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
4-Methyl-2-pentanone (MIBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Toluene	**0.001 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/10/03 22:23	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
2-Hexanone (MBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Xylenes, total	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-09 SB-7-0-4				Matrix:Soil		Collected: 10/08/03 14:25	
Determination of Volatile Organic Compounds							
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 22:23	
Surrogate: Dibromofluoromethane	*103 %*			*68-136*	TVK	10/10/03 22:23	
Surrogate: 1,2-Dichloroethane-d4	*101 %*			*66-143*	TVK	10/10/03 22:23	
Surrogate: Toluene-d8	*104 %*			*72-131*	TVK	10/10/03 22:23	
Surrogate: 4-Bromofluorobenzene	*100 %*			*72-130*	TVK	10/10/03 22:23	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J31028	EPA 8015	JRF	10/18/03 8:32	
Surrogate: Chlorobenzene	*86.4 %*			*62.1-122*	JRF	10/18/03 8:32	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 22:00	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 22:00	
TEH, as waste oil	**29 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 22:00	
Total Extractable Hydrocarbons	**29 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/20/03 22:00	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-09 SB-7-0-4				Matrix:Soil		Collected: 10/08/03 14:25	
Determination of Base/Neutral/Acid Extractable Compounds							
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 17:00	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 17:00	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-09 SB-7-0-4				Matrix:Soil		Collected: 10/08/03 14:25	
Determination of Base/Neutral/Acid Extractable Compounds							
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:00	
Surrogate: 2-Fluorophenol	*55.2 %*			*41-110*	EPP	10/22/03 17:00	
Surrogate: 2-Fluorobiphenyl	*91.2 %*			*54-111*	EPP	10/22/03 17:00	
Surrogate: 2,4,6-Tribromophenol	*55.6 %*			*67-139*	EPP	10/22/03 17:00	S-04
Surrogate: Phenol-d6	*49.3 %*			*50-110*	EPP	10/22/03 17:00	S-04
Surrogate: Terphenyl-dl4	*88.4 %*			*50-122*	EPP	10/22/03 17:00	
Surrogate: Nitrobenzene-d5	*81.3 %*			*50-110*	EPP	10/22/03 17:00	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 21:49	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 21:49	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 21:49	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 21:49	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 21:49	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 21:49	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 21:49	
Surrogate: Decachlorobiphenyl	*87.8 %*			*55-130*	EPP	10/22/03 21:49	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**82.4 %**	**0.1**	1J31032	% calculation	SNT	10/10/03 14:02	
Determination of Total Metals							
Barium, total	**126 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:54	
Silver, total	**0.6 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:54	
Arsenic, total	**7.6 mg/kg dry**	**1.2**	1J31004	EPA 6010B	RVV	10/10/03 14:54	
Cadmium, total	<0.6 mg/kg dry	0.6	1J31004	EPA 6010B	RVV	10/10/03 14:54	
Chromium, total	**16.3 mg/kg dry**	**1.9**	1J31004	EPA 6010B	RVV	10/10/03 14:54	
Lead, total	**72.0 mg/kg dry**	**3.1**	1J31004	EPA 6010B	RVV	10/10/03 14:54	
Mercury, total	<0.32 mg/kg dry	0.32	1J31031	EPA 7471A	MAQ	10/13/03 14:28	
Selenium, total	<1.2 mg/kg dry	1.2	1J31004	EPA 6010B	RVV	10/10/03 14:54	
13J0432-10 SB-7-8-10				Matrix:Soil		Collected: 10/08/03 14:50	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Acetone	<0.069 mg/kg dry	0.069	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Carbon Disulfide	**0.008 mg/kg dry**	**0.007**	1J31519	EPA 8260B	TVK	10/10/03 23:01	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-10 SB-7-8-10				Matrix:Soil		Collected: 10/08/03 14:50	
Determination of Volatile Organic Compounds							
Methylene Chloride	<0.069 mg/kg dry	0.069	1J31519	EPA 8260B	TVK	10/10/03 23:01	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Methyl-t-butyl Ether (MTBE)	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/10/03 23:01	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
2-Butanone (MEK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
4-Methyl-2-pentanone (MIBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Toluene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
2-Hexanone (MBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Xylenes, total	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:01	
Surrogate: Dibromofluoromethane	*103 %*			*68-136*	TVK	10/10/03 23:01	
Surrogate: 1,2-Dichloroethane-d4	*102 %*			*66-143*	TVK	10/10/03 23:01	
Surrogate: Toluene-d8	*104 %*			*72-131*	TVK	10/10/03 23:01	
Surrogate: 4-Bromofluorobenzene	*100 %*			*72-130*	TVK	10/10/03 23:01	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J31028	EPA 8015	JRF	10/15/03 20:38	
Surrogate: Chlorobenzene	*88.8 %*			*62.1-122*	JRF	10/15/03 20:38	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 22:48	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 22:48	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-10 SB-7-8-10				Matrix:Soil		Collected: 10/08/03 14:50	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 22:48	
Total Extractable Hydrocarbons	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 22:48	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 17:36	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-10 SB-7-8-10				Matrix:Soil		Collected: 10/08/03 14:50	
Determination of Base/Neutral/Acid Extractable Compounds							
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 17:36	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 17:36	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 17:36	
Surrogate: 2-Fluorophenol	*35.7 %*			*41-110*	EPP	10/22/03 17:36	S-04
Surrogate: 2-Fluorobiphenyl	*95.7 %*			*54-111*	EPP	10/22/03 17:36	
Surrogate: 2,4,6-Tribromophenol	*47.5 %*			*67-139*	EPP	10/22/03 17:36	S-04
Surrogate: Phenol-d6	*39.6 %*			*50-110*	EPP	10/22/03 17:36	S-04
Surrogate: Terphenyl-dl4	*89.8 %*			*50-122*	EPP	10/22/03 17:36	
Surrogate: Nitrobenzene-d5	*80.3 %*			*50-110*	EPP	10/22/03 17:36	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 22:19	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 22:19	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 22:19	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-10 SB-7-8-10				Matrix:Soil		Collected: 10/08/03 14:50	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 22:19	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 22:19	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 22:19	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 22:19	
Surrogate: Decachlorobiphenyl	*95.1 %*			*55-130*	EPP	10/22/03 22:19	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**75.1 %**	**0.1**	1J31032	% calculation	SNT	10/10/03 14:02	
Determination of Total Metals							
Barium, total	**204 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:58	
Silver, total	**0.8 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 14:58	
Arsenic, total	**12.0 mg/kg dry**	**1.3**	1J31004	EPA 6010B	RVV	10/10/03 14:58	
Cadmium, total	<0.6 mg/kg dry	0.6	1J31004	EPA 6010B	RVV	10/10/03 14:58	
Chromium, total	**11.9 mg/kg dry**	**1.9**	1J31004	EPA 6010B	RVV	10/10/03 14:58	
Lead, total	**14.8 mg/kg dry**	**3.2**	1J31004	EPA 6010B	RVV	10/10/03 14:58	
Mercury, total	<0.29 mg/kg dry	0.29	1J31031	EPA 7471A	LKM	10/17/03 16:28	
Selenium, total	<1.3 mg/kg dry	1.3	1J31004	EPA 6010B	RVV	10/10/03 14:58	
13J0432-11 SB-6-0-4				Matrix:Soil		Collected: 10/08/03 15:40	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Acetone	**0.115 mg/kg dry**	**0.066**	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Carbon Disulfide	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Methylene Chloride	<0.066 mg/kg dry	0.066	1J31519	EPA 8260B	TVK	10/10/03 23:40	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Methyl-t-butyl Ether (MTBE)	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/10/03 23:40	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
2-Butanone (MEK)	**0.016 mg/kg dry**	**0.007**	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Benzene	**0.002 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/10/03 23:40	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-11 SB-6-0-4				Matrix:Soil		Collected: 10/08/03 15:40	
Determination of Volatile Organic Compounds							
4-Methyl-2-pentanone (MIBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Toluene	**0.004 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/10/03 23:40	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
2-Hexanone (MBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Ethylbenzene	**0.001 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Xylenes, total	**0.003 mg/kg dry**	**0.003**	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/10/03 23:40	
Surrogate: Dibromofluoromethane	*104 %*			*68-136*	TVK	10/10/03 23:40	
Surrogate: 1,2-Dichloroethane-d4	*103 %*			*66-143*	TVK	10/10/03 23:40	
Surrogate: Toluene-d8	*104 %*			*72-131*	TVK	10/10/03 23:40	
Surrogate: 4-Bromofluorobenzene	*97.3 %*			*72-130*	TVK	10/10/03 23:40	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J31028	EPA 8015	JRF	10/15/03 21:19	
Surrogate: Chlorobenzene	*90.9 %*			*62.1-122*	JRF	10/15/03 21:19	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 23:37	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 23:37	
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 23:37	
Total Extractable Hydrocarbons	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/20/03 23:37	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-11 SB-6-0-4				Matrix:Soil		Collected: 10/08/03 15:40	
Determination of Base/Neutral/Acid Extractable Compounds							
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 18:11	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 18:11	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-11 SB-6-0-4				Matrix:Soil		Collected: 10/08/03 15:40	
Determination of Base/Neutral/Acid Extractable Compounds							
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:11	
Surrogate: 2-Fluorophenol	*48.1 %*			*41-110*	EPP	10/22/03 18:11	
Surrogate: 2-Fluorobiphenyl	*108 %*			*54-111*	EPP	10/22/03 18:11	
Surrogate: 2,4,6-Tribromophenol	*63.8 %*			*67-139*	EPP	10/22/03 18:11	S-04
Surrogate: Phenol-d6	*44.6 %*			*50-110*	EPP	10/22/03 18:11	S-04
Surrogate: Terphenyl-dl4	*84.0 %*			*50-122*	EPP	10/22/03 18:11	
Surrogate: Nitrobenzene-d5	*83.0 %*			*50-110*	EPP	10/22/03 18:11	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:11	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:11	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:11	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:11	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:11	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:11	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 9:11	
Surrogate: Decachlorobiphenyl	*85.7 %*			*55-130*	EPP	10/23/03 9:11	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**81.6 %**	**0.1**	1J31033	% calculation	SNT	10/10/03 14:05	
Determination of Total Metals							
Barium, total	**158 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 15:14	
Silver, total	**1.0 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 15:14	
Arsenic, total	**8.1 mg/kg dry**	**1.2**	1J31004	EPA 6010B	RVV	10/10/03 15:14	
Cadmium, total	**0.7 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 15:14	
Chromium, total	**11.4 mg/kg dry**	**1.8**	1J31004	EPA 6010B	RVV	10/10/03 15:14	
Lead, total	**69.0 mg/kg dry**	**3.0**	1J31004	EPA 6010B	RVV	10/10/03 15:14	
Mercury, total	<0.34 mg/kg dry	0.34	1J31031	EPA 7471A	LKM	10/17/03 16:28	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-11 SB-6-0-4				Matrix:Soil		Collected: 10/08/03 15:40	
Determination of Total Metals							
Selenium, total	<1.2 mg/kg dry	1.2	1J31004	EPA 6010B	RVV	10/10/03 15:14	
13J0432-12 SB-6-7-10				Matrix:Soil		Collected: 10/08/03 15:55	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Acetone	<0.072 mg/kg dry	0.072	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Carbon Disulfide	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Methylene Chloride	<0.072 mg/kg dry	0.072	1J31519	EPA 8260B	TVK	10/11/03 0:18	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Methyl-t-butyl Ether (MTBE)	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/11/03 0:18	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
2-Butanone (MEK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
4-Methyl-2-pentanone (MIBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Toluene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
2-Hexanone (MBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Xylenes, total	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-12 SB-6-7-10				Matrix:Soil		Collected: 10/08/03 15:55	
Determination of Volatile Organic Compounds							
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:18	
Surrogate: Dibromofluoromethane	*103 %*			*68-136*	TVK	10/11/03 0:18	
Surrogate: 1,2-Dichloroethane-d4	*104 %*			*66-143*	TVK	10/11/03 0:18	
Surrogate: Toluene-d8	*104 %*			*72-131*	TVK	10/11/03 0:18	
Surrogate: 4-Bromofluorobenzene	*101 %*			*72-130*	TVK	10/11/03 0:18	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J31028	EPA 8015	JRF	10/15/03 22:00	
Surrogate: Chlorobenzene	*88.8 %*			*62.1-122*	JRF	10/15/03 22:00	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 0:26	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 0:26	
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 0:26	
Total Extractable Hydrocarbons	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 0:26	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-12 SB-6-7-10				Matrix:Soil		Collected: 10/08/03 15:55	
Determination of Base/Neutral/Acid Extractable Compounds							
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 18:46	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 18:46	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-12 SB-6-7-10				Matrix:Soil		Collected: 10/08/03 15:55	
Determination of Base/Neutral/Acid Extractable Compounds							
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 18:46	
Surrogate: 2-Fluorophenol	*30.6 %*			*41-110*	EPP	10/22/03 18:46	S-04
Surrogate: 2-Fluorobiphenyl	*108 %*			*54-111*	EPP	10/22/03 18:46	
Surrogate: 2,4,6-Tribromophenol	*59.8 %*			*67-139*	EPP	10/22/03 18:46	S-04
Surrogate: Phenol-d6	*26.9 %*			*50-110*	EPP	10/22/03 18:46	S-04
Surrogate: Terphenyl-dl4	*98.1 %*			*50-122*	EPP	10/22/03 18:46	
Surrogate: Nitrobenzene-d5	*68.6 %*			*50-110*	EPP	10/22/03 18:46	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:19	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:19	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:19	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:19	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:19	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:19	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:19	
Surrogate: Decachlorobiphenyl	*81.6 %*			*55-130*	EPP	10/22/03 23:19	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**77.9 %**	**0.1**	1J31033	% calculation	SNT	10/10/03 14:05	
Determination of Total Metals							
Barium, total	**185 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 15:18	
Silver, total	**0.8 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 15:18	
Arsenic, total	**11.7 mg/kg dry**	**1.1**	1J31004	EPA 6010B	RVV	10/10/03 15:18	
Cadmium, total	**0.6 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 15:18	
Chromium, total	**9.4 mg/kg dry**	**1.7**	1J31004	EPA 6010B	RVV	10/10/03 15:18	
Lead, total	**9.7 mg/kg dry**	**2.8**	1J31004	EPA 6010B	RVV	10/10/03 15:18	
Mercury, total	<0.32 mg/kg dry	0.32	1J31031	EPA 7471A	MAQ	10/13/03 14:28	
Selenium, total	<1.1 mg/kg dry	1.1	1J31004	EPA 6010B	RVV	10/10/03 15:18	
13J0432-13 DUP-1				Matrix:Soil		Collected: 10/08/03 08:00	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Acetone	**0.071 mg/kg dry**	**0.071**	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Carbon Disulfide	**0.010 mg/kg dry**	**0.007**	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Methylene Chloride	<0.071 mg/kg dry	0.071	1J31519	EPA 8260B	TVK	10/11/03 0:57	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Methyl-t-butyl Ether (MTBE)	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/11/03 0:57	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-13 DUP-1				Matrix:Soil		Collected: 10/08/03 08:00	
Determination of Volatile Organic Compounds							
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
2-Butanone (MEK)	**0.016 mg/kg dry**	**0.007**	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Benzene	**0.002 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/11/03 0:57	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
4-Methyl-2-pentanone (MIBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Toluene	**0.005 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/11/03 0:57	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
2-Hexanone (MBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Ethylbenzene	**0.002 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Xylenes, total	**0.004 mg/kg dry**	**0.003**	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Naphthalene	5 <0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 0:57	
Surrogate: Dibromofluoromethane	*105 %*			*68-136*	TVK	10/11/03 0:57	
Surrogate: 1,2-Dichloroethane-d4	*103 %*			*66-143*	TVK	10/11/03 0:57	
Surrogate: Toluene-d8	*103 %*			*72-131*	TVK	10/11/03 0:57	
Surrogate: 4-Bromofluorobenzene	*98.2 %*			*72-130*	TVK	10/11/03 0:57	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J31028	EPA 8015	JRF	10/15/03 22:41	
Surrogate: Chlorobenzene	*89.7 %*			*62.1-122*	JRF	10/15/03 22:41	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 1:15	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 1:15	
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 1:15	
Total Extractable Hydrocarbons	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 1:15	
Determination of Base/Neutral/Acid Extractable Compounds							

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-13 DUP-1				Matrix:Soil		Collected: 10/08/03 08:00	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 19:22	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-13 DUP-1				Matrix:Soil		Collected: 10/08/03 08:00	
Determination of Base/Neutral/Acid Extractable Compounds							
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 19:22	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 19:22	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 19:22	
Surrogate: 2-Fluorophenol	*26.3 %*			*41-110*	EPP	10/22/03 19:22	S-04
Surrogate: 2-Fluorobiphenyl	*90.9 %*			*54-111*	EPP	10/22/03 19:22	
Surrogate: 2,4,6-Tribromophenol	*39.2 %*			*67-139*	EPP	10/22/03 19:22	S-04
Surrogate: Phenol-d6	*30.9 %*			*50-110*	EPP	10/22/03 19:22	S-04
Surrogate: Terphenyl-d14	*91.3 %*			*50-122*	EPP	10/22/03 19:22	
Surrogate: Nitrobenzene-d5	*80.4 %*			*50-110*	EPP	10/22/03 19:22	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:49	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:49	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:49	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:49	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:49	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:49	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0432

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0432-13 DUP-1				Matrix:Soil		Collected: 10/08/03 08:00	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/22/03 23:49	
Surrogate: Decachlorobiphenyl	*78.5 %*			*55-130*	EPP	10/22/03 23:49	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**78.1 %**	**0.1**	1J31033	% calculation	SNT	10/10/03 14:05	
Determination of Total Metals							
Barium, total	**171 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 15:33	
Silver, total	**0.7 mg/kg dry**	**0.6**	1J31004	EPA 6010B	RVV	10/10/03 15:33	
Arsenic, total	**7.5 mg/kg dry**	**1.1**	1J31004	EPA 6010B	RVV	10/10/03 15:33	
Cadmium, total	<0.6 mg/kg dry	0.6	1J31004	EPA 6010B	RVV	10/10/03 15:33	
Chromium, total	**11.4 mg/kg dry**	**1.7**	1J31004	EPA 6010B	RVV	10/10/03 15:33	
Lead, total	**10.4 mg/kg dry**	**2.8**	1J31004	EPA 6010B	RVV	10/10/03 15:33	
Mercury, total	<0.27 mg/kg dry	0.27	1J31031	EPA 7471A	MAQ	10/13/03 14:28	
Selenium, total	<1.1 mg/kg dry	1.1	1J31004	EPA 6010B	RVV	10/10/03 15:33	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31519 - EPA 5030B										
Blank (1J31519-BLK1)				Prepared & Analyzed: 10/10/03						
Chloromethane	ND	0.001	mg/kg wet							
Vinyl Chloride	ND	0.001	"							
Bromomethane	ND	0.001	"							
Chloroethane	ND	0.001	"							
1,1-Dichloroethylene	ND	0.001	"							
Acetone	ND	0.050	"							
Carbon Disulfide	ND	0.005	"							
Methylene Chloride	ND	0.050	"							
trans-1,2-Dichloroethylene	ND	0.001	"							
Methyl-t-butyl Ether (MTBE)	ND	0.002	"							
1,1-Dichloroethane	ND	0.001	"							
cis-1,2-Dichloroethylene	ND	0.001	"							
2-Butanone (MEK)	ND	0.005	"							
Chloroform	ND	0.001	"							
1,1,1-Trichloroethane	ND	0.001	"							
Carbon Tetrachloride	ND	0.001	"							
Benzene	ND	0.001	"							
1,2-Dichloroethane	ND	0.001	"							
Trichloroethylene	ND	0.001	"							
1,2-Dichloropropane	ND	0.001	"							
Bromodichloromethane	ND	0.001	"							
cis-1,3-Dichloropropene	ND	0.001	"							
4-Methyl-2-pentanone (MIBK)	ND	0.005	"							
Toluene	ND	0.001	"							
trans-1,3-Dichloropropene	ND	0.001	"							
1,1,2-Trichloroethane	ND	0.001	"							
Tetrachloroethylene	ND	0.001	"							
2-Hexanone (MBK)	ND	0.005	"							
Dibromochloromethane	ND	0.001	"							
Chlorobenzene	ND	0.001	"							
Ethylbenzene	ND	0.001	"							
Xylenes, total	ND	0.002	"							
Bromoform	ND	0.001	"							
1,1,2,2-Tetrachloroethane	ND	0.001	"							
1,3-Dichlorobenzene	ND	0.001	"							

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31519 - EPA 5030B										
Blank (1J31519-BLK1)				Prepared & Analyzed: 10/10/03						
1,4-Dichlorobenzene	ND	0.001	mg/kg wet							
1,2-Dichlorobenzene	ND	0.001	"							
Naphthalene	ND	0.001	"							
Surrogate: Dibromofluoromethane	*50.00*		"	*50.00*		*100*	*68-136*			
Surrogate: 1,2-Dichloroethane-d4	*52.13*		"	*50.00*		*104*	*66-143*			
Surrogate: Toluene-d8	*52.42*		"	*50.20*		*104*	*72-131*			
Surrogate: 4-Bromofluorobenzene	*51.16*		"	*50.00*		*102*	*72-130*			
LCS (1J31519-BS1)				Prepared & Analyzed: 10/10/03						
Chloromethane	0.1187	0.001	mg/kg wet	0.1000		119	70-130			
Vinyl Chloride	0.0975	0.001	"	0.1000		97.5	70-130			
Bromomethane	0.1063	0.001	"	0.1000		106	70-130			
Chloroethane	0.0881	0.001	"	0.1000		88.1	70-130			
1,1-Dichloroethylene	0.0465	0.001	"	0.0500		93.0	70-130			
Acetone	0.2393	0.050	"	0.2320		103	70-130			
Carbon Disulfide	0.2133	0.005	"	0.2120		101	70-130			
Methylene Chloride	0.0515	0.050	"	0.0500		103	70-130			
trans-1,2-Dichloroethylene	0.0454	0.001	"	0.0500		90.8	70-130			
Methyl-t-butyl Ether (MTBE)	0.1988	0.002	"	0.1900		105	66-130			
1,1-Dichloroethane	0.0454	0.001	"	0.0500		90.8	70-130			
cis-1,2-Dichloroethylene	0.0456	0.001	"	0.0500		91.2	70-130			
2-Butanone (MEK)	0.2516	0.005	"	0.2340		108	70-130			
Chloroform	0.0455	0.001	"	0.0500		91.0	70-130			
1,1,1-Trichloroethane	0.0450	0.001	"	0.0500		90.0	70-130			
Carbon Tetrachloride	0.0453	0.001	"	0.0500		90.6	70-130			
Benzene	0.0455	0.001	"	0.0500		91.0	66-136			
1,2-Dichloroethane	0.0463	0.001	"	0.0500		92.6	69-135			
Trichloroethylene	0.0490	0.001	"	0.0500		98.0	70-130			
1,2-Dichloropropane	0.0455	0.001	"	0.0500		91.0	70-130			
Bromodichloromethane	0.0460	0.001	"	0.0500		92.0	70-130			
cis-1,3-Dichloropropene	0.0447	0.001	"	0.0500		89.4	70-130			
4-Methyl-2-pentanone (MIBK)	0.2338	0.005	"	0.2180		107	70-130			
Toluene	0.0443	0.001	"	0.0500		88.6	69-130			
trans-1,3-Dichloropropene	0.0447	0.001	"	0.0500		89.4	70-130			
1,1,2-Trichloroethane	0.0464	0.001	"	0.0500		92.8	70-130			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31519 - EPA 5030B										
LCS (1J31519-BS1)				Prepared & Analyzed: 10/10/03						
Tetrachloroethylene	0.0446	0.001	mg/kg wet	0.0500		89.2	70-130			
2-Hexanone (MBK)	0.2378	0.005	"	0.2260		105	70-130			
Dibromochloromethane	0.0486	0.001	"	0.0500		97.2	70-130			
Chlorobenzene	0.0460	0.001	"	0.0500		92.0	70-130			
Ethylbenzene	0.0449	0.001	"	0.0500		89.8	67-133			
Xylenes, total	0.1351	0.002	"	0.1500		90.1	69-132			
Bromoform	0.0485	0.001	"	0.0500		97.0	70-130			
1,1,2,2-Tetrachloroethane	0.0413	0.001	"	0.0500		82.6	70-130			
1,3-Dichlorobenzene	0.0447	0.001	"	0.0500		89.4	70-130			
1,4-Dichlorobenzene	0.0447	0.001	"	0.0500		89.4	70-130			
1,2-Dichlorobenzene	0.0453	0.001	"	0.0500		90.6	70-130			
Naphthalene	0.0353	0.001	"	0.0500		70.6	64-123			
Surrogate: Dibromofluoromethane	*48.40*		*"*	*50.00*		*96.8*	*68-136*			
Surrogate: 1,2-Dichloroethane-d4	*50.69*		*"*	*50.00*		*101*	*66-143*			
Surrogate: Toluene-d8	*50.22*		*"*	*50.20*		*100*	*72-131*			
Surrogate: 4-Bromofluorobenzene	*51.00*		*"*	*50.00*		*102*	*72-130*			
Calibration Check (1J31519-CCV1)				Prepared & Analyzed: 10/10/03						
Chloromethane	0.1282	0.001	mg/kg wet	0.1000		128	70-130			
Vinyl Chloride	0.0977	0.001	"	0.1000		97.7	70-130			
Bromomethane	0.1026	0.001	"	0.1000		103	70-130			
Chloroethane	0.0890	0.001	"	0.1000		89.0	70-130			
1,1-Dichloroethylene	0.0493	0.001	"	0.0500		98.6	70-130			
Acetone	0.2245	0.050	"	0.2320		96.8	70-130			
Carbon Disulfide	0.2063	0.005	"	0.2120		97.3	70-130			
Methylene Chloride	0.0528	0.050	"	0.0500		106	70-130			
trans-1,2-Dichloroethylene	0.0493	0.001	"	0.0500		98.6	70-130			
Methyl-t-butyl Ether (MTBE)	0.1912	0.002	"	0.1900		101	70-130			
1,1-Dichloroethane	0.0489	0.001	"	0.0500		97.8	70-130			
cis-1,2-Dichloroethylene	0.0490	0.001	"	0.0500		98.0	70-130			
2-Butanone (MEK)	0.2315	0.005	"	0.2340		98.9	70-130			
Chloroform	0.0490	0.001	"	0.0500		98.0	70-130			
1,1,1-Trichloroethane	0.0479	0.001	"	0.0500		95.8	70-130			
Carbon Tetrachloride	0.0481	0.001	"	0.0500		96.2	70-130			
Benzene	0.0488	0.001	"	0.0500		97.6	70-130			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31519 - EPA 5030B										
Calibration Check (1J31519-CCV1)				Prepared & Analyzed: 10/10/03						
1,2-Dichloroethane	0.0486	0.001	mg/kg wet	0.0500		97.2	70-130			
Trichloroethylene	0.0536	0.001	"	0.0500		107	70-130			
1,2-Dichloropropane	0.0483	0.001	"	0.0500		96.6	70-130			
Bromodichloromethane	0.0482	0.001	"	0.0500		96.4	70-130			
cis-1,3-Dichloropropene	0.0470	0.001	"	0.0500		94.0	70-130			
4-Methyl-2-pentanone (MIBK)	0.2164	0.005	"	0.2180		99.3	70-130			
Toluene	0.0478	0.001	"	0.0500		95.6	70-130			
trans-1,3-Dichloropropene	0.0470	0.001	"	0.0500		94.0	70-130			
1,1,2-Trichloroethane	0.0500	0.001	"	0.0500		100	70-130			
Tetrachloroethylene	0.0487	0.001	"	0.0500		97.4	70-130			
2-Hexanone (MBK)	0.2160	0.005	"	0.2260		95.6	70-130			
Dibromochloromethane	0.0498	0.001	"	0.0500		99.6	70-130			
Chlorobenzene	0.0489	0.001	"	0.0500		97.8	70-130			
Ethylbenzene	0.0484	0.001	"	0.0500		96.8	70-130			
Xylenes, total	0.1444	0.002	"	0.1500		96.3	70-130			
Bromoform	0.0498	0.001	"	0.0500		99.6	70-130			
1,1,2,2-Tetrachloroethane	0.0408	0.001	"	0.0500		81.6	70-130			
1,3-Dichlorobenzene	0.0493	0.001	"	0.0500		98.6	70-130			
1,4-Dichlorobenzene	0.0498	0.001	"	0.0500		99.6	70-130			
1,2-Dichlorobenzene	0.0497	0.001	"	0.0500		99.4	70-130			
Naphthalene	0.0342	0.001	"	0.0500		68.4	70-130			QR-06
Surrogate: Dibromofluoromethane	*46.92*		"	*50.00*		*93.8*	*68-136*			
Surrogate: 1,2-Dichloroethane-d4	*49.67*		"	*50.00*		*99.3*	*66-143*			
Surrogate: Toluene-d8	*49.76*		"	*50.20*		*99.1*	*72-131*			
Surrogate: 4-Bromofluorobenzene	*50.52*		"	*50.00*		*101*	*72-130*			
Matrix Spike (1J31519-MS1)		**Source: 13J0432-03**		Prepared: 10/10/03		Analyzed: 10/11/03				
1,1-Dichloroethylene	0.1245	0.002	mg/kg dry	0.1260	ND	98.8	67-148			
Benzene	0.1563	0.002	"	0.1532	ND	102	62-140			
Trichloroethylene	0.1287	0.002	"	0.1373	ND	93.7	62-136			
Toluene	0.1264	0.002	"	0.1344	ND	94.0	64-135			
Chlorobenzene	0.1362	0.002	"	0.1526	ND	89.3	62-134			
Surrogate: Dibromofluoromethane	*52.74*		"	*50.00*		*105*	*68-136*			
Surrogate: 1,2-Dichloroethane-d4	*51.87*		"	*50.00*		*104*	*66-143*			
Surrogate: Toluene-d8	*53.96*		"	*50.20*		*107*	*72-131*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Determination of Volatile Organic Compounds - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31519 - EPA 5030B										
Matrix Spike (1J31519-MS1)		**Source: 13J0432-03**		Prepared: 10/10/03		Analyzed: 10/11/03				
Surrogate: 4-Bromofluorobenzene	*50.80*		*mg/kg dry*	*50.00*		*102*	*72-130*			
Matrix Spike Dup (1J31519-MSD1)		**Source: 13J0432-03**		Prepared: 10/10/03		Analyzed: 10/11/03				
1,1-Dichloroethylene	0.1487	0.002	mg/kg dry	0.1498	ND	99.3	67-148	17.7	27	
Benzene	0.1831	0.002	"	0.1821	ND	101	62-140	15.8	28	
Trichloroethylene	0.1509	0.002	"	0.1633	ND	92.4	62-136	15.9	28	
Toluene	0.1477	0.002	"	0.1598	ND	92.4	64-135	15.5	26	
Chlorobenzene	0.1608	0.002	"	0.1813	ND	88.7	62-134	16.6	25	
Surrogate: Dibromofluoromethane	*52.75*		"	*50.00*		*106*	*68-136*			
Surrogate: 1,2-Dichloroethane-d4	*51.17*		"	*50.00*		*102*	*66-143*			
Surrogate: Toluene-d8	*52.63*		"	*50.20*		*105*	*72-131*			
Surrogate: 4-Bromofluorobenzene	*50.64*		"	*50.00*		*101*	*72-130*			

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Montgomery Watson Harza-MI
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Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Determination of Volatile Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31028 - EPA 5030 Soil GC										
Blank (1J31028-BLK1)				Prepared: 10/10/03		Analyzed: 10/15/03				
TPH, as gasoline	ND	5.0	mg/kg							
Surrogate: Chlorobenzene	*10.35*		*"*	*10.74*		*96.4*	*62.1-122*			
LCS (1J31028-BS1)				Prepared: 10/10/03		Analyzed: 10/16/03				
Surrogate: Chlorobenzene	*10.53*		*mg/kg*	*10.74*		*98.0*	*62.1-122*			
Calibration Check (1J31028-CCV1)				Prepared: 10/10/03		Analyzed: 10/15/03				
Surrogate: Chlorobenzene	*10.90*		*mg/kg*	*10.74*		*101*	*62.1-122*			
Calibration Check (1J31028-CCV2)				Prepared: 10/10/03		Analyzed: 10/15/03				
TPH, as gasoline	110.9	5.0	mg/kg	106.8		104	0-200			
Surrogate: Chlorobenzene	*9.47*		*"*	*10.74*		*88.2*	*62.1-122*			
Calibration Check (1J31028-CCV3)				Prepared: 10/10/03		Analyzed: 10/16/03				
Surrogate: Chlorobenzene	*11.06*		*mg/kg*	*10.74*		*103*	*62.1-122*			
Calibration Check (1J31028-CCV4)				Prepared: 10/10/03		Analyzed: 10/16/03				
TPH, as gasoline	92.76	5.0	mg/kg	106.8		86.9	0-200			
Surrogate: Chlorobenzene	*10.39*		*"*	*10.74*		*96.7*	*62.1-122*			
Matrix Spike (1J31028-MS1)		**Source: 13J0432-05**		Prepared: 10/10/03		Analyzed: 10/16/03				
Surrogate: Chlorobenzene	*9.60*		*mg/kg*	*10.41*		*92.2*	*62.1-122*			
Matrix Spike Dup (1J31028-MSD1)		**Source: 13J0432-05**		Prepared: 10/10/03		Analyzed: 10/16/03				
Surrogate: Chlorobenzene	*9.63*		*mg/kg*	*10.43*		*92.3*	*62.1-122*			

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Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Determination of Extractable Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31428 - 3545 OA-2 PFE										
Blank (1J31428-BLK1)				Prepared: 10/14/03	Analyzed: 10/20/03					
TEH, as gasoline	ND	5	mg/kg							
TEH, as #2 diesel fuel	ND	5	"							
TEH, as waste oil	ND	5	"							
Total Extractable Hydrocarbons	ND	5	"							
LCS (1J31428-BS1)				Prepared: 10/14/03	Analyzed: 10/21/03					
TEH, as #2 diesel fuel	382.8	5	mg/kg	512.4		74.7	70-130			
Calibration Check (1J31428-CCV1)				Prepared: 10/14/03	Analyzed: 10/20/03					
TEH, as gasoline	2087		mg/kg	2140		97.5	85-115			
TEH, as #2 diesel fuel	1884		"	2070		91.0	85-115			
TEH, as waste oil	1871		"	2040		91.7	85-115			
Calibration Check (1J31428-CCV2)				Prepared: 10/14/03	Analyzed: 10/21/03					
TEH, as gasoline	2206		mg/kg	2140		103	85-115			
TEH, as #2 diesel fuel	2034		"	2070		98.3	85-115			
TEH, as waste oil	1893		"	2040		92.8	85-115			
Matrix Spike (1J31428-MS1)	**Source: 13J0432-02**			Prepared: 10/14/03	Analyzed: 10/21/03					
TEH, as #2 diesel fuel	344.9	5	mg/kg	512.4	ND	67.3	56-101			
Matrix Spike Dup (1J31428-MSD1)	**Source: 13J0432-02**			Prepared: 10/14/03	Analyzed: 10/21/03					
TEH, as #2 diesel fuel	311.8	5	mg/kg	511.6	ND	60.9	56-101	10.1	18	

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Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Blank (1J31639-BLK1)				Prepared: 10/16/03 Analyzed: 10/22/03						
N-Nitrosodimethylamine	ND	0.33	mg/kg wet							
Phenol	ND	0.33	"							
Aniline	ND	0.33	"							
Bis(2-Chloroethyl) Ether	ND	0.33	"							
2-Chlorophenol	ND	0.33	"							
1,3-Dichlorobenzene	ND	0.33	"							
1,4-Dichlorobenzene	ND	0.33	"							
Benzyl Alcohol	ND	0.33	"							
1,2-Dichlorobenzene	ND	0.33	"							
n-Nitroso-di-n-propylamine	ND	0.33	"							
2-Methylphenol	ND	0.33	"							
Bis(2-Chloroisopropyl) Ether	ND	0.33	"							
(3 & 4)-Methylphenol	ND	0.33	"							
Hexachloroethane	ND	0.33	"							
Nitrobenzene	ND	0.33	"							
Isophorone	ND	0.33	"							
2-Nitrophenol	ND	0.33	"							
2,4-Dimethylphenol	ND	0.33	"							
Bis(2-Chloroethoxy) Methane	ND	0.33	"							
2,4-Dichlorophenol	ND	0.33	"							
1,2,4-Trichlorobenzene	ND	0.33	"							
Naphthalene	ND	0.33	"							
4-Chloroaniline	ND	0.33	"							
Hexachlorobutadiene	ND	0.33	"							
4-Chloro-3-methylphenol	ND	0.33	"							
2-Methylnaphthalene	ND	0.33	"							
Hexachlorocyclopentadiene	ND	0.33	"							
2,4,6-Trichlorophenol	ND	0.33	"							
2,4,5-Trichlorophenol	ND	1.65	"							
2-Chloronaphthalene	ND	0.33	"							
2-Nitroaniline	ND	1.65	"							
Dimethylphthalate	ND	0.33	"							
Acenaphthylene	ND	0.33	"							
2,6-Dinitrotoluene	ND	0.33	"							
3-Nitroaniline	ND	1.65	"							

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Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Blank (1J31639-BLK1)				Prepared: 10/16/03 Analyzed: 10/22/03						
Acenaphthene	ND	0.33	mg/kg wet							
2,4-Dinitrophenol	ND	1.65	"							
Dibenzofuran	ND	0.33	"							
2,4-Dinitrotoluene	ND	0.33	"							
4-Nitrophenol	ND	0.56	"							
Diethyl Phthalate	ND	0.33	"							
Fluorene	ND	0.33	"							
4-Chlorophenyl Phenyl Ether	ND	0.33	"							
4-Nitroaniline	ND	0.66	"							
4,6-Dinitro-2-methylphenol	ND	1.65	"							
N-Nitrosodiphenylamine	ND	0.33	"							
Azobenzene	ND	0.33	"							
4-Bromophenyl Phenyl Ether	ND	0.33	"							
Hexachlorobenzene	ND	0.33	"							
Pentachlorophenol	ND	0.66	"							
Phenanthrene	ND	0.33	"							
Anthracene	ND	0.33	"							
Di-n-butyl Phthalate	ND	0.33	"							
Fluoranthene	ND	0.33	"							
Benzidine	ND	0.33	"							
Pyrene	ND	0.33	"							
Butyl Benzyl Phthalate	ND	0.33	"							
3,3'-Dichlorobenzidine	ND	0.66	"							
Benzo(a)anthracene	ND	0.33	"							
Chrysene	ND	0.33	"							
Bis(2-Ethylhexyl) Phthalate	ND	0.33	"							
Di-n-octyl Phthalate	ND	0.33	"							
Benzo(b)Fluoranthene	ND	0.33	"							
Benzo(k)Fluoranthene	ND	0.33	"							
Benzo(a)Pyrene	ND	0.33	"							
Indeno(1,2,3-cd)Pyrene	ND	0.33	"							
Dibenzo(a,h)anthracene	ND	0.33	"							
Benzo(g,h,i)perylene	ND	0.33	"							
Surrogate: 2-Fluorophenol	*1.108*		"	*1.627*		*68.1*	*41-110*			
Surrogate: 2-Fluorobiphenyl	*1.489*		"	*1.503*		*99.1*	*54-111*			

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41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Blank (1J31639-BLK1)				Prepared: 10/16/03	Analyzed: 10/22/03					
Surrogate: 2,4,6-Tribromophenol	*0.987*		*mg/kg wet*	*1.530*		*64.5*	*67-139*			*S-A*
Surrogate: Phenol-d6	*1.063*		*"*	*1.513*		*70.3*	*50-110*			
Surrogate: Terphenyl-d14	*1.362*		*"*	*1.503*		*90.6*	*50-122*			
Surrogate: Nitrobenzene-d5	*1.153*		*"*	*1.538*		*75.0*	*50-110*			
LCS (1J31639-BS1)				Prepared: 10/16/03	Analyzed: 10/22/03					
Phenol	1.390	0.33	mg/kg wet	1.713		81.1	60-140			
2-Chlorophenol	1.296	0.33	"	1.667		77.7	60-140			
1,4-Dichlorobenzene	1.310	0.33	"	1.680		78.0	60-140			
n-Nitroso-di-n-propylamine	1.258	0.33	"	1.667		75.5	64-113			
(3 & 4)-Methylphenol	1.414	0.33	"	1.660		85.2	60-140			
Nitrobenzene	1.384	0.33	"	1.813		76.3	60-140			
2-Nitrophenol	1.258	0.33	"	1.732		72.6	60-140			
4-Chloro-3-methylphenol	1.324	0.33	"	1.693		78.2	60-140			
Dimethylphthalate	1.630	0.33	"	1.787		91.2	60-140			
2,6-Dinitrotoluene	1.492	0.33	"	1.753		85.1	72-110			
Diethyl Phthalate	1.525	0.33	"	1.780		85.7	72-128			
4,6-Dinitro-2-methylphenol	1.473	1.55	"	1.753		84.0	60-140			
Pentachlorophenol	1.640	0.56	"	1.740		94.3	60-140			
Phenanthrene	1.605	0.33	"	1.667		96.3	60-140			
Anthracene	1.240	0.33	"	1.687		73.5	60-140			
Di-n-butyl Phthalate	1.705	0.33	"	1.773		96.2	60-140			
Fluoranthene	1.482	0.33	"	1.693		87.5	60-140			
Pyrene	1.113	0.33	"	1.740		64.0	60-140			
Surrogate: 2-Fluorophenol	*1.124*		*"*	*1.627*		*69.1*	*41-110*			
Surrogate: 2-Fluorobiphenyl	*1.354*		*"*	*1.503*		*90.1*	*54-111*			
Surrogate: 2,4,6-Tribromophenol	*1.390*		*"*	*1.530*		*90.8*	*67-139*			
Surrogate: Phenol-d6	*1.167*		*"*	*1.513*		*77.1*	*50-110*			
Surrogate: Terphenyl-d14	*1.197*		*"*	*1.503*		*79.6*	*50-122*			
Surrogate: Nitrobenzene-d5	*1.056*		*"*	*1.538*		*68.7*	*50-110*			

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Novi, MI 48375

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Work Order: 13J0432

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Calibration Check (1J31639-CCV1)				Prepared: 10/16/03	Analyzed: 10/22/03					
N-Nitrosodimethylamine	45.34		mg/kg wet	42.00		108	80-120			
Phenol	47.38		"	42.00		113	80-120			
Aniline	41.62		"	42.00		99.1	80-120			
Bis(2-Chloroethyl) Ether	45.58		"	42.00		109	80-120			
2-Chlorophenol	42.44		"	42.00		101	80-120			
1,3-Dichlorobenzene	44.88		"	42.00		107	80-120			
1,4-Dichlorobenzene	43.30		"	42.00		103	80-120			
Benzyl Alcohol	44.81		"	42.00		107	80-120			
1,2-Dichlorobenzene	46.46		"	42.40		110	80-120			
n-Nitroso-di-n-propylamine	45.29		"	42.00		108	80-120			
2-Methylphenol	45.27		"	42.00		108	80-120			
Bis(2-Chloroisopropyl) Ether	43.65		"	42.00		104	80-120			
(3 & 4)-Methylphenol	42.18		"	42.00		100	80-120			
Hexachloroethane	44.04		"	42.00		105	80-120			
Nitrobenzene	45.49		"	42.00		108	80-120			
Isophorone	44.42		"	42.00		106	80-120			
2-Nitrophenol	43.37		"	42.20		103	80-120			
2,4-Dimethylphenol	43.33		"	42.00		103	80-120			
Bis(2-Chloroethoxy) Methane	45.41		"	42.00		108	80-120			
2,4-Dichlorophenol	45.69		"	42.00		109	80-120			
1,2,4-Trichlorobenzene	43.32		"	42.00		103	80-120			
Naphthalene	44.02		"	42.00		105	80-120			
4-Chloroaniline	47.16		"	42.00		112	80-120			
Hexachlorobutadiene	43.81		"	42.00		104	80-120			
4-Chloro-3-methylphenol	44.55		"	42.00		106	80-120			
2-Methylnaphthalene	44.05		"	42.00		105	80-120			
Hexachlorocyclopentadiene	44.05		"	42.40		104	80-120			
2,4,6-Trichlorophenol	44.53		"	42.00		106	80-120			
2,4,5-Trichlorophenol	43.46		"	42.20		103	80-120			
2-Chloronaphthalene	46.58		"	42.00		111	80-120			
2-Nitroaniline	43.78		"	42.10		104	80-120			
Dimethylphthalate	45.98		"	42.00		109	80-120			
Acenaphthylene	48.21		"	42.00		115	80-120			
2,6-Dinitrotoluene	43.82		"	42.00		104	80-120			
3-Nitroaniline	45.73		"	42.00		109	80-120			

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Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Calibration Check (1J31639-CCV1)				Prepared: 10/16/03		Analyzed: 10/22/03				
Acenaphthene	47.06		mg/kg wet	42.00		112	80-120			
2,4-Dinitrophenol	42.84		"	42.00		102	80-120			
Dibenzofuran	46.20		"	42.00		110	80-120			
2,4-Dinitrotoluene	44.80		"	42.00		107	80-120			
4-Nitrophenol	43.94		"	42.20		104	80-120			
Diethyl Phthalate	47.93		"	42.00		114	80-120			
Fluorene	45.90		"	42.00		109	80-120			
4-Chlorophenyl Phenyl Ether	45.09		"	42.00		107	80-120			
4-Nitroaniline	43.92		"	42.00		105	80-120			
4,6-Dinitro-2-methylphenol	39.41		"	42.20		93.4	80-120			
N-Nitrosodiphenylamine	41.00		"	42.10		97.4	80-120			
Azobenzene	40.21		"	42.00		95.7	80-120			
4-Bromophenyl Phenyl Ether	41.09		"	42.00		97.8	80-120			
Hexachlorobenzene	40.22		"	42.00		95.8	80-120			
Pentachlorophenol	39.03		"	42.20		92.5	80-120			
Phenanthrene	43.43		"	42.00		103	80-120			
Anthracene	44.41		"	42.00		106	80-120			
Di-n-butyl Phthalate	46.41		"	42.00		110	80-120			
Fluoranthene	44.66		"	42.00		106	80-120			
Pyrene	37.88		"	42.00		90.2	80-120			
Butyl Benzyl Phthalate	40.85		"	42.00		97.3	80-120			
Benzo(a)anthracene	45.01		"	42.00		107	80-120			
Chrysene	43.57		"	42.00		104	80-120			
Bis(2-Ethylhexyl) Phthalate	39.06		"	42.00		93.0	80-120			
Di-n-octyl Phthalate	39.23		"	42.10		93.2	80-120			
Benzo(b)Fluoranthene	43.47		"	42.00		104	80-120			
Benzo(k)Fluoranthene	39.18		"	42.00		93.3	80-120			
Benzo(a)Pyrene	43.63		"	42.00		104	80-120			
Indeno(1,2,3-cd)Pyrene	45.70		"	42.00		109	80-120			
Dibenzo(a,h)anthracene	43.59		"	42.00		104	80-120			
Benzo(g,h,i)perylene	43.03		"	42.00		102	80-120			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0432

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Matrix Spike (1J31639-MS1)		**Source: 13J0432-02**		Prepared: 10/16/03		Analyzed: 10/22/03				
Phenol	1.171	0.33	mg/kg dry	2.109	ND	55.5	60-140			QM-05
2-Chlorophenol	1.472	0.33	"	2.051	ND	71.8	60-140			
1,4-Dichlorobenzene	1.538	0.33	"	2.068	ND	74.4	60-140			
n-Nitroso-di-n-propylamine	1.221	0.33	"	2.051	ND	59.5	67-110			QM-05
(3 & 4)-Methylphenol	1.016	0.33	"	2.043	ND	49.7	60-140			QM-05
Nitrobenzene	1.810	0.33	"	2.232	ND	81.1	60-140			
2-Nitrophenol	1.680	0.33	"	2.131	ND	78.8	60-140			
4-Chloro-3-methylphenol	1.501	0.33	"	2.084	ND	72.0	60-140			
Dimethylphthalate	1.349	0.33	"	2.199	ND	61.3	60-140			
2,6-Dinitrotoluene	1.556	0.33	"	2.158	ND	72.1	71-113			
Diethyl Phthalate	1.250	0.33	"	2.191	ND	57.1	69-129			QM-05
4,6-Dinitro-2-methylphenol	1.929	1.65	"	2.158	ND	89.4	60-140			
Pentachlorophenol	1.984	0.66	"	2.141	ND	92.7	60-140			
Phenanthrene	2.025	0.33	"	2.051	ND	98.7	60-140			
Anthracene	1.321	0.33	"	2.076	ND	63.6	60-140			
Di-n-butyl Phthalate	1.966	0.33	"	2.182	ND	90.1	60-140			
Fluoranthene	1.827	0.33	"	2.084	ND	87.7	60-140			
Pyrene	1.331	0.33	"	2.141	ND	62.2	34.5-129			
Surrogate: 2-Fluorophenol	*1.255*		"	*2.002*		*62.7*	*41-110*			
Surrogate: 2-Fluorobiphenyl	*1.487*		"	*1.850*		*80.4*	*54-111*			
Surrogate: 2,4,6-Tribromophenol	*1.328*		"	*1.883*		*70.5*	*67-139*			
Surrogate: Phenol-d6	*0.707*		"	*1.862*		*38.0*	*50-110*			*S-(*
Surrogate: Terphenyl-d14	*2.616*		"	*1.850*		*141*	*50-122*			*S-E*
Surrogate: Nitrobenzene-d5	*1.351*		"	*1.893*		*71.4*	*50-110*			
Matrix Spike Dup (1J31639-MSD1)		**Source: 13J0432-02**		Prepared: 10/16/03		Analyzed: 10/23/03				
Phenol	1.622	0.33	mg/kg dry	2.109	ND	76.9	60-140	32.3	40	
2-Chlorophenol	1.558	0.33	"	2.051	ND	76.0	60-140	5.68	40	
1,4-Dichlorobenzene	1.737	0.33	"	2.068	ND	84.0	60-140	12.2	40	
n-Nitroso-di-n-propylamine	1.833	0.33	"	2.051	ND	89.4	67-110	40.1	22	QM-05
(3 & 4)-Methylphenol	1.177	0.33	"	2.043	ND	57.6	60-140	14.7	40	QM-05
Nitrobenzene	1.994	0.33	"	2.232	ND	89.3	60-140	9.67	40	
2-Nitrophenol	1.696	0.33	"	2.131	ND	79.6	60-140	0.948	40	
4-Chloro-3-methylphenol	1.723	0.33	"	2.084	ND	82.7	60-140	13.8	40	
Dimethylphthalate	2.339	0.33	"	2.199	ND	106	60-140	53.7	40	QM-05

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Matrix Spike Dup (1J31639-MSD1)		**Source: 13J0432-02**		Prepared: 10/16/03		Analyzed: 10/23/03				
2,6-Dinitrotoluene	2.178	0.33	mg/kg dry	2.158	ND	101	71-113	33.3	11	QM-05
Diethyl Phthalate	2.531	0.33	"	2.191	ND	116	69-129	67.8	18	QM-05
4,6-Dinitro-2-methylphenol	2.018	1.55	"	2.158	ND	93.5	60-140	4.51	40	
Pentachlorophenol	2.011	0.56	"	2.141	ND	93.9	60-140	1.35	40	
Phenanthrene	2.134	0.33	"	2.051	ND	104	60-140	5.24	40	
Anthracene	1.557	0.33	"	2.076	ND	75.0	60-140	16.4	40	
Di-n-butyl Phthalate	2.408	0.33	"	2.182	ND	110	60-140	20.2	40	
Fluoranthene	1.997	0.33	"	2.084	ND	95.8	60-140	8.89	40	
Pyrene	2.337	0.33	"	2.141	ND	109	34.5-129	54.9	22.9	QM-05
Surrogate: 2-Fluorophenol	*1.198*		"	*2.002*		*59.8*	*41-110*			
Surrogate: 2-Fluorobiphenyl	*2.025*		"	*1.850*		*109*	*54-111*			
Surrogate: 2,4,6-Tribromophenol	*1.547*		"	*1.883*		*82.2*	*67-139*			
Surrogate: Phenol-d6	*1.264*		"	*1.862*		*67.9*	*50-110*			
Surrogate: Terphenyl-dl4	*2.502*		"	*1.850*		*135*	*50-122*			*S-E*
Surrogate: Nitrobenzene-d5	*1.420*		"	*1.893*		*75.0*	*50-110*			
Reference (1J31639-SRM1)				Prepared: 10/16/03		Analyzed: 10/22/03				
Phenol	1.594	0.33	mg/kg wet	1.717		92.8	70-130			
2-Chlorophenol	1.427	0.33	"	1.667		85.6	70-130			
1,4-Dichlorobenzene	1.572	0.33	"	1.683		93.4	70-130			
n-Nitroso-di-n-propylamine	1.463	0.33	"	1.667		87.8	70-130			
(3 & 4)-Methylphenol	1.562	0.33	"	1.660		94.1	70-130			
Nitrobenzene	1.787	0.33	"	1.817		98.3	70-130			
2-Nitrophenol	1.871	0.33	"	1.733		108	70-130			
4-Chloro-3-methylphenol	1.645	0.33	"	1.700		96.8	70-130			
Dimethylphthalate	1.692	0.33	"	1.783		94.9	70-130			
2,6-Dinitrotoluene	1.549	0.33	"	1.750		88.5	70-130			
Diethyl Phthalate	1.677	0.33	"	1.783		94.1	70-130			
4,6-Dinitro-2-methylphenol	1.576	1.65	"	1.750		90.1	70-130			
Pentachlorophenol	1.771	0.66	"	1.733		102	70-130			
Phenanthrene	1.608	0.33	"	1.667		96.5	70-130			
Anthracene	1.582	0.33	"	1.683		94.0	70-130			
Di-n-butyl Phthalate	1.594	0.33	"	1.767		90.2	70-130			
Fluoranthene	1.534	0.33	"	1.700		90.2	70-130			
Pyrene	1.145	0.33	"	1.733		66.1	70-130			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Reference (1J31639-SRM1)				Prepared: 10/16/03		Analyzed: 10/22/03				
Surrogate: 2-Fluorophenol	*1.452*		*mg/kg wet*	*1.627*		*89.2*	*70-130*			
Surrogate: 2-Fluorobiphenyl	*1.615*		*"*	*1.503*		*107*	*70-130*			
Surrogate: 2,4,6-Tribromophenol	*1.559*		*"*	*1.530*		*102*	*70-130*			
Surrogate: Phenol-d6	*1.412*		*"*	*1.513*		*93.3*	*70-130*			
Surrogate: Terphenyl-dl4	*1.144*		*"*	*1.503*		*76.1*	*70-130*			
Surrogate: Nitrobenzene-d5	*1.496*		*"*	*1.538*		*97.3*	*70-130*			

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41551 Eleven Mile Road
Novi, MI 48375

Determination of Polychlorinated Biphenyls (PCB) - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31730 - 3545 NP/OC PFE										
Blank (1J31730-BLK1)				Prepared: 10/17/03		Analyzed: 10/22/03				
Arochlor 1016	ND	0.050	mg/kg wet							
Arochlor 1221	ND	0.050	"							
Arochlor 1232	ND	0.050	"							
Arochlor 1242	ND	0.050	"							
Arochlor 1248	ND	0.050	"							
Arochlor 1254	ND	0.050	"							
Arochlor 1260	ND	0.050	"							
Surrogate: Decachlorobiphenyl	*0.0322*		"	*0.0321*		*100*	*55-130*			
LCS (1J31730-BS1)				Prepared: 10/17/03		Analyzed: 10/23/03				
Arochlor 1016	0.088	0.050	mg/kg wet	0.0933		94.3	60-140			
Arochlor 1260	0.101	0.050	"	0.0933		108	74-141			
Surrogate: Decachlorobiphenyl	*0.0360*		"	*0.0321*		*112*	*55-130*			
Matrix Spike (1J31730-MS1)		**Source: 13J0432-06**		Prepared: 10/17/03		Analyzed: 10/23/03				
Arochlor 1016	0.089	0.050	mg/kg dry	0.118	ND	75.4	60-140			
Arochlor 1260	0.106	0.050	"	0.118	ND	89.8	67-137			
Surrogate: Decachlorobiphenyl	*0.0355*		"	*0.0406*		*87.4*	*55-130*			
Matrix Spike Dup (1J31730-MSD1)		**Source: 13J0432-06**		Prepared: 10/17/03		Analyzed: 10/23/03				
Arochlor 1016	0.099	0.050	mg/kg dry	0.118	ND	83.9	60-140	10.6	30	
Arochlor 1260	0.115	0.050	"	0.118	ND	97.5	67-137	8.14	24	
Surrogate: Decachlorobiphenyl	*0.0382*		"	*0.0406*		*94.1*	*55-130*			
Reference (1J31730-SRM1)				Prepared: 10/17/03		Analyzed: 10/23/03				
Arochlor 1016	0.105	0.050	mg/kg wet	0.0933		113	70-130			
Arochlor 1260	0.105	0.050	"	0.0933		113	70-130			
Surrogate: Decachlorobiphenyl	*0.0347*		"	*0.0321*		*108*	*55-130*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0432

Determination of Total Metals - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31004 - EPA 3050B Solid Dig										
Blank (1J31004-BLK1)				Prepared & Analyzed: 10/10/03						
Barium, total	ND	0.01	mg/kg wet							
Silver, total	ND	0.01	"							
Arsenic, total	ND	0.02	"							
Cadmium, total	ND	0.01	"							
Chromium, total	ND	0.03	"							
Lead, total	ND	0.05	"							
Selenium, total	ND	0.02	"							
LCS (1J31004-BS1)				Prepared & Analyzed: 10/10/03						
Barium, total	1.98	0.01	mg/kg wet	2.00		99.0	90-111			
Silver, total	1.82	0.01	"	2.00		91.0	85-112			
Arsenic, total	1.8	0.02	"	2.00		90.0	85-110			
Cadmium, total	1.9	0.01	"	2.00		95.0	90-110			
Chromium, total	1.91	0.03	"	2.00		95.5	90-110			
Lead, total	1.9	0.05	"	2.00		95.0	80-108			
Selenium, total	1.6	0.02	"	2.00		80.0	66-101			
Calibration Check (1J31004-CCV1)				Prepared & Analyzed: 10/10/03						
Barium, total	1.04		mg/kg wet	1.00		104	85-115			
Silver, total	0.966		"	1.00		96.6	85-115			
Arsenic, total	1.1		"	1.00		110	85-115			
Cadmium, total	1.0		"	1.00		100	85-115			
Chromium, total	1.01		"	1.00		101	85-115			
Lead, total	1.0		"	1.00		100	85-115			
Selenium, total	1.1		"	1.00		110	85-115			
Calibration Check (1J31004-CCV2)				Prepared & Analyzed: 10/10/03						
Barium, total	1.03		mg/kg wet	1.00		103	85-115			
Silver, total	0.967		"	1.00		96.7	85-115			
Arsenic, total	1.1		"	1.00		110	85-115			
Cadmium, total	1.0		"	1.00		100	85-115			
Chromium, total	0.996		"	1.00		99.6	85-115			
Lead, total	1.0		"	1.00		100	85-115			
Selenium, total	1.0		"	1.00		100	85-115			

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Novi, MI 48375

Determination of Total Metals - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31004 - EPA 3050B Solid Dig										
Matrix Spike (1J31004-MS1)		**Source: 13J0432-10**		Prepared & Analyzed: 10/10/03						
Barium, total	335	0.6	mg/kg dry	163	204	80.4	72-120			
Silver, total	125	0.6	"	163	0.8	76.2	65-116			
Arsenic, total	139	1.2	"	163	12.0	77.9	71-115			
Cadmium, total	120	0.6	"	163	0.1	73.6	70-110			
Chromium, total	135	1.8	"	163	11.9	75.5	69-115			
Lead, total	135	3.1	"	163	14.8	73.7	70-110			
Selenium, total	116	1.2	"	163	ND	71.2	66-103			
Matrix Spike Dup (1J31004-MSD1)		**Source: 13J0432-10**		Prepared & Analyzed: 10/10/03						
Barium, total	318	0.6	mg/kg dry	166	204	68.7	72-120	5.21	22	QM-14
Silver, total	136	0.6	"	166	0.8	81.4	65-116	8.43	18	
Arsenic, total	149	1.2	"	166	12.0	82.5	71-115	6.94	12	
Cadmium, total	128	0.6	"	166	0.1	77.0	70-110	6.45	11	
Chromium, total	149	1.9	"	166	11.9	82.6	69-115	9.86	10	
Lead, total	153	3.1	"	166	14.8	83.3	70-110	12.5	16	
Selenium, total	124	1.2	"	166	ND	74.7	66-103	6.67	12	
Post Spike (1J31004-PS1)		**Source: 13J0432-10**		Prepared & Analyzed: 10/10/03						
Barium, total	332	0.6	mg/kg dry	169	204	75.7	66-110			
Silver, total	137	0.6	"	169	0.8	80.6	65-115			
Arsenic, total	145	1.3	"	169	12.0	78.7	72-110			
Cadmium, total	127	0.6	"	169	0.1	75.1	68-110			
Chromium, total	142	1.9	"	169	11.9	77.0	68-110			
Lead, total	143	3.2	"	169	14.8	75.9	70-110			
Selenium, total	119	1.3	"	169	ND	70.4	66-103			
Reference (1J31004-SRM1)				Prepared & Analyzed: 10/10/03						
Barium, total	0.528		mg/kg wet	0.500		106	85-115			
Silver, total	0.507		"	0.500		101	85-115			
Arsenic, total	0.5		"	0.500		100	85-115			
Cadmium, total	0.5		"	0.500		100	85-115			
Chromium, total	0.508		"	0.500		102	85-115			
Lead, total	0.5		"	0.500		100	85-115			
Selenium, total	0.5		"	0.500		100	85-115			

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Novi, MI 48375

Work Order: 13J0432

October 23, 2003

Determination of Total Metals - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31031 - EPA 7471A Hg Solid										
Blank (1J31031-BLK1)				Prepared: 10/10/03		Analyzed: 10/13/03				
Mercury, total	ND	0.0005	mg/kg wet							
LCS (1J31031-BS1)				Prepared: 10/10/03		Analyzed: 10/13/03				
Mercury, total	0.0021	0.0005	mg/kg wet	0.00200		105	79-118			
LCS (1J31031-BS2)				Prepared: 10/10/03		Analyzed: 10/13/03				
Mercury, total	0.0021	0.0005	mg/kg wet	0.00200		105	79-118			
LCS (1J31031-BS3)				Prepared: 10/10/03		Analyzed: 10/17/03				
Mercury, total	2.27	0.50	mg/kg wet	2.00		114	79-118			
LCS (1J31031-BS4)				Prepared: 10/10/03		Analyzed: 10/17/03				
Mercury, total	2.33	0.50	mg/kg wet	2.00		116	79-118			
Matrix Spike (1J31031-MS1)		**Source: 13J0432-12**		Prepared: 10/10/03		Analyzed: 10/13/03				
Mercury, total	1.39	0.45	mg/kg dry	1.17	0.29	94.0	64-138			
Matrix Spike Dup (1J31031-MSD1)		**Source: 13J0432-12**		Prepared: 10/10/03		Analyzed: 10/13/03				
Mercury, total	1.60	0.53	mg/kg dry	1.35	0.29	97.0	64-138	14.0	27	

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

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Novi, MI 48375

Work Order: 13J0432

October 23, 2003
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Notes and Definitions

D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
QM-05	The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-14	The spike recovery was outside acceptance limits for the MS and/or MSD. However, all other QC was acceptable.
QR-06	The reference standard was outside of established control limits.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
S-AC	Acid surrogate recovery outside of control limits. The data was accepted based on valid recovery of remaining two acid surrogates.
S-BN	Base/Neutral surrogate recovery outside of control limits. The data was accepted based on valid recovery of remaining two base/neutral surrogates.

End of Report

Jeffrey King

Keystone Laboratories, Inc.
Jeffrey King, Ph.D.
Laboratory Director

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Cooler # 563

Keystone Laboratories, Inc. Cooler/ Sample Receipt Form

Client: MWH **Work Order:** _____ **Date Received:** 10/9/03 **Initials:** [illegible]

Delivered By: UPS/ FedX/ AirBrn Pry Exp/ Mail/ Walk-in/ Courier / Other:_____ **Air Bill Number:** _____

Type of packing material: Bubble/ Foam/ Paper/ Peanuts/ Vermiculite/ NA/ Other plastic bag

Custody Seal: ☒ Present ☐ Absent ☐ Broken Seal No. _____ **COC signed and dated:** Yes / No

Samples cooled by: Ice/ Ice Packs/ NA/ Other_____ **Cooler Temperature (includes correction factor):** .7

Sample Receipt Discrepancies: ☐ No ☒ Yes (if Yes, see detail below)

☐ Chain of Custody not present ☐ Information obtained from PO/ letter received with samples	☒ Broken or leaking containers: On jar for SB-1-0-8 was broken.
☐ Container Problems: ☐ Label Absent ☐ Incorrect Containers for tests indicated ☐ Insufficient amount of sample for tests indicated	☐ Sample listed on COC not received:
☐ COC incomplete ☐ COC missing time sampled, time obtained from sample container. ☐ COC missing date sampled, date obtained from sample container ☐ Sample excluded from COC: _____	☐ Air bubbles in VOA vials: _____ ☐ Sample description on container label different from COC: _____

Detailed Description/comments: _____

Client contacted regarding cooler/sample receipt conditions: Yes / No Contacted by [illegible] Date/Time: 10/9/03 12:40

Who was contacted: Diane Remarks: Left message on voice mail about the broken jar.

Revision 1, 8/03
Keystone Laboratories, Inc.

Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Accreditations:
Iowa DNR: 095
New Jersey DEP: IA001
Kansas DHE: E-10287

ANALYTICAL REPORT

October 23, 2003

Work Order: 13J0503

Report To

Diane Krueger
Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order Information

Date Received: 10/10/2003 11:35AM
Collector: Diane Krueger
Phone: (248) 344-0205
PO Number:

Project : Jefferson Barracks ANG
Project Number: Jefferson Barracks ANG

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-01 SB-5-0-4				Matrix:Soil		Collected: 10/09/03 09:00	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Acetone	**0.107 mg/kg dry**	**0.063**	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Carbon Disulfide	<0.006 mg/kg dry	0.006	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Methylene Chloride	<0.063 mg/kg dry	0.063	1J31519	EPA 8260B	TVK	10/11/03 8:05	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Methyl-t-butyl Ether (MTBE)	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/11/03 8:05	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
2-Butanone (MEK)	**0.018 mg/kg dry**	**0.006**	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
4-Methyl-2-pentanone (MIBK)	<0.006 mg/kg dry	0.006	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Toluene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Tetrachloroethylene	**0.043 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/11/03 8:05	
2-Hexanone (MBK)	<0.006 mg/kg dry	0.006	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-01 SB-5-0-4				Matrix:Soil		Collected: 10/09/03 09:00	
Determination of Volatile Organic Compounds							
Xylenes, total	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:05	
Surrogate: Dibromofluoromethane	*107 %*			*68-136*	TVK	10/11/03 8:05	
Surrogate: 1,2-Dichloroethane-d4	*104 %*			*66-143*	TVK	10/11/03 8:05	
Surrogate: Toluene-d8	*105 %*			*72-131*	TVK	10/11/03 8:05	
Surrogate: 4-Bromofluorobenzene	*94.9 %*			*72-130*	TVK	10/11/03 8:05	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J32026	EPA 8015	JRF	10/21/03 19:32	
Surrogate: Chlorobenzene	*109 %*			*62.1-122*	JRF	10/21/03 19:32	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 2:54	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 2:54	
TEH, as waste oil	**12 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/21/03 2:54	
Total Extractable Hydrocarbons	**12 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/21/03 2:54	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-01 SB-5-0-4				Matrix:Soil		Collected: 10/09/03 09:00	
Determination of Base/Neutral/Acid Extractable Compounds							
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 20:33	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 20:33	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Phenanthrene	**0.63 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Fluoranthene	**0.70 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Pyrene	**0.53 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-01 SB-5-0-4				Matrix:Soil		Collected: 10/09/03 09:00	
Determination of Base/Neutral/Acid Extractable Compounds							
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 20:33	
Surrogate: 2-Fluorophenol	*69.0 %*			*41-110*	EPP	10/22/03 20:33	
Surrogate: 2-Fluorobiphenyl	*91.4 %*			*54-111*	EPP	10/22/03 20:33	
Surrogate: 2,4,6-Tribromophenol	*61.7 %*			*67-139*	EPP	10/22/03 20:33	S-AC
Surrogate: Phenol-d6	*59.7 %*			*50-110*	EPP	10/22/03 20:33	
Surrogate: Terphenyl-dl4	*100 %*			*50-122*	EPP	10/22/03 20:33	
Surrogate: Nitrobenzene-d5	*84.7 %*			*50-110*	EPP	10/22/03 20:33	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 0:49	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 0:49	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 0:49	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 0:49	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 0:49	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 0:49	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 0:49	
Surrogate: Decachlorobiphenyl	*95.1 %*			*55-130*	EPP	10/23/03 0:49	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**81.9 %**	**0.1**	1J31033	% calculation	SNT	10/10/03 14:05	
Determination of Total Metals							
Barium, total	**168 mg/kg dry**	**0.6**	1J31506	EPA 6010B	RVV	10/15/03 14:16	
Silver, total	**0.9 mg/kg dry**	**0.6**	1J31506	EPA 6010B	RVV	10/15/03 14:16	
Arsenic, total	**7.1 mg/kg dry**	**1.2**	1J31506	EPA 6010B	RVV	10/15/03 14:16	
Cadmium, total	<0.6 mg/kg dry	0.6	1J31506	EPA 6010B	RVV	10/15/03 14:16	
Chromium, total	**13.4 mg/kg dry**	**1.8**	1J31506	EPA 6010B	RVV	10/15/03 14:16	
Lead, total	**26.0 mg/kg dry**	**3.0**	1J31506	EPA 6010B	RVV	10/15/03 14:16	
Mercury, total	<0.34 mg/kg dry	0.34	1J31422	EPA 7471A	MAQ	10/15/03 14:00	
Selenium, total	<1.2 mg/kg dry	1.2	1J31506	EPA 6010B	RVV	10/15/03 14:16	
13J0503-02 SB-5-8-10				Matrix:Soil		Collected: 10/09/03 09:10	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Acetone	<0.071 mg/kg dry	0.071	1J31519	EPA 8260B	TVK	10/11/03 8:44	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-02 SB-5-8-10				Matrix:Soil		Collected: 10/09/03 09:10	
Determination of Volatile Organic Compounds							
Carbon Disulfide	**0.007 mg/kg dry**	**0.007**	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Methylene Chloride	<0.071 mg/kg dry	0.071	1J31519	EPA 8260B	TVK	10/11/03 8:44	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Methyl-t-butyl Ether (MTBE)	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/11/03 8:44	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
2-Butanone (MEK)	**0.007 mg/kg dry**	**0.007**	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
4-Methyl-2-pentanone (MIBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Toluene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
2-Hexanone (MBK)	<0.007 mg/kg dry	0.007	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Xylenes, total	<0.003 mg/kg dry	0.003	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 8:44	
Surrogate: Dibromofluoromethane	*106 %*			*68-136*	TVK	10/11/03 8:44	
Surrogate: 1,2-Dichloroethane-d4	*105 %*			*66-143*	TVK	10/11/03 8:44	
Surrogate: Toluene-d8	*105 %*			*72-131*	TVK	10/11/03 8:44	
Surrogate: 4-Bromofluorobenzene	*99.6 %*			*72-130*	TVK	10/11/03 8:44	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J32026	EPA 8015	JRF	10/21/03 20:14	
Surrogate: Chlorobenzene	*104 %*			*62.1-122*	JRF	10/21/03 20:14	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 3:43	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-02 SB-5-8-10				Matrix:Soil		Collected: 10/09/03 09:10	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 3:43	
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 3:43	
Total Extractable Hydrocarbons	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 3:43	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-02 SB-5-8-10				Matrix:Soil		Collected: 10/09/03 09:10	
Determination of Base/Neutral/Acid Extractable Compounds							
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 21:08	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 21:08	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:08	
Surrogate: 2-Fluorophenol	*52.8 %*			*41-110*	EPP	10/22/03 21:08	
Surrogate: 2-Fluorobiphenyl	*99.1 %*			*54-111*	EPP	10/22/03 21:08	
Surrogate: 2,4,6-Tribromophenol	*73.6 %*			*67-139*	EPP	10/22/03 21:08	
Surrogate: Phenol-d6	*54.0 %*			*50-110*	EPP	10/22/03 21:08	
Surrogate: Terphenyl-d14	*116 %*			*50-122*	EPP	10/22/03 21:08	
Surrogate: Nitrobenzene-d5	*85.4 %*			*50-110*	EPP	10/22/03 21:08	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:19	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:19	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-02 SB-5-8-10				Matrix:Soil		Collected: 10/09/03 09:10	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:19	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:19	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:19	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:19	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:19	
Surrogate: Decachlorobiphenyl	*105 %*			*55-130*	EPP	10/23/03 1:19	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**78.8 %**	**0.1**	1J31033	% calculation	SNT	10/10/03 14:05	
Determination of Total Metals							
Barium, total	**173 mg/kg dry**	**0.7**	1J31506	EPA 6010B	RVV	10/15/03 14:21	
Silver, total	**0.8 mg/kg dry**	**0.7**	1J31506	EPA 6010B	RVV	10/15/03 14:21	
Arsenic, total	**11.2 mg/kg dry**	**1.3**	1J31506	EPA 6010B	RVV	10/15/03 14:21	
Cadmium, total	<0.7 mg/kg dry	0.7	1J31506	EPA 6010B	RVV	10/15/03 14:21	
Chromium, total	**10.3 mg/kg dry**	**2.0**	1J31506	EPA 6010B	RVV	10/15/03 14:21	
Lead, total	**11.4 mg/kg dry**	**3.3**	1J31506	EPA 6010B	RVV	10/15/03 14:21	
Mercury, total	<0.23 mg/kg dry	0.23	1J31422	EPA 7471A	LKM	10/17/03 16:28	
Selenium, total	<1.3 mg/kg dry	1.3	1J31506	EPA 6010B	RVV	10/15/03 14:21	
13J0503-03 SB-4-0-8				Matrix:Soil		Collected: 10/09/03 09:30	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Acetone	**0.147 mg/kg dry**	**0.050**	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Carbon Disulfide	**0.016 mg/kg dry**	**0.005**	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Methylene Chloride	<0.050 mg/kg dry	0.050	1J31519	EPA 8260B	TVK	10/11/03 9:23	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Methyl-t-butyl Ether (MTBE)	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/11/03 9:23	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
2-Butanone (MEK)	**0.021 mg/kg dry**	**0.005**	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-03 SB-4-0-8				Matrix:Soil		Collected: 10/09/03 09:30	
Determination of Volatile Organic Compounds							
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
4-Methyl-2-pentanone (MIBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Toluene	**0.002 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/11/03 9:23	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
2-Hexanone (MBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Xylenes, total	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 9:23	
Surrogate: Dibromofluoromethane	*107 %*			*68-136*	TVK	10/11/03 9:23	
Surrogate: 1,2-Dichloroethane-d4	*105 %*			*66-143*	TVK	10/11/03 9:23	
Surrogate: Toluene-d8	*104 %*			*72-131*	TVK	10/11/03 9:23	
Surrogate: 4-Bromofluorobenzene	*90.3 %*			*72-130*	TVK	10/11/03 9:23	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J32026	EPA 8015	JRF	10/21/03 20:56	
Surrogate: Chlorobenzene	*107 %*			*62.1-122*	JRF	10/21/03 20:56	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 4:31	
TEH, as #2 diesel fuel	**13 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/21/03 4:31	D-06
TEH, as waste oil	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 4:31	
Total Extractable Hydrocarbons	**13 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/21/03 4:31	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-03 SB-4-0-8				Matrix:Soil		Collected: 10/09/03 09:30	
Determination of Base/Neutral/Acid Extractable Compounds							
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 21:44	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 21:44	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Phenanthrene	**0.34 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 21:44	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-03 SB-4-0-8				Matrix:Soil		Collected: 10/09/03 09:30	
Determination of Base/Neutral/Acid Extractable Compounds							
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Fluoranthene	**0.43 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Pyrene	**0.35 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 21:44	
Surrogate: 2-Fluorophenol	*52.6 %*			*41-110*	EPP	10/22/03 21:44	
Surrogate: 2-Fluorobiphenyl	*101 %*			*54-111*	EPP	10/22/03 21:44	
Surrogate: 2,4,6-Tribromophenol	*54.3 %*			*67-139*	EPP	10/22/03 21:44	S-AC
Surrogate: Phenol-d6	*52.6 %*			*50-110*	EPP	10/22/03 21:44	
Surrogate: Terphenyl-d14	*107 %*			*50-122*	EPP	10/22/03 21:44	
Surrogate: Nitrobenzene-d5	*79.1 %*			*50-110*	EPP	10/22/03 21:44	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:49	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:49	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:49	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:49	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:49	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:49	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 1:49	
Surrogate: Decachlorobiphenyl	*82.1 %*			*55-130*	EPP	10/23/03 1:49	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**84.3 %**	**0.1**	1J31033	% calculation	SNT	10/10/03 14:05	
Determination of Total Metals							
Barium, total	**158 mg/kg dry**	**0.6**	1J31506	EPA 6010B	RVV	10/15/03 14:25	
Silver, total	**0.7 mg/kg dry**	**0.6**	1J31506	EPA 6010B	RVV	10/15/03 14:25	
Arsenic, total	**7.9 mg/kg dry**	**1.2**	1J31506	EPA 6010B	RVV	10/15/03 14:25	
Cadmium, total	**0.6 mg/kg dry**	**0.6**	1J31506	EPA 6010B	RVV	10/15/03 14:25	
Chromium, total	**14.3 mg/kg dry**	**1.8**	1J31506	EPA 6010B	RVV	10/15/03 14:25	
Lead, total	**90.7 mg/kg dry**	**3.0**	1J31506	EPA 6010B	RVV	10/15/03 14:25	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-03 SB-4-0-8				Matrix:Soil		Collected: 10/09/03 09:30	
Determination of Total Metals							
Mercury, total	<0.26 mg/kg dry	0.26	1J31422	EPA 7471A	LKM	10/17/03 16:28	
Selenium, total	<1.2 mg/kg dry	1.2	1J31506	EPA 6010B	RVV	10/15/03 14:25	
13J0503-04 SB-4-8-10				Matrix:Soil		Collected: 10/09/03 10:00	
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Acetone	<0.050 mg/kg dry	0.050	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Carbon Disulfide	**0.005 mg/kg dry**	**0.005**	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Methylene Chloride	<0.050 mg/kg dry	0.050	1J31519	EPA 8260B	TVK	10/11/03 10:02	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Methyl-t-butyl Ether (MTBE)	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/11/03 10:02	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
2-Butanone (MEK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
4-Methyl-2-pentanone (MIBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Toluene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
2-Hexanone (MBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Xylenes, total	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-04 SB-4-8-10				Matrix:Soil		Collected: 10/09/03 10:00	
Determination of Volatile Organic Compounds							
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:02	
Surrogate: Dibromofluoromethane	*107 %*			*68-136*	TVK	10/11/03 10:02	
Surrogate: 1,2-Dichloroethane-d4	*105 %*			*66-143*	TVK	10/11/03 10:02	
Surrogate: Toluene-d8	*106 %*			*72-131*	TVK	10/11/03 10:02	
Surrogate: 4-Bromofluorobenzene	*101 %*			*72-130*	TVK	10/11/03 10:02	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J32026	EPA 8015	JRF	10/21/03 21:38	
Surrogate: Chlorobenzene	*107 %*			*62.1-122*	JRF	10/21/03 21:38	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 5:20	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 5:20	
TEH, as waste oil	**9 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/21/03 5:20	
Total Extractable Hydrocarbons	**9 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/21/03 5:20	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-04 SB-4-8-10				Matrix:Soil		Collected: 10/09/03 10:00	
Determination of Base/Neutral/Acid Extractable Compounds							
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 22:20	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 22:20	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Phenanthrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Benzo(a)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Chrysene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-04 SB-4-8-10				Matrix:Soil	Collected: 10/09/03 10:00		
Determination of Base/Neutral/Acid Extractable Compounds							
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:20	
Surrogate: 2-Fluorophenol	*54.5 %*			*41-110*	EPP	10/22/03 22:20	
Surrogate: 2-Fluorobiphenyl	*110 %*			*54-111*	EPP	10/22/03 22:20	
Surrogate: 2,4,6-Tribromophenol	*66.7 %*			*67-139*	EPP	10/22/03 22:20	S-AC
Surrogate: Phenol-d6	*52.8 %*			*50-110*	EPP	10/22/03 22:20	
Surrogate: Terphenyl-dl4	*108 %*			*50-122*	EPP	10/22/03 22:20	
Surrogate: Nitrobenzene-d5	*75.0 %*			*50-110*	EPP	10/22/03 22:20	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:20	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:20	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:20	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:20	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:20	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:20	
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:20	
Surrogate: Decachlorobiphenyl	*92.5 %*			*55-130*	EPP	10/23/03 2:20	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**77.3 %**	**0.1**	1J31033	% calculation	SNT	10/10/03 14:05	
Determination of Total Metals							
Barium, total	**189 mg/kg dry**	**0.6**	1J31506	EPA 6010B	RVV	10/15/03 14:52	
Silver, total	**0.9 mg/kg dry**	**0.6**	1J31506	EPA 6010B	RVV	10/15/03 14:52	
Arsenic, total	**11.5 mg/kg dry**	**1.2**	1J31506	EPA 6010B	RVV	10/15/03 14:52	
Cadmium, total	**0.6 mg/kg dry**	**0.6**	1J31506	EPA 6010B	RVV	10/15/03 14:52	
Chromium, total	**9.7 mg/kg dry**	**1.9**	1J31506	EPA 6010B	RVV	10/15/03 14:52	
Lead, total	**11.2 mg/kg dry**	**3.1**	1J31506	EPA 6010B	RVV	10/15/03 14:52	
Mercury, total	<0.28 mg/kg dry	0.28	1J31422	EPA 7471A	LKM	10/17/03 16:28	
Selenium, total	<1.2 mg/kg dry	1.2	1J31506	EPA 6010B	RVV	10/15/03 14:52	
13J0503-05 DUP-2				Matrix:Soil	Collected: 10/09/03 08:00		
Determination of Volatile Organic Compounds							
Chloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Vinyl Chloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Bromomethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Chloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
1,1-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Acetone	**0.102 mg/kg dry**	**0.050**	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Carbon Disulfide	**0.016 mg/kg dry**	**0.005**	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Methylene Chloride	<0.050 mg/kg dry	0.050	1J31519	EPA 8260B	TVK	10/11/03 10:41	
trans-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-05 DUP-2				Matrix:Soil		Collected: 10/09/03 08:00	
Determination of Volatile Organic Compounds							
Methyl-t-butyl Ether (MTBE)	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/11/03 10:41	
1,1-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
cis-1,2-Dichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
2-Butanone (MEK)	**0.015 mg/kg dry**	**0.005**	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Chloroform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
1,1,1-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Carbon Tetrachloride	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Benzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
1,2-Dichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Trichloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
1,2-Dichloropropane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Bromodichloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
cis-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
4-Methyl-2-pentanone (MIBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Toluene	**0.002 mg/kg dry**	**0.001**	1J31519	EPA 8260B	TVK	10/11/03 10:41	
trans-1,3-Dichloropropene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
1,1,2-Trichloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Tetrachloroethylene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
2-Hexanone (MBK)	<0.005 mg/kg dry	0.005	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Dibromochloromethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Chlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Ethylbenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Xylenes, total	<0.002 mg/kg dry	0.002	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Bromoform	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
1,1,2,2-Tetrachloroethane	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
1,3-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
1,4-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
1,2-Dichlorobenzene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Naphthalene	<0.001 mg/kg dry	0.001	1J31519	EPA 8260B	TVK	10/11/03 10:41	
Surrogate: Dibromofluoromethane	*108 %*			*68-136*	TVK	10/11/03 10:41	
Surrogate: 1,2-Dichloroethane-d4	*106 %*			*66-143*	TVK	10/11/03 10:41	
Surrogate: Toluene-d8	*105 %*			*72-131*	TVK	10/11/03 10:41	
Surrogate: 4-Bromofluorobenzene	*95.0 %*			*72-130*	TVK	10/11/03 10:41	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<5.0 mg/kg	5.0	1J32026	EPA 8015	JRF	10/21/03 22:19	
Surrogate: Chlorobenzene	*107 %*			*62.1-122*	JRF	10/21/03 22:19	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	**11 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/21/03 6:09	
TEH, as #2 diesel fuel	<5 mg/kg	5	1J31428	EPA 8015	SMG	10/21/03 6:09	
TEH, as waste oil	**20 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/21/03 6:09	D-06
Total Extractable Hydrocarbons	**31 mg/kg**	**5**	1J31428	EPA 8015	SMG	10/21/03 6:09	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-05 DUP-2				Matrix:Soil		Collected: 10/09/03 08:00	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Phenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Aniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Bis(2-Chloroethyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2-Chlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
1,3-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
1,4-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Benzyl Alcohol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
1,2-Dichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
n-Nitroso-di-n-propylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Bis(2-Chloroisopropyl) Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
(3 & 4)-Methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Hexachloroethane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Nitrobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Isophorone	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2-Nitrophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2,4-Dimethylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Bis(2-Chloroethoxy) Methane	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2,4-Dichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
1,2,4-Trichlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Naphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
4-Chloroaniline	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Hexachlorobutadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
4-Chloro-3-methylphenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2-Methylnaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Hexachlorocyclopentadiene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2,4,6-Trichlorophenol	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2,4,5-Trichlorophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2-Chloronaphthalene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Dimethylphthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Acenaphthylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2,6-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
3-Nitroaniline	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Acenaphthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2,4-Dinitrophenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Dibenzofuran	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
2,4-Dinitrotoluene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
4-Nitrophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 22:56	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-05 DUP-2				Matrix:Soil		Collected: 10/09/03 08:00	
Determination of Base/Neutral/Acid Extractable Compounds							
Diethyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Fluorene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
4-Chlorophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
4-Nitroaniline	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 22:56	
4,6-Dinitro-2-methylphenol	<1.65 mg/kg dry	1.65	1J31639	EPA 8270C	EPP	10/22/03 22:56	
N-Nitrosodiphenylamine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Azobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
4-Bromophenyl Phenyl Ether	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Hexachlorobenzene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Pentachlorophenol	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Phenanthrene	**1.70 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Di-n-butyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Fluoranthene	**1.76 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Benzidine	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Pyrene	**1.37 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Butyl Benzyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
3,3'-Dichlorobenzidine	<0.66 mg/kg dry	0.66	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Benzo(a)anthracene	**0.60 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Chrysene	**0.63 mg/kg dry**	**0.33**	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Bis(2-Ethylhexyl) Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Di-n-octyl Phthalate	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Benzo(b)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Benzo(k)Fluoranthene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Benzo(a)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Indeno(1,2,3-cd)Pyrene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Dibenzo(a,h)anthracene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Benzo(g,h,i)perylene	<0.33 mg/kg dry	0.33	1J31639	EPA 8270C	EPP	10/22/03 22:56	
Surrogate: 2-Fluorophenol	*54.7 %*			*41-110*	EPP	10/22/03 22:56	
Surrogate: 2-Fluorobiphenyl	*129 %*			*54-111*	EPP	10/22/03 22:56	S-04
Surrogate: 2,4,6-Tribromophenol	*64.2 %*			*67-139*	EPP	10/22/03 22:56	S-04
Surrogate: Phenol-d6	*49.0 %*			*50-110*	EPP	10/22/03 22:56	S-04
Surrogate: Terphenyl-d14	*122 %*			*50-122*	EPP	10/22/03 22:56	
Surrogate: Nitrobenzene-d5	*85.9 %*			*50-110*	EPP	10/22/03 22:56	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:50	
Arochlor 1221	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:50	
Arochlor 1232	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:50	
Arochlor 1242	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:50	
Arochlor 1248	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:50	
Arochlor 1254	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:50	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 23, 2003

Work Order: 13J0503

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0503-05 DUP-2				Matrix:Soil		Collected: 10/09/03 08:00	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1260	<0.050 mg/kg dry	0.050	1J31730	EPA 8082	EPP	10/23/03 2:50	
Surrogate: Decachlorobiphenyl	*96.7 %*			*55-130*	EPP	10/23/03 2:50	
Determination of Physical/Conventional Chemistry Parameters							
% Solids	**87.1 %**	**0.1**	1J31033	% calculation	SNT	10/10/03 14:05	
Determination of Total Metals							
Barium, total	**151 mg/kg dry**	**0.6**	1J31506	EPA 6010B	RVV	10/15/03 14:56	
Silver, total	**0.7 mg/kg dry**	**0.6**	1J31506	EPA 6010B	RVV	10/15/03 14:56	
Arsenic, total	**8.7 mg/kg dry**	**1.3**	1J31506	EPA 6010B	RVV	10/15/03 14:56	
Cadmium, total	**0.6 mg/kg dry**	**0.6**	1J31506	EPA 6010B	RVV	10/15/03 14:56	
Chromium, total	**18.9 mg/kg dry**	**1.9**	1J31506	EPA 6010B	RVV	10/15/03 14:56	
Lead, total	**119 mg/kg dry**	**3.2**	1J31506	EPA 6010B	RVV	10/15/03 14:56	
Mercury, total	<0.24 mg/kg dry	0.24	1J31422	EPA 7471A	LKM	10/17/03 16:28	
Selenium, total	<1.3 mg/kg dry	1.3	1J31506	EPA 6010B	RVV	10/15/03 14:56	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

October 23, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31519 - EPA 5030B										
Blank (1J31519-BLK1)				Prepared & Analyzed: 10/10/03						
Chloromethane	ND	0.001	mg/kg wet							
Vinyl Chloride	ND	0.001	"							
Bromomethane	ND	0.001	"							
Chloroethane	ND	0.001	"							
1,1-Dichloroethylene	ND	0.001	"							
Acetone	ND	0.050	"							
Carbon Disulfide	ND	0.005	"							
Methylene Chloride	ND	0.050	"							
trans-1,2-Dichloroethylene	ND	0.001	"							
Methyl-t-butyl Ether (MTBE)	ND	0.002	"							
1,1-Dichloroethane	ND	0.001	"							
cis-1,2-Dichloroethylene	ND	0.001	"							
2-Butanone (MEK)	ND	0.005	"							
Chloroform	ND	0.001	"							
1,1,1-Trichloroethane	ND	0.001	"							
Carbon Tetrachloride	ND	0.001	"							
Benzene	ND	0.001	"							
1,2-Dichloroethane	ND	0.001	"							
Trichloroethylene	ND	0.001	"							
1,2-Dichloropropane	ND	0.001	"							
Bromodichloromethane	ND	0.001	"							
cis-1,3-Dichloropropene	ND	0.001	"							
4-Methyl-2-pentanone (MIBK)	ND	0.005	"							
Toluene	ND	0.001	"							
trans-1,3-Dichloropropene	ND	0.001	"							
1,1,2-Trichloroethane	ND	0.001	"							
Tetrachloroethylene	ND	0.001	"							
2-Hexanone (MBK)	ND	0.005	"							
Dibromochloromethane	ND	0.001	"							
Chlorobenzene	ND	0.001	"							
Ethylbenzene	ND	0.001	"							
Xylenes, total	ND	0.002	"							
Bromoform	ND	0.001	"							
1,1,2,2-Tetrachloroethane	ND	0.001	"							
1,3-Dichlorobenzene	ND	0.001	"							

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

October 23, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31519 - EPA 5030B										
Blank (1J31519-BLK1)				Prepared & Analyzed: 10/10/03						
1,4-Dichlorobenzene	ND	0.001	mg/kg wet							
1,2-Dichlorobenzene	ND	0.001	"							
Naphthalene	ND	0.001	"							
Surrogate: Dibromofluoromethane	*50.00*		"	*50.00*		*100*	*68-136*			
Surrogate: 1,2-Dichloroethane-d4	*52.13*		"	*50.00*		*104*	*66-143*			
Surrogate: Toluene-d8	*52.42*		"	*50.20*		*104*	*72-131*			
Surrogate: 4-Bromofluorobenzene	*51.16*		"	*50.00*		*102*	*72-130*			
LCS (1J31519-BS1)				Prepared & Analyzed: 10/10/03						
Chloromethane	0.1187	0.001	mg/kg wet	0.1000		119	70-130			
Vinyl Chloride	0.0975	0.001	"	0.1000		97.5	70-130			
Bromomethane	0.1063	0.001	"	0.1000		106	70-130			
Chloroethane	0.0881	0.001	"	0.1000		88.1	70-130			
1,1-Dichloroethylene	0.0465	0.001	"	0.0500		93.0	70-130			
Acetone	0.2393	0.050	"	0.2320		103	70-130			
Carbon Disulfide	0.2133	0.005	"	0.2120		101	70-130			
Methylene Chloride	0.0515	0.050	"	0.0500		103	70-130			
trans-1,2-Dichloroethylene	0.0454	0.001	"	0.0500		90.8	70-130			
Methyl-t-butyl Ether (MTBE)	0.1988	0.002	"	0.1900		105	66-130			
1,1-Dichloroethane	0.0454	0.001	"	0.0500		90.8	70-130			
cis-1,2-Dichloroethylene	0.0456	0.001	"	0.0500		91.2	70-130			
2-Butanone (MEK)	0.2516	0.005	"	0.2340		108	70-130			
Chloroform	0.0455	0.001	"	0.0500		91.0	70-130			
1,1,1-Trichloroethane	0.0450	0.001	"	0.0500		90.0	70-130			
Carbon Tetrachloride	0.0453	0.001	"	0.0500		90.6	70-130			
Benzene	0.0455	0.001	"	0.0500		91.0	66-136			
1,2-Dichloroethane	0.0463	0.001	"	0.0500		92.6	69-135			
Trichloroethylene	0.0490	0.001	"	0.0500		98.0	70-130			
1,2-Dichloropropane	0.0455	0.001	"	0.0500		91.0	70-130			
Bromodichloromethane	0.0460	0.001	"	0.0500		92.0	70-130			
cis-1,3-Dichloropropene	0.0447	0.001	"	0.0500		89.4	70-130			
4-Methyl-2-pentanone (MIBK)	0.2338	0.005	"	0.2180		107	70-130			
Toluene	0.0443	0.001	"	0.0500		88.6	69-130			
trans-1,3-Dichloropropene	0.0447	0.001	"	0.0500		89.4	70-130			
1,1,2-Trichloroethane	0.0464	0.001	"	0.0500		92.8	70-130			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

October 23, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31519 - EPA 5030B										
LCS (1J31519-BS1)				Prepared & Analyzed: 10/10/03						
Tetrachloroethylene	0.0446	0.001	mg/kg wet	0.0500		89.2	70-130			
2-Hexanone (MBK)	0.2378	0.005	"	0.2260		105	70-130			
Dibromochloromethane	0.0486	0.001	"	0.0500		97.2	70-130			
Chlorobenzene	0.0460	0.001	"	0.0500		92.0	70-130			
Ethylbenzene	0.0449	0.001	"	0.0500		89.8	67-133			
Xylenes, total	0.1351	0.002	"	0.1500		90.1	69-132			
Bromoform	0.0485	0.001	"	0.0500		97.0	70-130			
1,1,2,2-Tetrachloroethane	0.0413	0.001	"	0.0500		82.6	70-130			
1,3-Dichlorobenzene	0.0447	0.001	"	0.0500		89.4	70-130			
1,4-Dichlorobenzene	0.0447	0.001	"	0.0500		89.4	70-130			
1,2-Dichlorobenzene	0.0453	0.001	"	0.0500		90.6	70-130			
Naphthalene	0.0353	0.001	"	0.0500		70.6	64-123			
Surrogate: Dibromofluoromethane	*48.40*		"	*50.00*		*96.8*	*68-136*			
Surrogate: 1,2-Dichloroethane-d4	*50.69*		"	*50.00*		*101*	*66-143*			
Surrogate: Toluene-d8	*50.22*		"	*50.20*		*100*	*72-131*			
Surrogate: 4-Bromofluorobenzene	*51.00*		"	*50.00*		*102*	*72-130*			
Calibration Check (1J31519-CCV1)				Prepared & Analyzed: 10/10/03						
Chloromethane	0.1282	0.001	mg/kg wet	0.1000		128	70-130			
Vinyl Chloride	0.0977	0.001	"	0.1000		97.7	70-130			
Bromomethane	0.1026	0.001	"	0.1000		103	70-130			
Chloroethane	0.0890	0.001	"	0.1000		89.0	70-130			
1,1-Dichloroethylene	0.0493	0.001	"	0.0500		98.6	70-130			
Acetone	0.2245	0.050	"	0.2320		96.8	70-130			
Carbon Disulfide	0.2063	0.005	"	0.2120		97.3	70-130			
Methylene Chloride	0.0528	0.050	"	0.0500		106	70-130			
trans-1,2-Dichloroethylene	0.0493	0.001	"	0.0500		98.6	70-130			
Methyl-t-butyl Ether (MTBE)	0.1912	0.002	"	0.1900		101	70-130			
1,1-Dichloroethane	0.0489	0.001	"	0.0500		97.8	70-130			
cis-1,2-Dichloroethylene	0.0490	0.001	"	0.0500		98.0	70-130			
2-Butanone (MEK)	0.2315	0.005	"	0.2340		98.9	70-130			
Chloroform	0.0490	0.001	"	0.0500		98.0	70-130			
1,1,1-Trichloroethane	0.0479	0.001	"	0.0500		95.8	70-130			
Carbon Tetrachloride	0.0481	0.001	"	0.0500		96.2	70-130			
Benzene	0.0488	0.001	"	0.0500		97.6	70-130			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31519 - EPA 5030B										
Calibration Check (1J31519-CCV1)				Prepared & Analyzed: 10/10/03						
1,2-Dichloroethane	0.0486	0.001	mg/kg wet	0.0500		97.2	70-130			
Trichloroethylene	0.0536	0.001	"	0.0500		107	70-130			
1,2-Dichloropropane	0.0483	0.001	"	0.0500		96.6	70-130			
Bromodichloromethane	0.0482	0.001	"	0.0500		96.4	70-130			
cis-1,3-Dichloropropene	0.0470	0.001	"	0.0500		94.0	70-130			
4-Methyl-2-pentanone (MIBK)	0.2164	0.005	"	0.2180		99.3	70-130			
Toluene	0.0478	0.001	"	0.0500		95.6	70-130			
trans-1,3-Dichloropropene	0.0470	0.001	"	0.0500		94.0	70-130			
1,1,2-Trichloroethane	0.0500	0.001	"	0.0500		100	70-130			
Tetrachloroethylene	0.0487	0.001	"	0.0500		97.4	70-130			
2-Hexanone (MBK)	0.2160	0.005	"	0.2260		95.6	70-130			
Dibromochloromethane	0.0498	0.001	"	0.0500		99.6	70-130			
Chlorobenzene	0.0489	0.001	"	0.0500		97.8	70-130			
Ethylbenzene	0.0484	0.001	"	0.0500		96.8	70-130			
Xylenes, total	0.1444	0.002	"	0.1500		96.3	70-130			
Bromoform	0.0498	0.001	"	0.0500		99.6	70-130			
1,1,2,2-Tetrachloroethane	0.0408	0.001	"	0.0500		81.6	70-130			
1,3-Dichlorobenzene	0.0493	0.001	"	0.0500		98.6	70-130			
1,4-Dichlorobenzene	0.0498	0.001	"	0.0500		99.6	70-130			
1,2-Dichlorobenzene	0.0497	0.001	"	0.0500		99.4	70-130			
Naphthalene	0.0342	0.001	"	0.0500		68.4	70-130			QR-06
Surrogate: Dibromofluoromethane	*46.92*		*"*	*50.00*		*93.8*	*68-136*			
Surrogate: 1,2-Dichloroethane-d4	*49.67*		*"*	*50.00*		*99.3*	*66-143*			
Surrogate: Toluene-d8	*49.76*		*"*	*50.20*		*99.1*	*72-131*			
Surrogate: 4-Bromofluorobenzene	*50.52*		*"*	*50.00*		*101*	*72-130*			
Matrix Spike (1J31519-MS1)		**Source: 13J0432-03**		Prepared: 10/10/03		Analyzed: 10/11/03				
1,1-Dichloroethylene	0.1245	0.002	mg/kg dry	0.1260	ND	98.8	67-148			
Benzene	0.1563	0.002	"	0.1532	ND	102	62-140			
Trichloroethylene	0.1287	0.002	"	0.1373	ND	93.7	62-136			
Toluene	0.1264	0.002	"	0.1344	ND	94.0	64-135			
Chlorobenzene	0.1362	0.002	"	0.1526	ND	89.3	62-134			
Surrogate: Dibromofluoromethane	*52.74*		*"*	*50.00*		*105*	*68-136*			
Surrogate: 1,2-Dichloroethane-d4	*51.87*		*"*	*50.00*		*104*	*66-143*			
Surrogate: Toluene-d8	*53.96*		*"*	*50.20*		*107*	*72-131*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

October 23, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31519 - EPA 5030B										
Matrix Spike (1J31519-MS1)		**Source: 13J0432-03**		Prepared: 10/10/03		Analyzed: 10/11/03				
Surrogate: 4-Bromofluorobenzene	*50.80*		*mg/kg dry*	*50.00*		*102*	*72-130*			
Matrix Spike Dup (1J31519-MSD1)		**Source: 13J0432-03**		Prepared: 10/10/03		Analyzed: 10/11/03				
1,1-Dichloroethylene	0.1487	0.002	mg/kg dry	0.1498	ND	99.3	67-148	17.7	27	
Benzene	0.1831	0.002	"	0.1821	ND	101	62-140	15.8	28	
Trichloroethylene	0.1509	0.002	"	0.1633	ND	92.4	62-136	15.9	28	
Toluene	0.1477	0.002	"	0.1598	ND	92.4	64-135	15.5	26	
Chlorobenzene	0.1608	0.002	"	0.1813	ND	88.7	62-134	16.6	25	
Surrogate: Dibromofluoromethane	*52.75*		"	*50.00*		*106*	*68-136*			
Surrogate: 1,2-Dichloroethane-d4	*51.17*		"	*50.00*		*102*	*66-143*			
Surrogate: Toluene-d8	*52.63*		"	*50.20*		*105*	*72-131*			
Surrogate: 4-Bromofluorobenzene	*50.64*		"	*50.00*		*101*	*72-130*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

Determination of Volatile Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J32026 - EPA 5030 Soil GC										
Blank (1J32026-BLK1)				Prepared: 10/20/03		Analyzed: 10/21/03				
TPH, as gasoline	ND	5.0	mg/kg							
Surrogate: Chlorobenzene	*12.44*		*"*	*11.58*		*107*	*62.1-122*			
LCS (1J32026-BS1)				Prepared: 10/20/03		Analyzed: 10/22/03				
Surrogate: Chlorobenzene	*12.49*		*mg/kg*	*11.58*		*108*	*62.1-122*			
Calibration Check (1J32026-CCV1)				Prepared: 10/20/03		Analyzed: 10/21/03				
Surrogate: Chlorobenzene	*9.19*		*mg/kg*	*11.58*		*79.4*	*62.1-122*			
Calibration Check (1J32026-CCV2)				Prepared: 10/20/03		Analyzed: 10/21/03				
TPH, as gasoline	112.0	5.0	mg/kg	106.8		105	80-120			
Surrogate: Chlorobenzene	*9.52*		*"*	*11.58*		*82.2*	*62.1-122*			
Calibration Check (1J32026-CCV3)				Prepared: 10/20/03		Analyzed: 10/22/03				
Surrogate: Chlorobenzene	*10.36*		*mg/kg*	*11.58*		*89.5*	*62.1-122*			
Calibration Check (1J32026-CCV4)				Prepared: 10/20/03		Analyzed: 10/22/03				
TPH, as gasoline	103.4	5.0	mg/kg	106.8		96.8	80-120			
Surrogate: Chlorobenzene	*11.85*		*"*	*11.58*		*102*	*62.1-122*			
Matrix Spike (1J32026-MS1)		**Source: 13J0835-04**		Prepared: 10/20/03		Analyzed: 10/22/03				
Surrogate: Chlorobenzene	*12.24*		*mg/kg*	*11.40*		*107*	*62.1-122*			
Matrix Spike Dup (1J32026-MSD1)		**Source: 13J0835-04**		Prepared: 10/20/03		Analyzed: 10/22/03				
Surrogate: Chlorobenzene	*12.30*		*mg/kg*	*11.42*		*108*	*62.1-122*			

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41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

October 23, 2003

Determination of Extractable Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31428 - 3545 OA-2 PFE										
Blank (1J31428-BLK1)				Prepared: 10/14/03		Analyzed: 10/20/03				
TEH, as gasoline	ND	5	mg/kg							
TEH, as #2 diesel fuel	ND	5	"							
TEH, as waste oil	ND	5	"							
Total Extractable Hydrocarbons	ND	5	"							
LCS (1J31428-BS1)				Prepared: 10/14/03		Analyzed: 10/21/03				
TEH, as #2 diesel fuel	382.8	5	mg/kg	512.4		74.7	70-130			
Calibration Check (1J31428-CCV1)				Prepared: 10/14/03		Analyzed: 10/20/03				
TEH, as gasoline	2087		mg/kg	2140		97.5	85-115			
TEH, as #2 diesel fuel	1884		"	2070		91.0	85-115			
TEH, as waste oil	1871		"	2040		91.7	85-115			
Calibration Check (1J31428-CCV2)				Prepared: 10/14/03		Analyzed: 10/21/03				
TEH, as gasoline	2206		mg/kg	2140		103	85-115			
TEH, as #2 diesel fuel	2034		"	2070		98.3	85-115			
TEH, as waste oil	1893		"	2040		92.8	85-115			
Matrix Spike (1J31428-MS1)		**Source: 13J0432-02**		Prepared: 10/14/03		Analyzed: 10/21/03				
TEH, as #2 diesel fuel	344.9	5	mg/kg	512.4	ND	67.3	56-101			
Matrix Spike Dup (1J31428-MSD1)		**Source: 13J0432-02**		Prepared: 10/14/03		Analyzed: 10/21/03				
TEH, as #2 diesel fuel	311.8	5	mg/kg	511.6	ND	60.9	56-101	10.1	18	

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41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Blank (1J31639-BLK1)				Prepared: 10/16/03 Analyzed: 10/22/03						
N-Nitrosodimethylamine	ND	0.33	mg/kg wet							
Phenol	ND	0.33	"							
Aniline	ND	0.33	"							
Bis(2-Chloroethyl) Ether	ND	0.33	"							
2-Chlorophenol	ND	0.33	"							
1,3-Dichlorobenzene	ND	0.33	"							
1,4-Dichlorobenzene	ND	0.33	"							
Benzyl Alcohol	ND	0.33	"							
1,2-Dichlorobenzene	ND	0.33	"							
n-Nitroso-di-n-propylamine	ND	0.33	"							
2-Methylphenol	ND	0.33	"							
Bis(2-Chloroisopropyl) Ether	ND	0.33	"							
(3 & 4)-Methylphenol	ND	0.33	"							
Hexachloroethane	ND	0.33	"							
Nitrobenzene	ND	0.33	"							
Isophorone	ND	0.33	"							
2-Nitrophenol	ND	0.33	"							
2,4-Dimethylphenol	ND	0.33	"							
Bis(2-Chloroethoxy) Methane	ND	0.33	"							
2,4-Dichlorophenol	ND	0.33	"							
1,2,4-Trichlorobenzene	ND	0.33	"							
Naphthalene	ND	0.33	"							
4-Chloroaniline	ND	0.33	"							
Hexachlorobutadiene	ND	0.33	"							
4-Chloro-3-methylphenol	ND	0.33	"							
2-Methylnaphthalene	ND	0.33	"							
Hexachlorocyclopentadiene	ND	0.33	"							
2,4,6-Trichlorophenol	ND	0.33	"							
2,4,5-Trichlorophenol	ND	1.65	"							
2-Chloronaphthalene	ND	0.33	"							
2-Nitroaniline	ND	1.65	"							
Dimethylphthalate	ND	0.33	"							
Acenaphthylene	ND	0.33	"							
2,6-Dinitrotoluene	ND	0.33	"							
3-Nitroaniline	ND	1.65	"							

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Novi, MI 48375

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October 23, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Blank (1J31639-BLK1)				Prepared: 10/16/03 Analyzed: 10/22/03						
Acenaphthene	ND	0.33	mg/kg wet							
2,4-Dinitrophenol	ND	1.65	"							
Dibenzofuran	ND	0.33	"							
2,4-Dinitrotoluene	ND	0.33	"							
4-Nitrophenol	ND	0.66	"							
Diethyl Phthalate	ND	0.33	"							
Fluorene	ND	0.33	"							
4-Chlorophenyl Phenyl Ether	ND	0.33	"							
4-Nitroaniline	ND	0.66	"							
4,6-Dinitro-2-methylphenol	ND	1.65	"							
N-Nitrosodiphenylamine	ND	0.33	"							
Azobenzene	ND	0.33	"							
4-Bromophenyl Phenyl Ether	ND	0.33	"							
Hexachlorobenzene	ND	0.33	"							
Pentachlorophenol	ND	0.66	"							
Phenanthrene	ND	0.33	"							
Anthracene	ND	0.33	"							
Di-n-butyl Phthalate	ND	0.33	"							
Fluoranthene	ND	0.33	"							
Benzidine	ND	0.33	"							
Pyrene	ND	0.33	"							
Butyl Benzyl Phthalate	ND	0.33	"							
3,3'-Dichlorobenzidine	ND	0.66	"							
Benzo(a)anthracene	ND	0.33	"							
Chrysene	ND	0.33	"							
Bis(2-Ethylhexyl) Phthalate	ND	0.33	"							
Di-n-octyl Phthalate	ND	0.33	"							
Benzo(b)Fluoranthene	ND	0.33	"							
Benzo(k)Fluoranthene	ND	0.33	"							
Benzo(a)Pyrene	ND	0.33	"							
Indeno(1,2,3-cd)Pyrene	ND	0.33	"							
Dibenzo(a,h)anthracene	ND	0.33	"							
Benzo(g,h,i)perylene	ND	0.33	"							
Surrogate: 2-Fluorophenol	*1.108*		*"*	*1.627*		*68.1*	*41-110*			
Surrogate: 2-Fluorobiphenyl	*1.489*		*"*	*1.503*		*99.1*	*54-111*			

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Novi, MI 48375

Work Order: 13J0503

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Blank (1J31639-BLK1)				Prepared: 10/16/03		Analyzed: 10/22/03				
Surrogate: 2,4,6-Tribromophenol	*0.987*		*mg/kg wet*	*1.530*		*64.5*	*67-139*			*S-A*
Surrogate: Phenol-d6	*1.063*		*"*	*1.513*		*70.3*	*50-110*			
Surrogate: Terphenyl-dl4	*1.362*		*"*	*1.503*		*90.6*	*50-122*			
Surrogate: Nitrobenzene-d5	*1.153*		*"*	*1.538*		*75.0*	*50-110*			
LCS (1J31639-BS1)				Prepared: 10/16/03		Analyzed: 10/22/03				
Phenol	1.390	0.33	mg/kg wet	1.713		81.1	60-140			
2-Chlorophenol	1.296	0.33	"	1.667		77.7	60-140			
1,4-Dichlorobenzene	1.310	0.33	"	1.680		78.0	60-140			
n-Nitroso-di-n-propylamine	1.258	0.33	"	1.667		75.5	64-113			
(3 & 4)-Methylphenol	1.414	0.33	"	1.660		85.2	60-140			
Nitrobenzene	1.384	0.33	"	1.813		76.3	60-140			
2-Nitrophenol	1.258	0.33	"	1.732		72.6	60-140			
4-Chloro-3-methylphenol	1.324	0.33	"	1.693		78.2	60-140			
Dimethylphthalate	1.630	0.33	"	1.787		91.2	60-140			
2,6-Dinitrotoluene	1.492	0.33	"	1.753		85.1	72-110			
Diethyl Phthalate	1.525	0.33	"	1.780		85.7	72-128			
4,6-Dinitro-2-methylphenol	1.473	1.65	"	1.753		84.0	60-140			
Pentachlorophenol	1.640	0.66	"	1.740		94.3	60-140			
Phenanthrene	1.605	0.33	"	1.667		96.3	60-140			
Anthracene	1.240	0.33	"	1.687		73.5	60-140			
Di-n-butyl Phthalate	1.705	0.33	"	1.773		96.2	60-140			
Fluoranthene	1.482	0.33	"	1.693		87.5	60-140			
Pyrene	1.113	0.33	"	1.740		64.0	60-140			
Surrogate: 2-Fluorophenol	*1.124*		*"*	*1.627*		*69.1*	*41-110*			
Surrogate: 2-Fluorobiphenyl	*1.354*		*"*	*1.503*		*90.1*	*54-111*			
Surrogate: 2,4,6-Tribromophenol	*1.390*		*"*	*1.530*		*90.8*	*67-139*			
Surrogate: Phenol-d6	*1.167*		*"*	*1.513*		*77.1*	*50-110*			
Surrogate: Terphenyl-dl4	*1.197*		*"*	*1.503*		*79.6*	*50-122*			
Surrogate: Nitrobenzene-d5	*1.056*		*"*	*1.538*		*68.7*	*50-110*			

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Novi, MI 48375

Work Order: 13J0503

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Calibration Check (1J31639-CCV1)				Prepared: 10/16/03		Analyzed: 10/22/03				
N-Nitrosodimethylamine	45.34		mg/kg wet	42.00		108	80-120			
Phenol	47.38		"	42.00		113	80-120			
Aniline	41.62		"	42.00		99.1	80-120			
Bis(2-Chloroethyl) Ether	45.58		"	42.00		109	80-120			
2-Chlorophenol	42.44		"	42.00		101	80-120			
1,3-Dichlorobenzene	44.88		"	42.00		107	80-120			
1,4-Dichlorobenzene	43.30		"	42.00		103	80-120			
Benzyl Alcohol	44.81		"	42.00		107	80-120			
1,2-Dichlorobenzene	46.46		"	42.40		110	80-120			
n-Nitroso-di-n-propylamine	45.29		"	42.00		108	80-120			
2-Methylphenol	45.27		"	42.00		108	80-120			
Bis(2-Chloroisopropyl) Ether	43.65		"	42.00		104	80-120			
(3 & 4)-Methylphenol	42.18		"	42.00		100	80-120			
Hexachloroethane	44.04		"	42.00		105	80-120			
Nitrobenzene	45.49		"	42.00		108	80-120			
Isophorone	44.42		"	42.00		106	80-120			
2-Nitrophenol	43.37		"	42.20		103	80-120			
2,4-Dimethylphenol	43.33		"	42.00		103	80-120			
Bis(2-Chloroethoxy) Methane	45.41		"	42.00		108	80-120			
2,4-Dichlorophenol	45.69		"	42.00		109	80-120			
1,2,4-Trichlorobenzene	43.32		"	42.00		103	80-120			
Naphthalene	44.02		"	42.00		105	80-120			
4-Chloroaniline	47.16		"	42.00		112	80-120			
Hexachlorobutadiene	43.81		"	42.00		104	80-120			
4-Chloro-3-methylphenol	44.55		"	42.00		106	80-120			
2-Methylnaphthalene	44.05		"	42.00		105	80-120			
Hexachlorocyclopentadiene	44.05		"	42.40		104	80-120			
2,4,6-Trichlorophenol	44.53		"	42.00		106	80-120			
2,4,5-Trichlorophenol	43.46		"	42.20		103	80-120			
2-Chloronaphthalene	46.58		"	42.00		111	80-120			
2-Nitroaniline	43.78		"	42.10		104	80-120			
Dimethylphthalate	45.98		"	42.00		109	80-120			
Acenaphthylene	48.21		"	42.00		115	80-120			
2,6-Dinitrotoluene	43.82		"	42.00		104	80-120			
3-Nitroaniline	45.73		"	42.00		109	80-120			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Calibration Check (1J31639-CCV1)				Prepared: 10/16/03		Analyzed: 10/22/03				
Acenaphthene	47.06		mg/kg wet	42.00		112	80-120			
2,4-Dinitrophenol	42.84		"	42.00		102	80-120			
Dibenzofuran	46.20		"	42.00		110	80-120			
2,4-Dinitrotoluene	44.80		"	42.00		107	80-120			
4-Nitrophenol	43.94		"	42.20		104	80-120			
Diethyl Phthalate	47.93		"	42.00		114	80-120			
Fluorene	45.90		"	42.00		109	80-120			
4-Chlorophenyl Phenyl Ether	45.09		"	42.00		107	80-120			
4-Nitroaniline	43.92		"	42.00		105	80-120			
4,6-Dinitro-2-methylphenol	39.41		"	42.20		93.4	80-120			
N-Nitrosodiphenylamine	41.00		"	42.10		97.4	80-120			
Azobenzene	40.21		"	42.00		95.7	80-120			
4-Bromophenyl Phenyl Ether	41.09		"	42.00		97.8	80-120			
Hexachlorobenzene	40.22		"	42.00		95.8	80-120			
Pentachlorophenol	39.03		"	42.20		92.5	80-120			
Phenanthrene	43.43		"	42.00		103	80-120			
Anthracene	44.41		"	42.00		106	80-120			
Di-n-butyl Phthalate	46.41		"	42.00		110	80-120			
Fluoranthene	44.66		"	42.00		106	80-120			
Pyrene	37.88		"	42.00		90.2	80-120			
Butyl Benzyl Phthalate	40.85		"	42.00		97.3	80-120			
Benzo(a)anthracene	45.01		"	42.00		107	80-120			
Chrysene	43.57		"	42.00		104	80-120			
Bis(2-Ethylhexyl) Phthalate	39.06		"	42.00		93.0	80-120			
Di-n-octyl Phthalate	39.23		"	42.10		93.2	80-120			
Benzo(b)Fluoranthene	43.47		"	42.00		104	80-120			
Benzo(k)Fluoranthene	39.18		"	42.00		93.3	80-120			
Benzo(a)Pyrene	43.63		"	42.00		104	80-120			
Indeno(1,2,3-cd)Pyrene	45.70		"	42.00		109	80-120			
Dibenzo(a,h)anthracene	43.59		"	42.00		104	80-120			
Benzo(g,h,i)perylene	43.03		"	42.00		102	80-120			

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Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Matrix Spike (1J31639-MS1)		**Source: 13J0432-02**		Prepared: 10/16/03	Analyzed: 10/22/03					
Phenol	1.171	0.33	mg/kg dry	2.109	ND	55.5	60-140			QM-05
2-Chlorophenol	1.472	0.33	"	2.051	ND	71.8	60-140			
1,4-Dichlorobenzene	1.538	0.33	"	2.068	ND	74.4	60-140			
n-Nitroso-di-n-propylamine	1.221	0.33	"	2.051	ND	59.5	67-110			QM-05
(3 & 4)-Methylphenol	1.016	0.33	"	2.043	ND	49.7	60-140			QM-05
Nitrobenzene	1.810	0.33	"	2.232	ND	81.1	60-140			
2-Nitrophenol	1.680	0.33	"	2.131	ND	78.8	60-140			
4-Chloro-3-methylphenol	1.501	0.33	"	2.084	ND	72.0	60-140			
Dimethylphthalate	1.349	0.33	"	2.199	ND	61.3	60-140			
2,6-Dinitrotoluene	1.556	0.33	"	2.158	ND	72.1	71-113			
Diethyl Phthalate	1.250	0.33	"	2.191	ND	57.1	69-129			QM-05
4,6-Dinitro-2-methylphenol	1.929	1.65	"	2.158	ND	89.4	60-140			
Pentachlorophenol	1.984	0.66	"	2.141	ND	92.7	60-140			
Phenanthrene	2.025	0.33	"	2.051	ND	98.7	60-140			
Anthracene	1.321	0.33	"	2.076	ND	63.6	60-140			
Di-n-butyl Phthalate	1.966	0.33	"	2.182	ND	90.1	60-140			
Fluoranthene	1.827	0.33	"	2.084	ND	87.7	60-140			
Pyrene	1.331	0.33	"	2.141	ND	62.2	34.5-129			
Surrogate: 2-Fluorophenol	*1.255*		"	*2.002*		*62.7*	*41-110*			
Surrogate: 2-Fluorobiphenyl	*1.487*		"	*1.850*		*80.4*	*54-111*			
Surrogate: 2,4,6-Tribromophenol	*1.328*		"	*1.883*		*70.5*	*67-139*			
Surrogate: Phenol-d6	*0.707*		"	*1.862*		*38.0*	*50-110*			*S-(*
Surrogate: Terphenyl-d14	*2.616*		"	*1.850*		*141*	*50-122*			*S-E*
Surrogate: Nitrobenzene-d5	*1.351*		"	*1.893*		*71.4*	*50-110*			
Matrix Spike Dup (1J31639-MSD1)		**Source: 13J0432-02**		Prepared: 10/16/03	Analyzed: 10/23/03					
Phenol	1.622	0.33	mg/kg dry	2.109	ND	76.9	60-140	32.3	40	
2-Chlorophenol	1.558	0.33	"	2.051	ND	76.0	60-140	5.68	40	
1,4-Dichlorobenzene	1.737	0.33	"	2.068	ND	84.0	60-140	12.2	40	
n-Nitroso-di-n-propylamine	1.833	0.33	"	2.051	ND	89.4	67-110	40.1	22	QM-05
(3 & 4)-Methylphenol	1.177	0.33	"	2.043	ND	57.6	60-140	14.7	40	QM-05
Nitrobenzene	1.994	0.33	"	2.232	ND	89.3	60-140	9.67	40	
2-Nitrophenol	1.696	0.33	"	2.131	ND	79.6	60-140	0.948	40	
4-Chloro-3-methylphenol	1.723	0.33	"	2.084	ND	82.7	60-140	13.8	40	
Dimethylphthalate	2.339	0.33	"	2.199	ND	106	60-140	53.7	40	QM-05

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Matrix Spike Dup (1J31639-MSD1)		**Source: 13J0432-02**		Prepared: 10/16/03		Analyzed: 10/23/03				
2,6-Dinitrotoluene	2.178	0.33	mg/kg dry	2.158	ND	101	71-113	33.3	11	QM-05
Diethyl Phthalate	2.531	0.33	"	2.191	ND	116	69-129	67.8	18	QM-05
4,6-Dinitro-2-methylphenol	2.018	1.65	"	2.158	ND	93.5	60-140	4.51	40	
Pentachlorophenol	2.011	0.66	"	2.141	ND	93.9	60-140	1.35	40	
Phenanthrene	2.134	0.33	"	2.051	ND	104	60-140	5.24	40	
Anthracene	1.557	0.33	"	2.076	ND	75.0	60-140	16.4	40	
Di-n-butyl Phthalate	2.408	0.33	"	2.182	ND	110	60-140	20.2	40	
Fluoranthene	1.997	0.33	"	2.084	ND	95.8	60-140	8.89	40	
Pyrene	2.337	0.33	"	2.141	ND	109	34.5-129	54.9	22.9	QM-05
Surrogate: 2-Fluorophenol	*1.198*		"	*2.002*		*59.8*	*41-110*			
Surrogate: 2-Fluorobiphenyl	*2.025*		"	*1.850*		*109*	*54-111*			
Surrogate: 2,4,6-Tribromophenol	*1.547*		"	*1.883*		*82.2*	*67-139*			
Surrogate: Phenol-d6	*1.264*		"	*1.862*		*67.9*	*50-110*			
Surrogate: Terphenyl-d14	*2.502*		"	*1.850*		*135*	*50-122*			*S-E*
Surrogate: Nitrobenzene-d5	*1.420*		"	*1.893*		*75.0*	*50-110*			
Reference (1J31639-SRM1)				Prepared: 10/16/03		Analyzed: 10/22/03				
Phenol	1.594	0.33	mg/kg wet	1.717		92.8	70-130			
2-Chlorophenol	1.427	0.33	"	1.667		85.6	70-130			
1,4-Dichlorobenzene	1.572	0.33	"	1.683		93.4	70-130			
n-Nitroso-di-n-propylamine	1.463	0.33	"	1.667		87.8	70-130			
(3 & 4)-Methylphenol	1.562	0.33	"	1.660		94.1	70-130			
Nitrobenzene	1.787	0.33	"	1.817		98.3	70-130			
2-Nitrophenol	1.871	0.33	"	1.733		108	70-130			
4-Chloro-3-methylphenol	1.645	0.33	"	1.700		96.8	70-130			
Dimethylphthalate	1.692	0.33	"	1.783		94.9	70-130			
2,6-Dinitrotoluene	1.549	0.33	"	1.750		88.5	70-130			
Diethyl Phthalate	1.677	0.33	"	1.783		94.1	70-130			
4,6-Dinitro-2-methylphenol	1.576	1.65	"	1.750		90.1	70-130			
Pentachlorophenol	1.771	0.66	"	1.733		102	70-130			
Phenanthrene	1.608	0.33	"	1.667		96.5	70-130			
Anthracene	1.582	0.33	"	1.683		94.0	70-130			
Di-n-butyl Phthalate	1.594	0.33	"	1.767		90.2	70-130			
Fluoranthene	1.534	0.33	"	1.700		90.2	70-130			
Pyrene	1.145	0.33	"	1.733		66.1	70-130			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31639 - 3545 BNA PFE										
Reference (1J31639-SRM1)				Prepared: 10/16/03 Analyzed: 10/22/03						
Surrogate: 2-Fluorophenol	*1.452*		*mg/kg wet*	*1.627*		*89.2*	*70-130*			
Surrogate: 2-Fluorobiphenyl	*1.615*		*"*	*1.503*		*107*	*70-130*			
Surrogate: 2,4,6-Tribromophenol	*1.559*		*"*	*1.530*		*102*	*70-130*			
Surrogate: Phenol-d6	*1.412*		*"*	*1.513*		*93.3*	*70-130*			
Surrogate: Terphenyl-dl4	*1.144*		*"*	*1.503*		*76.1*	*70-130*			
Surrogate: Nitrobenzene-d5	*1.496*		*"*	*1.538*		*97.3*	*70-130*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

October 23, 2003

Determination of Polychlorinated Biphenyls (PCB) - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31730 - 3545 NP/OC PFE										
Blank (1J31730-BLK1)				Prepared: 10/17/03		Analyzed: 10/22/03				
Arochlor 1016	ND	0.050	mg/kg wet							
Arochlor 1221	ND	0.050	"							
Arochlor 1232	ND	0.050	"							
Arochlor 1242	ND	0.050	"							
Arochlor 1248	ND	0.050	"							
Arochlor 1254	ND	0.050	"							
Arochlor 1260	ND	0.050	"							
Surrogate: Decachlorobiphenyl	*0.0322*		"	*0.0321*		*100*	*55-130*			
LCS (1J31730-BS1)				Prepared: 10/17/03		Analyzed: 10/23/03				
Arochlor 1016	0.088	0.050	mg/kg wet	0.0933		94.3	60-140			
Arochlor 1260	0.101	0.050	"	0.0933		108	74-141			
Surrogate: Decachlorobiphenyl	*0.0360*		"	*0.0321*		*112*	*55-130*			
Matrix Spike (1J31730-MS1)		**Source: 13J0432-06**		Prepared: 10/17/03		Analyzed: 10/23/03				
Arochlor 1016	0.089	0.050	mg/kg dry	0.118	ND	75.4	60-140			
Arochlor 1260	0.106	0.050	"	0.118	ND	89.8	67-137			
Surrogate: Decachlorobiphenyl	*0.0355*		"	*0.0406*		*87.4*	*55-130*			
Matrix Spike Dup (1J31730-MSD1)		**Source: 13J0432-06**		Prepared: 10/17/03		Analyzed: 10/23/03				
Arochlor 1016	0.099	0.050	mg/kg dry	0.118	ND	83.9	60-140	10.6	30	
Arochlor 1260	0.115	0.050	"	0.118	ND	97.5	67-137	8.14	24	
Surrogate: Decachlorobiphenyl	*0.0382*		"	*0.0406*		*94.1*	*55-130*			
Reference (1J31730-SRM1)				Prepared: 10/17/03		Analyzed: 10/23/03				
Arochlor 1016	0.105	0.050	mg/kg wet	0.0933		113	70-130			
Arochlor 1260	0.105	0.050	"	0.0933		113	70-130			
Surrogate: Decachlorobiphenyl	*0.0347*		"	*0.0321*		*108*	*55-130*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

Determination of Total Metals - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31422 - EPA 7471A Hg Solid										
Blank (1J31422-BLK1)				Prepared: 10/14/03		Analyzed: 10/15/03				
Mercury, total	ND	0.0005	mg/kg wet							
LCS (1J31422-BS1)				Prepared: 10/14/03		Analyzed: 10/15/03				
Mercury, total	0.0022	0.0005	mg/kg wet	0.00200		110	79-118			
LCS (1J31422-BS2)				Prepared: 10/14/03		Analyzed: 10/15/03				
Mercury, total	0.0023	0.0005	mg/kg wet	0.00200		115	79-118			
LCS (1J31422-BS3)				Prepared: 10/14/03		Analyzed: 10/17/03				
Mercury, total	2.27	0.50	mg/kg wet	2.00		114	79-118			
LCS (1J31422-BS4)				Prepared: 10/14/03		Analyzed: 10/17/03				
Mercury, total	2.33	0.50	mg/kg wet	2.00		116	79-118			
Matrix Spike (1J31422-MS1)		**Source: 13J0503-01**		Prepared: 10/14/03		Analyzed: 10/15/03				
Mercury, total	1.56	0.30	mg/kg dry	1.22	0.14	116	64-138			
Matrix Spike Dup (1J31422-MSD1)		**Source: 13J0503-01**		Prepared: 10/14/03		Analyzed: 10/15/03				
Mercury, total	1.49	0.29	mg/kg dry	1.16	0.14	116	64-138	4.59	27	
Batch 1J31506 - EPA 3050B Solid Dig										
Blank (1J31506-BLK1)				Prepared & Analyzed: 10/15/03						
Barium, total	ND	0.01	mg/kg wet							
Silver, total	ND	0.01	"							
Arsenic, total	ND	0.02	"							
Cadmium, total	ND	0.01	"							
Chromium, total	ND	0.03	"							
Lead, total	ND	0.05	"							
Selenium, total	ND	0.02	"							

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

October 23, 2003

Determination of Total Metals - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31506 - EPA 3050B Solid Dig										
LCS (1J31506-BS1)				Prepared & Analyzed: 10/15/03						
Barium, total	2.03	0.01	mg/kg wet	2.00		102	90-111			
Silver, total	1.88	0.01	"	2.00		94.0	85-112			
Arsenic, total	1.9	0.02	"	2.00		95.0	85-110			
Cadmium, total	1.9	0.01	"	2.00		95.0	90-110			
Chromium, total	2.00	0.03	"	2.00		100	90-110			
Lead, total	2.0	0.05	"	2.00		100	80-108			
Selenium, total	1.6	0.02	"	2.00		80.0	66-101			
Calibration Check (1J31506-CCV1)				Prepared & Analyzed: 10/15/03						
Barium, total	1.07		mg/kg wet	1.00		107	85-115			
Silver, total	1.01		"	1.00		101	85-115			
Arsenic, total	1.1		"	1.00		110	85-115			
Cadmium, total	1.0		"	1.00		100	85-115			
Chromium, total	1.05		"	1.00		105	85-115			
Lead, total	1.1		"	1.00		110	85-115			
Selenium, total	1.1		"	1.00		110	85-115			
Calibration Check (1J31506-CCV2)				Prepared & Analyzed: 10/15/03						
Barium, total	1.08		mg/kg wet	1.00		108	85-115			
Silver, total	1.02		"	1.00		102	85-115			
Arsenic, total	1.1		"	1.00		110	85-115			
Cadmium, total	1.1		"	1.00		110	85-115			
Chromium, total	1.06		"	1.00		106	85-115			
Lead, total	1.1		"	1.00		110	85-115			
Selenium, total	1.1		"	1.00		110	85-115			
Matrix Spike (1J31506-MS1)		**Source: 13J0503-03**		Prepared & Analyzed: 10/15/03						
Barium, total	318	0.6	mg/kg dry	150	158	107	72-120			
Silver, total	129	0.6	"	150	0.7	85.5	65-116			
Arsenic, total	139	1.3	"	150	7.9	87.4	71-115			
Cadmium, total	122	0.6	"	150	0.6	80.9	70-110			
Chromium, total	142	1.9	"	150	14.3	85.1	69-115			
Lead, total	193	3.2	"	150	90.7	68.2	70-110			QM-14
Selenium, total	120	1.3	"	150	ND	80.0	66-103			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

Determination of Total Metals - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31506 - EPA 3050B Solid Dig										
Matrix Spike Dup (1J31506-MSD1)		**Source: 13J0503-03**		Prepared & Analyzed: 10/15/03						
Barium, total	290	0.6	mg/kg dry	152	158	86.8	72-120	9.21	22	
Silver, total	132	0.6	"	152	0.7	86.4	65-116	2.30	18	
Arsenic, total	145	1.3	"	152	7.9	90.2	71-115	4.23	12	
Cadmium, total	127	0.6	"	152	0.6	83.2	70-110	4.02	11	
Chromium, total	147	1.9	"	152	14.3	87.3	69-115	3.46	10	
Lead, total	189	3.2	"	152	90.7	64.7	70-110	2.09	16	QM-14
Selenium, total	124	1.3	"	152	ND	81.6	66-103	3.28	12	
Post Spike (1J31506-PS1)		**Source: 13J0503-03**		Prepared & Analyzed: 10/15/03						
Barium, total	275	0.6	mg/kg dry	145	158	80.7	66-110			
Silver, total	126	0.6	"	145	0.7	86.4	65-115			
Arsenic, total	133	1.2	"	145	7.9	86.3	72-110			
Cadmium, total	117	0.6	"	145	0.6	80.3	68-110			
Chromium, total	134	1.8	"	145	14.3	82.6	68-110			
Lead, total	215	3.0	"	145	90.7	85.7	70-110			
Selenium, total	117	1.2	"	145	ND	80.7	66-103			
Reference (1J31506-SRM1)				Prepared & Analyzed: 10/15/03						
Barium, total	0.538		mg/kg wet	0.500		108	85-115			
Silver, total	0.522		"	0.500		104	85-115			
Arsenic, total	0.5		"	0.500		100	85-115			
Cadmium, total	0.5		"	0.500		100	85-115			
Chromium, total	0.527		"	0.500		105	85-115			
Lead, total	0.5		"	0.500		100	85-115			
Selenium, total	0.5		"	0.500		100	85-115			

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0503

October 23, 2003

Notes and Definitions

D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
QM-05	The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-14	The spike recovery was outside acceptance limits for the MS and/or MSD. However, all other QC was acceptable.
QR-06	The reference standard was outside of established control limits.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
S-AC	Acid surrogate recovery outside of control limits. The data was accepted based on valid recovery of remaining two acid surrogates.
S-AC	Acid surrogate recovery outside of control limits. The data was accepted based on valid recovery of remaining two acid surrogates.
S-BN	Base/Neutral surrogate recovery outside of control limits. The data was accepted based on valid recovery of remaining two base/neutral surrogates.

End of Report

Jeffrey King

Keystone Laboratories, Inc.
Jeffrey King, Ph.D.
Laboratory Director

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Cooler #_____

Keystone Laboratories, Inc. Cooler/ Sample Receipt Form

Client: MWH **Work Order:** 13J0503 **Date Received:** 10/10/03 **Initials:** KLO

Delivered By: UPS/ FedX/ AirBrn Pry Exp/ Mail/ Walk-in/ Courier / Other:_____ **Air Bill Number:** 841761564957

Type of packing material: Bubble/ Foam/ Paper/ Peanuts/ Vermiculite/ NA/ Other_____

Custody Seal: ☒ Present ☐ Absent ☐ Broken Seal No. _____ **COC signed and dated:** Yes / No

Samples cooled by: Ice/ Ice Packs/ NA/ Other_____ **Cooler Temperature (includes correction factor):** 1.2

Sample Receipt Discrepancies: ☒ No ☐ Yes (if Yes, see detail below)

☐ Chain of Custody not present ☐ Information obtained from PO/ letter received with samples	☐ Broken or leaking containers: _____
☐ Container Problems: ☐ Label Absent ☐ Incorrect Containers for tests indicated ☐ Insufficient amount of sample for tests indicated	☐ Sample listed on COC not received:
☐ COC incomplete ☐ COC missing time sampled, time obtained from sample container. ☐ COC missing date sampled, date obtained from sample container ☐ Sample excluded from COC: _____	☐ Air bubbles in VOA vials: _____ ☐ Sample description on container label different from COC: _____

Detailed Description/comments: _____

Client contacted regarding cooler/sample receipt conditions: Yes / No Contacted by_____ Date/Time:_____

Who was contacted:_____ Remarks:_____

Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Accreditations:
Iowa DNR: 095
New Jersey DEP: IA001
Kansas DHE: E-10287

ANALYTICAL REPORT

October 27, 2003

Work Order: 13J0548

Report To

Diane Krueger
Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order Information

Date Received: 10/13/2003 8:25AM
Collector:
Phone: (248) 344-0205
PO Number:

Project : Jefferson Barracks ANG
Project Number: Jefferson Barracks ANG

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-01 Dup-1				Matrix:Water		Collected: 10/10/03 08:00	
Determination of Volatile Organic Compounds							
Chloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Vinyl Chloride	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Bromomethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Chloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
1,1-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Acetone	<10.0 ug/l	10.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Carbon Disulfide	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Methylene Chloride	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
trans-1,2-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/l	2.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
1,1-Dichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
cis-1,2-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
2-Butanone (MEK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Chloroform	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
1,1,1-Trichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Carbon Tetrachloride	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Benzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
1,2-Dichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Trichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
1,2-Dichloropropane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Bromodichloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
cis-1,3-Dichloropropene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Toluene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
trans-1,3-Dichloropropene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
1,1,2-Trichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Tetrachloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
2-Hexanone (MBK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Dibromochloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Chlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Ethylbenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-01 Dup-1				Matrix: Water		Collected: 10/10/03 08:00	
Determination of Volatile Organic Compounds							
Xylenes, total	<2.0 ug/l	2.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Bromoform	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
1,1,2,2-Tetrachloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
1,3-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
1,4-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
1,2-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Naphthalene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:06	
Surrogate: Dibromofluoromethane	*99.7 %*			*78-124*	TVK	10/14/03 20:06	
Surrogate: 1,2-Dichloroethane-d4	*104 %*			*72-122*	TVK	10/14/03 20:06	
Surrogate: Toluene-d8	*100 %*			*84-120*	TVK	10/14/03 20:06	
Surrogate: 4-Bromofluorobenzene	*98.4 %*			*80-124*	TVK	10/14/03 20:06	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<10 ug/l	10	1J31712	EPA 8015	JRF	10/16/03 19:08	
Surrogate: Chlorobenzene	*116 %*			*65-120*	JRF	10/16/03 19:08	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 0:59	
TEH, as #2 diesel fuel	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 0:59	
TEH, as waste oil	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 0:59	
Total Extractable Hydrocarbons	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 0:59	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Phenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Aniline	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Bis(2-Chloroethyl) Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2-Chlorophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
1,3-Dichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
1,4-Dichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Benzyl Alcohol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
1,2-Dichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
n-Nitroso-di-n-propylamine	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2-Methylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Bis(2-Chloroisopropyl) Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
(3 & 4)-Methylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Hexachloroethane	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Nitrobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Isophorone	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2-Nitrophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2,4-Dimethylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Bis(2-Chloroethoxy) Methane	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2,4-Dichlorophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
1,2,4-Trichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-01 Dup-1				Matrix:Water		Collected: 10/10/03 08:00	
Determination of Base/Neutral/Acid Extractable Compounds							
Naphthalene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
4-Chloroaniline	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Hexachlorobutadiene	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 15:54	
4-Chloro-3-methylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2-Methylnaphthalene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Hexachlorocyclopentadiene	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2,4,6-Trichlorophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2,4,5-Trichlorophenol	<50 ug/l	50	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2-Chloronaphthalene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2-Nitroaniline	<50 ug/l	50	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Dimethylphthalate	<15 ug/l	15	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Acenaphthylene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2,6-Dinitrotoluene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
3-Nitroaniline	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Acenaphthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2,4-Dinitrophenol	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Dibenzofuran	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
2,4-Dinitrotoluene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
4-Nitrophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Diethyl Phthalate	<30 ug/l	30	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Fluorene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
4-Chlorophenyl Phenyl Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
4-Nitroaniline	5 <20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 15:54	
4,6-Dinitro-2-methylphenol	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 15:54	
N-Nitrosodiphenylamine	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Azobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
4-Bromophenyl Phenyl Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Hexachlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Pentachlorophenol	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Phenanthrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Anthracene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Di-n-butyl Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Fluoranthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Benzidine	<50 ug/l	50	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Pyrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Butyl Benzyl Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
3,3'-Dichlorobenzidine	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Benzo(a)anthracene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Chrysene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Bis(2-Ethylhexyl) Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-01 Dup-1				Matrix:Water		Collected: 10/10/03 08:00	
Determination of Base/Neutral/Acid Extractable Compounds							
Di-n-octyl Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Benzo(b)Fluoranthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Benzo(k)Fluoranthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Benzo(a)Pyrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Indeno(1,2,3-cd)Pyrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Dibenzo(a,h)anthracene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Benzo(g,h,i)perylene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 15:54	
Surrogate: 2-Fluorophenol	*69.4 %*			*45-110*	EPP	10/20/03 15:54	
Surrogate: 2-Fluorobiphenyl	*76.4 %*			*50-110*	EPP	10/20/03 15:54	
Surrogate: 2,4,6-Tribromophenol	*124 %*			*59-130*	EPP	10/20/03 15:54	
Surrogate: Phenol-d6	*75.4 %*			*44-115*	EPP	10/20/03 15:54	
Surrogate: Terphenyl-dl4	*90.0 %*			*40-110*	EPP	10/20/03 15:54	
Surrogate: Nitrobenzene-d5	*76.0 %*			*47-123*	EPP	10/20/03 15:54	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.10 ug/l	0.10	1J31638	EPA 8082	EPP	10/24/03 12:30	
Arochlor 1221	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 12:30	
Arochlor 1232	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 12:30	
Arochlor 1242	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 12:30	
Arochlor 1248	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 12:30	
Arochlor 1254	<0.10 ug/l	0.10	1J31638	EPA 8082	EPP	10/24/03 12:30	
Arochlor 1260	<0.10 ug/l	0.10	1J31638	EPA 8082	EPP	10/24/03 12:30	
Surrogate: Decachlorobiphenyl	*54.1 %*			*55-130*	EPP	10/24/03 12:30	S-07
Determination of Total Metals							
Arsenic, total	<0.005 mg/l	0.005	1J31306	EPA 7060A	LAR	10/15/03 18:13	
Barium, total	**0.046 mg/l**	**0.010**	1J31401	EPA 6010B	RVV	10/14/03 14:51	
Cadmium, total	<0.0010 mg/l	0.0010	1J31306	EPA 7131A	LAR	10/15/03 18:09	
Chromium, total	<0.005 mg/l	0.005	1J31401	EPA 6010B	RVV	10/14/03 14:51	
Lead, total	<0.005 mg/l	0.005	1J31401	EPA 6010B	RVV	10/14/03 14:51	
Mercury, total	<0.0005 mg/l	0.00050	1J31416	EPA 7470A	MAQ	10/15/03 14:00	
Selenium, total	<0.005 mg/l	0.005	1J31306	EPA 7740	LKM	10/14/03 16:15	
Silver, total	<0.010 mg/l	0.010	1J31401	EPA 6010B	RVV	10/14/03 14:51	
13J0548-02 MW-1				Matrix:Water		Collected: 10/10/03 12:00	
Determination of Volatile Organic Compounds							
Chloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Vinyl Chloride	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Bromomethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Chloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
1,1-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Acetone	<10.0 ug/l	10.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Carbon Disulfide	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-02 MW-1				Matrix:Water		Collected: 10/10/03 12:00	
Determination of Volatile Organic Compounds							
Methylene Chloride	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
trans-1,2-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/l	2.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
1,1-Dichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
cis-1,2-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
2-Butanone (MEK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Chloroform	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
1,1,1-Trichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Carbon Tetrachloride	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Benzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
1,2-Dichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Trichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
1,2-Dichloropropane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Bromodichloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
cis-1,3-Dichloropropene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Toluene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
trans-1,3-Dichloropropene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
1,1,2-Trichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Tetrachloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
2-Hexanone (MBK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Dibromochloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Chlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Ethylbenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Xylenes, total	<2.0 ug/l	2.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Bromoform	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
1,1,2,2-Tetrachloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
1,3-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
1,4-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
1,2-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Naphthalene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 20:44	
Surrogate: Dibromofluoromethane	*100 %*			*78-124*	TVK	10/14/03 20:44	
Surrogate: 1,2-Dichloroethane-d4	*103 %*			*72-122*	TVK	10/14/03 20:44	
Surrogate: Toluene-d8	*102 %*			*84-120*	TVK	10/14/03 20:44	
Surrogate: 4-Bromofluorobenzene	*98.2 %*			*80-124*	TVK	10/14/03 20:44	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<10 ug/l	10	1J31712	EPA 8015	JRF	10/16/03 19:49	
Surrogate: Chlorobenzene	*117 %*			*65-120*	JRF	10/16/03 19:49	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 1:48	
TEH, as #2 diesel fuel	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 1:48	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-02 MW-1				Matrix:Water		Collected: 10/10/03 12:00	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as waste oil	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 1:48	
Total Extractable Hydrocarbons	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 1:48	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Phenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Aniline	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Bis(2-Chloroethyl) Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2-Chlorophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
1,3-Dichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
1,4-Dichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Benzyl Alcohol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
1,2-Dichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
n-Nitroso-di-n-propylamine	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2-Methylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Bis(2-Chloroisopropyl) Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
(3 & 4)-Methylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Hexachloroethane	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Nitrobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Isophorone	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2-Nitrophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2,4-Dimethylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Bis(2-Chloroethoxy) Methane	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2,4-Dichlorophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
1,2,4-Trichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Naphthalene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
4-Chloroaniline	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Hexachlorobutadiene	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 16:29	
4-Chloro-3-methylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2-Methylnaphthalene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Hexachlorocyclopentadiene	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2,4,6-Trichlorophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2,4,5-Trichlorophenol	<50 ug/l	50	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2-Chloronaphthalene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2-Nitroaniline	<50 ug/l	50	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Dimethylphthalate	<15 ug/l	15	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Acenaphthylene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2,6-Dinitrotoluene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
3-Nitroaniline	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Acenaphthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2,4-Dinitrophenol	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 16:29	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-02 MW-1				Matrix:Water		Collected: 10/10/03 12:00	
Determination of Base/Neutral/Acid Extractable Compounds							
Dibenzofuran	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
2,4-Dinitrotoluene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
4-Nitrophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Diethyl Phthalate	<30 ug/l	30	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Fluorene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
4-Chlorophenyl Phenyl Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
4-Nitroaniline	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 16:29	
4,6-Dinitro-2-methylphenol	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 16:29	
N-Nitrosodiphenylamine	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Azobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
4-Bromophenyl Phenyl Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Hexachlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Pentachlorophenol	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Phenanthrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Anthracene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Di-n-butyl Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Fluoranthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Benzidine	<50 ug/l	50	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Pyrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Butyl Benzyl Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
3,3'-Dichlorobenzidine	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Benzo(a)anthracene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Chrysene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Bis(2-Ethylhexyl) Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Di-n-octyl Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Benzo(b)Fluoranthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Benzo(k)Fluoranthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Benzo(a)Pyrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Indeno(1,2,3-cd)Pyrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Dibenzo(a,h)anthracene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Benzo(g,h,i)perylene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 16:29	
Surrogate: 2-Fluorophenol	*60.0 %*			*45-110*	EPP	10/20/03 16:29	
Surrogate: 2-Fluorobiphenyl	*76.6 %*			*50-110*	EPP	10/20/03 16:29	
Surrogate: 2,4,6-Tribromophenol	*127 %*			*59-130*	EPP	10/20/03 16:29	
Surrogate: Phenol-d6	*70.0 %*			*44-115*	EPP	10/20/03 16:29	
Surrogate: Terphenyl-dl4	*112 %*			*40-110*	EPP	10/20/03 16:29	S-BN
Surrogate: Nitrobenzene-d5	*72.5 %*			*47-123*	EPP	10/20/03 16:29	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.10 ug/l	0.10	1J31638	EPA 8082	EPP	10/24/03 13:00	
Arochlor 1221	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 13:00	
Arochlor 1232	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 13:00	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-02 MW-1				Matrix:Water		Collected: 10/10/03 12:00	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1242	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 13:00	
Arochlor 1248	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 13:00	
Arochlor 1254	<0.10 ug/l	0.10	1J31638	EPA 8082	EPP	10/24/03 13:00	
Arochlor 1260	<0.10 ug/l	0.10	1J31638	EPA 8082	EPP	10/24/03 13:00	
Surrogate: Decachlorobiphenyl	*66.6 %*			*55-130*	EPP	10/24/03 13:00	
Determination of Total Metals							
Arsenic, total	<0.005 mg/l	0.005	1J31306	EPA 7060A	LAR	10/15/03 18:13	
Barium, total	**0.046 mg/l**	**0.010**	1J31401	EPA 6010B	RVV	10/14/03 14:55	
Cadmium, total	<0.0010 mg/l	0.0010	1J31306	EPA 7131A	LAR	10/15/03 18:09	
Chromium, total	<0.005 mg/l	0.005	1J31401	EPA 6010B	RVV	10/14/03 14:55	
Lead, total	<0.005 mg/l	0.005	1J31401	EPA 6010B	RVV	10/14/03 14:55	
Mercury, total	<0.0005 mg/l	0.00050	1J31416	EPA 7470A	MAQ	10/15/03 14:00	
Selenium, total	<0.005 mg/l	0.005	1J31306	EPA 7740	LKM	10/14/03 16:15	
Silver, total	<0.010 mg/l	0.010	1J31401	EPA 6010B	RVV	10/14/03 14:55	
13J0548-03 MW-2				Matrix:Water		Collected: 10/10/03 10:15	
Determination of Volatile Organic Compounds							
Chloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Vinyl Chloride	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Bromomethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Chloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
1,1-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Acetone	<10.0 ug/l	10.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Carbon Disulfide	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Methylene Chloride	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
trans-1,2-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/l	2.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
1,1-Dichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
cis-1,2-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
2-Butanone (MEK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Chloroform	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
1,1,1-Trichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Carbon Tetrachloride	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Benzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
1,2-Dichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Trichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
1,2-Dichloropropane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Bromodichloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
cis-1,3-Dichloropropene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-03 MW-2				Matrix:Water		Collected: 10/10/03 10:15	
Determination of Volatile Organic Compounds							
Toluene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
trans-1,3-Dichloropropene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
1,1,2-Trichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Tetrachloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
2-Hexanone (MBK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Dibromochloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Chlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Ethylbenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Xylenes, total	<2.0 ug/l	2.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Bromoform	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
1,1,2,2-Tetrachloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
1,3-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
1,4-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
1,2-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Naphthalene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 21:23	
Surrogate: Dibromofluoromethane	*101 %*			*78-124*	TVK	10/14/03 21:23	
Surrogate: 1,2-Dichloroethane-d4	*102 %*			*72-122*	TVK	10/14/03 21:23	
Surrogate: Toluene-d8	*102 %*			*84-120*	TVK	10/14/03 21:23	
Surrogate: 4-Bromofluorobenzene	*95.6 %*			*80-124*	TVK	10/14/03 21:23	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<10 ug/l	10	1J31712	EPA 8015	JRF	10/16/03 20:31	
Surrogate: Chlorobenzene	*116 %*			*65-120*	JRF	10/16/03 20:31	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 2:36	
TEH, as #2 diesel fuel	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 2:36	
TEH, as waste oil	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 2:36	
Total Extractable Hydrocarbons	<0.1 mg/l	0.1	1J31539	EPA 8015	SMG	10/17/03 2:36	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Phenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Aniline	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Bis(2-Chloroethyl) Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2-Chlorophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
1,3-Dichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
1,4-Dichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Benzyl Alcohol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
1,2-Dichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
n-Nitroso-di-n-propylamine	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2-Methylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Bis(2-Chloroisopropyl) Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
(3 & 4)-Methylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-03 MW-2				Matrix:Water		Collected: 10/10/03 10:15	
Determination of Base/Neutral/Acid Extractable Compounds							
Hexachloroethane	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Nitrobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Isophorone	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2-Nitrophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2,4-Dimethylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Bis(2-Chloroethoxy) Methane	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2,4-Dichlorophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
1,2,4-Trichlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Naphthalene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
4-Chloroaniline	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Hexachlorobutadiene	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 17:04	
4-Chloro-3-methylphenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2-Methylnaphthalene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Hexachlorocyclopentadiene	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2,4,6-Trichlorophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2,4,5-Trichlorophenol	<50 ug/l	50	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2-Chloronaphthalene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2-Nitroaniline	<50 ug/l	50	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Dimethylphthalate	<15 ug/l	15	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Acenaphthylene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2,6-Dinitrotoluene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
3-Nitroaniline	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Acenaphthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2,4-Dinitrophenol	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Dibenzofuran	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
2,4-Dinitrotoluene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
4-Nitrophenol	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Diethyl Phthalate	<30 ug/l	30	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Fluorene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
4-Chlorophenyl Phenyl Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
4-Nitroaniline	5 <20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 17:04	
4,6-Dinitro-2-methylphenol	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 17:04	
N-Nitrosodiphenylamine	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Azobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
4-Bromophenyl Phenyl Ether	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Hexachlorobenzene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Pentachlorophenol	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Phenanthrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Anthracene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Di-n-butyl Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-03 MW-2				Matrix:Water		Collected: 10/10/03 10:15	
Determination of Base/Neutral/Acid Extractable Compounds							
Fluoranthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Benzidine	<50 ug/l	50	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Pyrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Butyl Benzyl Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
3,3'-Dichlorobenzidine	<20 ug/l	20	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Benzo(a)anthracene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Chrysene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Bis(2-Ethylhexyl) Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Di-n-octyl Phthalate	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Benzo(b)Fluoranthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Benzo(k)Fluoranthene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Benzo(a)Pyrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Indeno(1,2,3-cd)Pyrene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Dibenzo(a,h)anthracene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Benzo(g,h,i)perylene	<10 ug/l	10	1J31537	EPA 8270C	EPP	10/20/03 17:04	
Surrogate: 2-Fluorophenol	*63.4 %*			*45-110*	EPP	10/20/03 17:04	
Surrogate: 2-Fluorobiphenyl	*81.8 %*			*50-110*	EPP	10/20/03 17:04	
Surrogate: 2,4,6-Tribromophenol	*129 %*			*59-130*	EPP	10/20/03 17:04	
Surrogate: Phenol-d6	*69.6 %*			*44-115*	EPP	10/20/03 17:04	
Surrogate: Terphenyl-d14	*101 %*			*40-110*	EPP	10/20/03 17:04	
Surrogate: Nitrobenzene-d5	*77.0 %*			*47-123*	EPP	10/20/03 17:04	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.10 ug/l	0.10	1J31638	EPA 8082	EPP	10/24/03 13:30	
Arochlor 1221	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 13:30	
Arochlor 1232	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 13:30	
Arochlor 1242	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 13:30	
Arochlor 1248	<0.20 ug/l	0.20	1J31638	EPA 8082	EPP	10/24/03 13:30	
Arochlor 1254	<0.10 ug/l	0.10	1J31638	EPA 8082	EPP	10/24/03 13:30	
Arochlor 1260	<0.10 ug/l	0.10	1J31638	EPA 8082	EPP	10/24/03 13:30	
Surrogate: Decachlorobiphenyl	*40.0 %*			*55-130*	EPP	10/24/03 13:30	S-07
Determination of Total Metals							
Arsenic, total	<0.005 mg/l	0.005	1J31306	EPA 7060A	LAR	10/15/03 18:13	
Barium, total	**0.064 mg/l**	**0.010**	1J31401	EPA 6010B	RVV	10/14/03 14:59	
Cadmium, total	<0.0010 mg/l	0.0010	1J31306	EPA 7131A	LAR	10/15/03 18:09	
Chromium, total	<0.005 mg/l	0.005	1J31401	EPA 6010B	RVV	10/14/03 14:59	
Lead, total	**0.006 mg/l**	**0.005**	1J31401	EPA 6010B	RVV	10/14/03 14:59	
Mercury, total	<0.0005 mg/l	0.00050	1J31416	EPA 7470A	MAQ	10/15/03 14:00	
Selenium, total	<0.005 mg/l	0.005	1J31306	EPA 7740	LKM	10/14/03 16:15	
Silver, total	<0.010 mg/l	0.010	1J31401	EPA 6010B	RVV	10/14/03 14:59	

13J0548-04 Trip Blank 10-30-03 JRF 10:45 Sealed — Matrix:Water — Collected: 10/10/03 00:00

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13J0548-04 Trip Blank 10-30-03 JRF 10:45 Sealed				Matrix: Water		Collected: 10/10/03 00:00	
Determination of Volatile Organic Compounds							
Chloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Vinyl Chloride	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Bromomethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Chloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
1,1-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Acetone	<10.0 ug/l	10.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Carbon Disulfide	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Methylene Chloride	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
trans-1,2-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/l	2.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
1,1-Dichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
cis-1,2-Dichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
2-Butanone (MEK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Chloroform	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
1,1,1-Trichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Carbon Tetrachloride	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Benzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
1,2-Dichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Trichloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
1,2-Dichloropropane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Bromodichloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
cis-1,3-Dichloropropene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Toluene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
trans-1,3-Dichloropropene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
1,1,2-Trichloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Tetrachloroethylene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
2-Hexanone (MBK)	<5.0 ug/l	5.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Dibromochloromethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Chlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Ethylbenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Xylenes, total	<2.0 ug/l	2.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Bromoform	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
1,1,2,2-Tetrachloroethane	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
1,3-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
1,4-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
1,2-Dichlorobenzene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Naphthalene	<1.0 ug/l	1.0	1J31526	EPA 8260B	TVK	10/14/03 19:27	
Surrogate: Dibromofluoromethane	*102 %*			*78-124*	TVK	10/14/03 19:27	
Surrogate: 1,2-Dichloroethane-d4	*105 %*			*72-122*	TVK	10/14/03 19:27	
Surrogate: Toluene-d8	*102 %*			*84-120*	TVK	10/14/03 19:27	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

13J0548-04 Trip Blank 10-30-03 JRF 10:45 Sealed Matrix: Water Collected: 10/10/03 00:00

Determination of Volatile Organic Compounds

Surrogate: 4-Bromofluorobenzene	*97.6 %*	*80-124*	TVK	10/14/03 19:27

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31526 - EPA 5030B										
Blank (1J31526-BLK1)				Prepared & Analyzed: 10/14/03						
Chloromethane	ND	1.0	ug/l							
Vinyl Chloride	ND	1.0	"							
Bromomethane	ND	1.0	"							
Chloroethane	ND	1.0	"							
1,1-Dichloroethylene	ND	1.0	"							
Acetone	ND	10.0	"							
Carbon Disulfide	ND	1.0	"							
Methylene Chloride	ND	5.0	"							
trans-1,2-Dichloroethylene	ND	1.0	"							
Methyl-t-butyl Ether (MTBE)	ND	2.0	"							
1,1-Dichloroethane	ND	1.0	"							
cis-1,2-Dichloroethylene	ND	1.0	"							
2-Butanone (MEK)	ND	5.0	"							
Chloroform	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Carbon Tetrachloride	ND	1.0	"							
Benzene	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Trichloroethylene	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
4-Methyl-2-pentanone (MIBK)	ND	5.0	"							
Toluene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
Tetrachloroethylene	ND	1.0	"							
2-Hexanone (MBK)	ND	5.0	"							
Dibromochloromethane	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	2.0	"							
Bromoform	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31526 - EPA 5030B										
Blank (1J31526-BLK1)				Prepared & Analyzed: 10/14/03						
1,4-Dichlorobenzene	ND	1.0	ug/l							
1,2-Dichlorobenzene	ND	1.0	"							
Naphthalene	ND	1.0	"							
Surrogate: Dibromofluoromethane	*50.12*		"	*50.00*		*100*	*78-124*			
Surrogate: 1,2-Dichloroethane-d4	*51.68*		"	*50.00*		*103*	*72-122*			
Surrogate: Toluene-d8	*50.20*		"	*50.00*		*100*	*84-120*			
Surrogate: 4-Bromofluorobenzene	*49.63*		"	*50.00*		*99.3*	*80-124*			
LCS (1J31526-BS1)				Prepared & Analyzed: 10/14/03						
Chloromethane	98.23	1.0	ug/l	100.0		98.2	70-130			
Vinyl Chloride	103.0	1.0	"	100.0		103	70-130			
Bromomethane	96.31	1.0	"	100.0		96.3	70-130			
Chloroethane	100.6	1.0	"	100.0		101	70-130			
1,1-Dichloroethylene	49.82	1.0	"	50.00		99.6	70-130			
Acetone	223.2	10.0	"	232.0		96.2	70-130			
Carbon Disulfide	211.2	1.0	"	212.0		99.6	70-130			
Methylene Chloride	48.26	5.0	"	50.00		96.5	70-130			
trans-1,2-Dichloroethylene	47.85	1.0	"	50.00		95.7	70-130			
Methyl-t-butyl Ether (MTBE)	190.1	2.0	"	190.0		100	65-134			
1,1-Dichloroethane	47.62	1.0	"	50.00		95.2	70-130			
cis-1,2-Dichloroethylene	47.76	1.0	"	50.00		95.5	70-130			
2-Butanone (MEK)	230.5	5.0	"	234.0		98.5	70-130			
Chloroform	47.91	1.0	"	50.00		95.8	70-130			
1,1,1-Trichloroethane	49.61	1.0	"	50.00		99.2	70-130			
Carbon Tetrachloride	50.94	1.0	"	50.00		102	70-130			
Benzene	48.29	1.0	"	50.00		96.6	69-140			
1,2-Dichloroethane	48.86	1.0	"	50.00		97.7	70-130			
Trichloroethylene	47.41	1.0	"	50.00		94.8	80-124			
1,2-Dichloropropane	48.49	1.0	"	50.00		97.0	70-130			
Bromodichloromethane	49.05	1.0	"	50.00		98.1	70-130			
cis-1,3-Dichloropropene	49.05	1.0	"	50.00		98.1	70-130			
4-Methyl-2-pentanone (MIBK)	227.6	5.0	"	218.0		104	70-130			
Toluene	48.06	1.0	"	50.00		96.1	69-137			
trans-1,3-Dichloropropene	48.68	1.0	"	50.00		97.4	70-130			
1,1,2-Trichloroethane	48.93	1.0	"	50.00		97.9	70-130			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0548

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31526 - EPA 5030B										
LCS (1J31526-BS1)				Prepared & Analyzed: 10/14/03						
Tetrachloroethylene	48.38	1.0	ug/l	50.00		96.8	81-120			
2-Hexanone (MBK)	229.7	5.0	"	226.0		102	70-130			
Dibromochloromethane	48.51	1.0	"	50.00		97.0	70-130			
Chlorobenzene	47.60	1.0	"	50.00		95.2	78-128			
Ethylbenzene	48.05	1.0	"	50.00		96.1	73-137			
Xylenes, total	145.6	2.0	"	150.0		97.1	75-137			
Bromoform	50.44	1.0	"	50.00		101	70-130			
1,1,2,2-Tetrachloroethane	49.99	1.0	"	50.00		100	70-130			
1,3-Dichlorobenzene	46.77	1.0	"	50.00		93.5	70-130			
1,4-Dichlorobenzene	47.88	1.0	"	50.00		95.8	70-130			
1,2-Dichlorobenzene	47.17	1.0	"	50.00		94.3	70-130			
Naphthalene	48.96	1.0	"	50.00		97.9	61-125			
Surrogate: Dibromofluoromethane	*49.67*		"	*50.00*		*99.3*	*78-124*			
Surrogate: 1,2-Dichloroethane-d4	*49.84*		"	*50.00*		*99.7*	*72-122*			
Surrogate: Toluene-d8	*50.86*		"	*50.00*		*102*	*84-120*			
Surrogate: 4-Bromofluorobenzene	*50.50*		"	*50.00*		*101*	*80-124*			
Calibration Check (1J31526-CCV1)				Prepared & Analyzed: 10/14/03						
Chloromethane	94.45	1.0	ug/l	100.0		94.4	70-130			
Vinyl Chloride	104.6	1.0	"	100.0		105	70-130			
Bromomethane	97.81	1.0	"	100.0		97.8	70-130			
Chloroethane	103.0	1.0	"	100.0		103	70-130			
1,1-Dichloroethylene	51.47	1.0	"	50.00		103	70-130			
Acetone	207.4	10.0	"	232.0		89.4	70-130			
Carbon Disulfide	212.3	1.0	"	212.0		100	70-130			
Methylene Chloride	48.74	5.0	"	50.00		97.5	70-130			
trans-1,2-Dichloroethylene	49.70	1.0	"	50.00		99.4	70-130			
Methyl-t-butyl Ether (MTBE)	188.3	2.0	"	190.0		99.1	70-130			
1,1-Dichloroethane	49.59	1.0	"	50.00		99.2	70-130			
cis-1,2-Dichloroethylene	48.81	1.0	"	50.00		97.6	70-130			
2-Butanone (MEK)	226.2	5.0	"	234.0		96.7	70-130			
Chloroform	48.88	1.0	"	50.00		97.8	70-130			
1,1,1-Trichloroethane	50.48	1.0	"	50.00		101	70-130			
Carbon Tetrachloride	51.61	1.0	"	50.00		103	70-130			
Benzene	48.43	1.0	"	50.00		96.9	70-130			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0548

October 27, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31526 - EPA 5030B										
Calibration Check (1J31526-CCV1)				Prepared & Analyzed: 10/14/03						
1,2-Dichloroethane	49.99	1.0	ug/l	50.00		100	70-130			
Trichloroethylene	48.33	1.0	"	50.00		96.7	70-130			
1,2-Dichloropropane	48.81	1.0	"	50.00		97.6	70-130			
Bromodichloromethane	49.15	1.0	"	50.00		98.3	70-130			
cis-1,3-Dichloropropene	49.38	1.0	"	50.00		98.8	70-130			
4-Methyl-2-pentanone (MIBK)	216.8	5.0	"	218.0		99.4	70-130			
Toluene	49.49	1.0	"	50.00		99.0	70-130			
trans-1,3-Dichloropropene	47.65	1.0	"	50.00		95.3	70-130			
1,1,2-Trichloroethane	48.38	1.0	"	50.00		96.8	70-130			
Tetrachloroethylene	49.90	1.0	"	50.00		99.8	70-130			
2-Hexanone (MBK)	220.6	5.0	"	226.0		97.6	70-130			
Dibromochloromethane	48.75	1.0	"	50.00		97.5	70-130			
Chlorobenzene	48.84	1.0	"	50.00		97.7	70-130			
Ethylbenzene	49.73	1.0	"	50.00		99.5	70-130			
Xylenes, total	149.7	2.0	"	150.0		99.8	70-130			
Bromoform	50.53	1.0	"	50.00		101	70-130			
1,1,2,2-Tetrachloroethane	49.24	1.0	"	50.00		98.5	70-130			
1,3-Dichlorobenzene	48.23	1.0	"	50.00		96.5	70-130			
1,4-Dichlorobenzene	46.70	1.0	"	50.00		93.4	70-130			
1,2-Dichlorobenzene	48.04	1.0	"	50.00		96.1	70-130			
Naphthalene	45.93	1.0	"	50.00		91.9	70-130			
Surrogate: Dibromofluoromethane	*49.03*		"	*50.00*		*98.1*	*78-124*			
Surrogate: 1,2-Dichloroethane-d4	*50.05*		"	*50.00*		*100*	*72-122*			
Surrogate: Toluene-d8	*49.65*		"	*50.00*		*99.3*	*84-120*			
Surrogate: 4-Bromofluorobenzene	*50.25*		"	*50.00*		*100*	*80-124*			
Matrix Spike (1J31526-MS1)		**Source: 13J0379-03**		Prepared: 10/14/03		Analyzed: 10/15/03				
1,1-Dichloroethylene	290.6	5.0	ug/l	277.5	ND	105	81-144			
Benzene	355.6	5.0	"	337.5	92.3	78.0	69-137			
Trichloroethylene	286.9	5.0	"	302.5	ND	94.8	88-123			
Toluene	279.0	5.0	"	296.0	ND	94.3	69-136			
Chlorobenzene	309.8	5.0	"	336.0	ND	92.2	86-119			
Surrogate: Dibromofluoromethane	*48.62*		"	*50.00*		*97.2*	*78-124*			
Surrogate: 1,2-Dichloroethane-d4	*49.04*		"	*50.00*		*98.1*	*72-122*			
Surrogate: Toluene-d8	*49.00*		"	*50.00*		*98.0*	*84-120*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31526 - EPA 5030B										
Matrix Spike (1J31526-MS1)		**Source: 13J0379-03**		Prepared: 10/14/03		Analyzed: 10/15/03				
Surrogate: 4-Bromofluorobenzene	*47.02*		*ug/l*	*50.00*		*94.0*	*80-124*			
Matrix Spike Dup (1J31526-MSD1)		**Source: 13J0379-03**		Prepared: 10/14/03		Analyzed: 10/15/03				
1,1-Dichloroethylene	289.7	5.0	ug/l	277.5	ND	104	81-144	0.310	19	
Benzene	357.7	5.0	"	337.5	92.3	78.6	69-137	0.589	17	
Trichloroethylene	290.5	5.0	"	302.5	ND	96.0	88-123	1.25	11	
Toluene	278.3	5.0	"	296.0	ND	94.0	69-136	0.251	15	
Chlorobenzene	312.5	5.0	"	336.0	ND	93.0	86-119	0.868	11	
Surrogate: Dibromofluoromethane	*49.12*		"	*50.00*		*98.2*	*78-124*			
Surrogate: 1,2-Dichloroethane-d4	*49.54*		"	*50.00*		*99.1*	*72-122*			
Surrogate: Toluene-d8	*49.37*		"	*50.00*		*98.7*	*84-120*			
Surrogate: 4-Bromofluorobenzene	*47.89*		"	*50.00*		*95.8*	*80-124*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0548

October 27, 2003

Determination of Volatile Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31712 - EPA 5030B										
Blank (1J31712-BLK1)				Prepared & Analyzed: 10/16/03						
TPH, as gasoline	ND	10	ug/l							
Surrogate: Chlorobenzene	*113.2*		"	*102.5*		*110*	*65-120*			
Calibration Check (1J31712-CCV1)				Prepared & Analyzed: 10/16/03						
Surrogate: Chlorobenzene	*108.9*		*ug/l*	*102.5*		*106*	*65-120*			
Calibration Check (1J31712-CCV2)				Prepared & Analyzed: 10/16/03						
TPH, as gasoline	1120	10	ug/l	1068		105	0-200			
Surrogate: Chlorobenzene	*105.7*		"	*102.5*		*103*	*65-120*			
Calibration Check (1J31712-CCV3)				Prepared: 10/16/03 Analyzed: 10/17/03						
Surrogate: Chlorobenzene	*119.7*		*ug/l*	*102.5*		*117*	*65-120*			
Calibration Check (1J31712-CCV4)				Prepared: 10/16/03 Analyzed: 10/17/03						
TPH, as gasoline	1175	10	ug/l	1068		110	0-200			
Surrogate: Chlorobenzene	*118.1*		"	*102.5*		*115*	*65-120*			
Matrix Spike (1J31712-MS1)		**Source: 13J0548-02**		Prepared & Analyzed: 10/16/03						
Surrogate: Chlorobenzene	*119.8*		*ug/l*	*102.5*		*117*	*65-120*			
Matrix Spike Dup (1J31712-MSD1)		**Source: 13J0548-02**		Prepared: 10/16/03 Analyzed: 10/17/03						
Surrogate: Chlorobenzene	*121.9*		*ug/l*	*102.5*		*119*	*65-120*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0548

October 27, 2003

Determination of Extractable Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31539 - 3510C OA-2 Sep Fnl										
Blank (1J31539-BLK1)				Prepared & Analyzed: 10/15/03						
TEH, as gasoline	ND	0.1	mg/l							
TEH, as #2 diesel fuel	ND	0.1	"							
TEH, as waste oil	ND	0.1	"							
Total Extractable Hydrocarbons	ND	0.1	"							
LCS (1J31539-BS1)				Prepared & Analyzed: 10/15/03						
TEH, as #2 diesel fuel	7.71	0.1	mg/l	10.25		75.2	70-730			
LCS Dup (1J31539-BSD1)				Prepared & Analyzed: 10/15/03						
TEH, as #2 diesel fuel	8.00	0.1	mg/l	10.25		78.0	70-730	3.69	20	
Calibration Check (1J31539-CCV1)				Prepared & Analyzed: 10/15/03						
TEH, as gasoline	2154		mg/l	2140		101	85-115			
TEH, as #2 diesel fuel	1985		"	2070		95.9	85-115			
TEH, as waste oil	1983		"	2040		97.2	85-115			
Calibration Check (1J31539-CCV2)				Prepared: 10/15/03 Analyzed: 10/16/03						
TEH, as gasoline	2402		mg/l	2140		112	85-115			
TEH, as #2 diesel fuel	2061		"	2070		99.6	85-115			
TEH, as waste oil	2016		"	2040		98.8	85-115			
Calibration Check (1J31539-CCV3)				Prepared: 10/15/03 Analyzed: 10/17/03						
TEH, as gasoline	2226		mg/l	2140		104	85-115			
TEH, as #2 diesel fuel	2021		"	2070		97.6	85-115			
TEH, as waste oil	1999		"	2040		98.0	85-115			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0548

October 27, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31537 - 3520C BNA Cont Liq										
Blank (1J31537-BLK1)				Prepared: 10/15/03 Analyzed: 10/20/03						
N-Nitrosodimethylamine	ND	10	ug/l							
Phenol	ND	10	"							
Aniline	ND	10	"							
Bis(2-Chloroethyl) Ether	ND	10	"							
2-Chlorophenol	ND	10	"							
1,3-Dichlorobenzene	ND	10	"							
1,4-Dichlorobenzene	ND	10	"							
Benzyl Alcohol	ND	10	"							
1,2-Dichlorobenzene	ND	10	"							
n-Nitroso-di-n-propylamine	ND	10	"							
2-Methylphenol	ND	10	"							
Bis(2-Chloroisopropyl) Ether	ND	10	"							
(3 & 4)-Methylphenol	ND	10	"							
Hexachloroethane	ND	10	"							
Nitrobenzene	ND	10	"							
Isophorone	ND	10	"							
2-Nitrophenol	ND	10	"							
2,4-Dimethylphenol	ND	10	"							
Bis(2-Chloroethoxy) Methane	ND	10	"							
2,4-Dichlorophenol	ND	10	"							
1,2,4-Trichlorobenzene	ND	10	"							
Naphthalene	ND	10	"							
4-Chloroaniline	ND	10	"							
Hexachlorobutadiene	ND	20	"							
4-Chloro-3-methylphenol	ND	10	"							
2-Methylnaphthalene	ND	10	"							
Hexachlorocyclopentadiene	ND	20	"							
2,4,6-Trichlorophenol	ND	10	"							
2,4,5-Trichlorophenol	ND	50	"							
2-Chloronaphthalene	ND	10	"							
2-Nitroaniline	ND	50	"							
Dimethylphthalate	ND	15	"							
Acenaphthylene	ND	10	"							
2,6-Dinitrotoluene	ND	10	"							
3-Nitroaniline	ND	10	"							

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Novi, MI 48375

Work Order: 13J0548

October 27, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31537 - 3520C BNA Cont Liq										
Blank (1J31537-BLK1)				Prepared: 10/15/03 Analyzed: 10/20/03						
Acenaphthene	ND	10	ug/l							
2,4-Dinitrophenol	ND	20	"							
Dibenzofuran	ND	10	"							
2,4-Dinitrotoluene	ND	10	"							
4-Nitrophenol	ND	10	"							
Diethyl Phthalate	ND	30	"							
Fluorene	ND	10	"							
4-Chlorophenyl Phenyl Ether	ND	10	"							
4-Nitroaniline	ND	20	"							
4,6-Dinitro-2-methylphenol	ND	20	"							
N-Nitrosodiphenylamine	ND	10	"							
Azobenzene	ND	10	"							
4-Bromophenyl Phenyl Ether	ND	10	"							
Hexachlorobenzene	ND	10	"							
Pentachlorophenol	ND	20	"							
Phenanthrene	ND	10	"							
Anthracene	ND	10	"							
Di-n-butyl Phthalate	ND	10	"							
Fluoranthene	ND	10	"							
Benzidine	ND	50	"							
Pyrene	ND	10	"							
Butyl Benzyl Phthalate	ND	10	"							
3,3'-Dichlorobenzidine	ND	20	"							
Benzo(a)anthracene	ND	10	"							
Chrysene	ND	10	"							
Bis(2-Ethylhexyl) Phthalate	ND	10	"							
Di-n-octyl Phthalate	ND	10	"							
Benzo(b)Fluoranthene	ND	10	"							
Benzo(k)Fluoranthene	ND	10	"							
Benzo(a)Pyrene	ND	10	"							
Indeno(1,2,3-cd)Pyrene	ND	10	"							
Dibenzo(a,h)anthracene	ND	10	"							
Benzo(g,h,i)perylene	ND	10	"							
Surrogate: 2-Fluorophenol	*37.5*		"	*48.8*		*76.8*	*45-110*			
Surrogate: 2-Fluorobiphenyl	*43.0*		"	*45.1*		*95.3*	*50-110*			

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Novi, MI 48375

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31537 - 3520C BNA Cont Liq										
Blank (1J31537-BLK1)				Prepared: 10/15/03		Analyzed: 10/20/03				
Surrogate: 2,4,6-Tribromophenol	*61.0*		*ug/l*	*45.9*		*133*	*59-130*			*S-A*
Surrogate: Phenol-d6	*37.1*		*"*	*45.4*		*81.7*	*44-115*			
Surrogate: Terphenyl-dl4	*43.5*		*"*	*45.1*		*96.5*	*40-110*			
Surrogate: Nitrobenzene-d5	*41.8*		*"*	*46.2*		*90.5*	*47-123*			
LCS (1J31537-BS1)				Prepared: 10/15/03		Analyzed: 10/20/03				
Phenol	49.5	10	ug/l	51.4		96.3	55-116			
2-Chlorophenol	46.0	10	"	50.0		92.0	46-121			
1,4-Dichlorobenzene	46.2	10	"	50.4		91.7	47-110			
n-Nitroso-di-n-propylamine	39.1	10	"	50.0		78.2	46-110			
(3 & 4)-Methylphenol	48.8	10	"	49.8		98.0	70-130			
Nitrobenzene	43.4	10	"	54.4		79.8	70-130			
2-Nitrophenol	50.2	10	"	52.0		96.5	70-130			
4-Chloro-3-methylphenol	49.2	10	"	50.8		96.9	59-123			
2,6-Dinitrotoluene	46.3	10	"	52.6		88.0	57-132			
4,6-Dinitro-2-methylphenol	53.1	20	"	52.6		101	70-130			
Pentachlorophenol	95.0	20	"	52.2		182	51-138			QS-02
Phenanthrene	43.4	10	"	50.0		86.8	70-130			
Anthracene	37.2	10	"	50.6		73.5	70-130			
Di-n-butyl Phthalate	49.2	10	"	53.2		92.5	70-130			
Fluoranthene	41.5	10	"	50.8		81.7	70-130			
Pyrene	53.6	10	"	52.2		103	48-119			
Surrogate: 2-Fluorophenol	*39.1*		*"*	*48.8*		*80.1*	*45-110*			
Surrogate: 2-Fluorobiphenyl	*39.2*		*"*	*45.1*		*86.9*	*50-110*			
Surrogate: 2,4,6-Tribromophenol	*58.6*		*"*	*45.9*		*128*	*59-130*			
Surrogate: Phenol-d6	*43.0*		*"*	*45.4*		*94.7*	*44-115*			
Surrogate: Terphenyl-dl4	*45.7*		*"*	*45.1*		*101*	*40-110*			
Surrogate: Nitrobenzene-d5	*37.8*		*"*	*46.2*		*81.8*	*47-123*			

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Novi, MI 48375

Work Order: 13J0548

October 27, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31537 - 3520C BNA Cont Liq										
Calibration Check (1J31537-CCV1)				Prepared: 10/15/03		Analyzed: 10/20/03				
N-Nitrosodimethylamine	48.3		ug/l	42.0		115	80-120			
Phenol	44.5		"	42.0		106	80-120			
Aniline	47.7		"	42.0		114	80-120			
Bis(2-Chloroethyl) Ether	42.4		"	42.0		101	80-120			
2-Chlorophenol	44.6		"	42.0		106	80-120			
1,3-Dichlorobenzene	43.5		"	42.0		104	80-120			
1,4-Dichlorobenzene	44.3		"	42.0		105	80-120			
Benzyl Alcohol	47.3		"	42.0		113	80-120			
1,2-Dichlorobenzene	44.1		"	42.4		104	80-120			
n-Nitroso-di-n-propylamine	43.2		"	42.0		103	80-120			
2-Methylphenol	44.4		"	42.0		106	80-120			
Bis(2-Chloroisopropyl) Ether	43.5		"	42.0		104	80-120			
(3 & 4)-Methylphenol	44.3		"	42.0		105	80-120			
Hexachloroethane	45.6		"	42.0		109	80-120			
Nitrobenzene	43.6		"	42.0		104	80-120			
Isophorone	44.0		"	42.0		105	80-120			
2-Nitrophenol	41.3		"	42.2		97.9	80-120			
2,4-Dimethylphenol	44.7		"	42.0		106	80-120			
Bis(2-Chloroethoxy) Methane	43.2		"	42.0		103	80-120			
2,4-Dichlorophenol	43.8		"	42.0		104	80-120			
1,2,4-Trichlorobenzene	40.7		"	42.0		96.9	80-120			
Naphthalene	42.1		"	42.0		100	80-120			
4-Chloroaniline	46.6		"	42.0		111	80-120			
Hexachlorobutadiene	47.8		"	42.0		114	80-120			
4-Chloro-3-methylphenol	45.9		"	42.0		109	80-120			
2-Methylnaphthalene	43.1		"	42.0		103	80-120			
Hexachlorocyclopentadiene	38.2		"	42.4		90.1	80-120			
2,4,6-Trichlorophenol	41.8		"	42.0		99.5	80-120			
2,4,5-Trichlorophenol	42.1		"	42.2		99.8	80-120			
2-Chloronaphthalene	42.0		"	42.0		100	80-120			
2-Nitroaniline	41.2		"	42.1		97.9	80-120			
Dimethylphthalate	42.0		"	42.0		100	80-120			
Acenaphthylene	39.3		"	42.0		93.6	80-120			
2,6-Dinitrotoluene	39.5		"	42.0		94.0	80-120			
3-Nitroaniline	43.2		"	42.0		103	80-120			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0548

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31537 - 3520C BNA Cont Liq										
Calibration Check (1J31537-CCV1)				Prepared: 10/15/03		Analyzed: 10/20/03				
Acenaphthene	42.6		ug/l	42.0		101	80-120			
2,4-Dinitrophenol	49.6		"	42.0		118	80-120			
Dibenzofuran	40.4		"	42.0		96.2	80-120			
2,4-Dinitrotoluene	41.8		"	42.0		99.5	80-120			
4-Nitrophenol	45.1		"	42.2		107	80-120			
Diethyl Phthalate	43.4		"	42.0		103	80-120			
Fluorene	41.0		"	42.0		97.6	80-120			
4-Chlorophenyl Phenyl Ether	41.6		"	42.0		99.0	80-120			
4-Nitroaniline	32.9		"	42.0		78.3	80-120			QR-06
4,6-Dinitro-2-methylphenol	48.6		"	42.2		115	80-120			
N-Nitrosodiphenylamine	41.3		"	42.1		98.1	80-120			
Azobenzene	41.9		"	42.0		99.8	80-120			
4-Bromophenyl Phenyl Ether	42.0		"	42.0		100	80-120			
Hexachlorobenzene	43.8		"	42.0		104	80-120			
Pentachlorophenol	88.5		"	42.2		210	80-120			QS-02
Phenanthrene	46.6		"	42.0		111	80-120			
Anthracene	43.9		"	42.0		105	80-120			
Di-n-butyl Phthalate	42.9		"	42.0		102	80-120			
Fluoranthene	41.0		"	42.0		97.6	80-120			
Pyrene	46.4		"	42.0		110	80-120			
Butyl Benzyl Phthalate	44.1		"	42.0		105	80-120			
Benzo(a)anthracene	41.5		"	42.0		98.8	80-120			
Chrysene	42.9		"	42.0		102	80-120			
Bis(2-Ethylhexyl) Phthalate	46.5		"	42.0		111	80-120			
Di-n-octyl Phthalate	45.2		"	42.1		107	80-120			
Benzo(b)Fluoranthene	40.0		"	42.0		95.2	80-120			
Benzo(k)Fluoranthene	45.4		"	42.0		108	80-120			
Benzo(a)Pyrene	38.9		"	42.0		92.6	80-120			
Indeno(1,2,3-cd)Pyrene	37.3		"	42.0		88.8	80-120			
Dibenzo(a,h)anthracene	41.6		"	42.0		99.0	80-120			
Benzo(g,h,i)perylene	41.6		"	42.0		99.0	80-120			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0548

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31537 - 3520C BNA Cont Liq										
Matrix Spike (1J31537-MS1)		**Source: 13J0548-02**		Prepared: 10/15/03		Analyzed: 10/20/03				
Phenol	41.9	10	ug/l	56.7	ND	73.9	55-116			
2-Chlorophenol	40.1	10	"	55.2	ND	72.6	46-121			
1,4-Dichlorobenzene	41.6	10	"	55.6	ND	74.8	47-110			
n-Nitroso-di-n-propylamine	34.9	10	"	55.2	ND	63.2	45-120			
(3 & 4)-Methylphenol	46.0	10	"	55.0	ND	83.6	70-130			
Nitrobenzene	42.4	10	"	60.0	ND	70.7	70-130			
2-Nitrophenol	42.5	10	"	57.3	ND	74.2	70-130			
4-Chloro-3-methylphenol	52.9	10	"	56.1	ND	94.3	59-123			
2,6-Dinitrotoluene	54.1	10	"	58.1	ND	93.1	57-132			
4,6-Dinitro-2-methylphenol	60.4	20	"	58.1	ND	104	70-130			
Pentachlorophenol	101.0	20	"	57.6	ND	175	51-138			QS-02
Phenanthrene	49.1	10	"	55.2	ND	88.9	70-130			
Anthracene	40.9	10	"	55.8	ND	73.3	70-130			
Di-n-butyl Phthalate	47.3	10	"	58.7	ND	80.6	70-130			
Fluoranthene	41.9	10	"	56.1	ND	74.7	70-130			
Pyrene	51.2	10	"	57.6	ND	88.9	48-119			
Surrogate: 2-Fluorophenol	*36.3*		*"*	*53.9*		*67.3*	*45-110*			
Surrogate: 2-Fluorobiphenyl	*38.9*		*"*	*49.8*		*78.1*	*50-110*			
Surrogate: 2,4,6-Tribromophenol	*64.8*		*"*	*50.7*		*128*	*59-130*			
Surrogate: Phenol-d6	*38.0*		*"*	*50.1*		*75.8*	*44-115*			
Surrogate: Terphenyl-d14	*44.8*		*"*	*49.8*		*90.0*	*40-110*			
Surrogate: Nitrobenzene-d5	*35.8*		*"*	*50.9*		*70.3*	*47-123*			
Matrix Spike Dup (1J31537-MSD1)		**Source: 13J0548-02**		Prepared: 10/15/03		Analyzed: 10/20/03				
Phenol	41.1	10	ug/l	54.6	ND	75.3	55-116	1.93	35	
2-Chlorophenol	41.1	10	"	53.1	ND	77.4	46-121	2.46	36	
1,4-Dichlorobenzene	42.0	10	"	53.6	ND	78.4	47-110	0.957	44	
n-Nitroso-di-n-propylamine	36.9	10	"	53.1	ND	69.5	45-120	5.57	23	
(3 & 4)-Methylphenol	48.3	10	"	52.9	ND	91.3	70-130	4.88	20	
Nitrobenzene	41.5	10	"	57.8	ND	71.8	70-130	2.15	20	
2-Nitrophenol	42.1	10	"	55.2	ND	76.3	70-130	0.946	20	
4-Chloro-3-methylphenol	49.0	10	"	54.0	ND	90.7	59-123	7.65	28	
2,6-Dinitrotoluene	52.0	10	"	55.9	ND	93.0	57-132	3.96	11	
4,6-Dinitro-2-methylphenol	61.0	20	"	55.9	ND	109	70-130	0.988	20	
Pentachlorophenol	101.1	20	"	55.5	ND	182	51-138	0.0990	27	QS-02

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0548

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31537 - 3520C BNA Cont Liq										
Matrix Spike Dup (1J31537-MSD1)		**Source: 13J0548-02**		Prepared: 10/15/03		Analyzed: 10/20/03				
Phenanthrene	48.9	10	ug/l	53.1	ND	92.1	70-130	0.408	20	
Anthracene	38.8	10	"	53.8	ND	72.1	70-130	5.27	20	
Di-n-butyl Phthalate	43.7	10	"	56.5	ND	77.3	70-130	7.91	20	
Fluoranthene	44.2	10	"	54.0	ND	81.9	70-130	5.34	20	
Pyrene	48.8	10	"	55.5	ND	87.9	48-119	4.80	29	
Surrogate: 2-Fluorophenol	*39.5*		*"*	*51.9*		*76.1*	*45-110*			
Surrogate: 2-Fluorobiphenyl	*39.6*		*"*	*47.9*		*82.7*	*50-110*			
Surrogate: 2,4,6-Tribromophenol	*66.4*		*"*	*48.8*		*136*	*59-130*			*S-A*
Surrogate: Phenol-d6	*37.8*		*"*	*48.2*		*78.4*	*44-115*			
Surrogate: Terphenyl-d14	*46.0*		*"*	*47.9*		*96.0*	*40-110*			
Surrogate: Nitrobenzene-d5	*35.3*		*"*	*49.0*		*72.0*	*47-123*			
Reference (1J31537-SRM1)				Prepared: 10/15/03		Analyzed: 10/20/03				
Phenol	50.0	10	ug/l	51.5		97.1	70-130			
2-Chlorophenol	53.5	10	"	50.0		107	70-130			
1,4-Dichlorobenzene	50.1	10	"	50.5		99.2	70-130			
n-Nitroso-di-n-propylamine	52.0	10	"	50.0		104	70-130			
(3 & 4)-Methylphenol	56.3	10	"	49.8		113	70-130			
Nitrobenzene	53.7	10	"	54.5		98.5	70-130			
2-Nitrophenol	50.1	10	"	52.0		96.3	70-130			
4-Chloro-3-methylphenol	50.4	10	"	51.0		98.8	70-130			
Dimethylphthalate	54.4	15	"	53.5		102	70-130			
2,6-Dinitrotoluene	47.9	10	"	52.5		91.2	70-130			
Diethyl Phthalate	48.8	30	"	53.5		91.2	70-130			
4,6-Dinitro-2-methylphenol	54.8	20	"	52.5		104	70-130			
Pentachlorophenol	100.8	20	"	52.0		194	70-130			QS-02
Phenanthrene	50.4	10	"	50.0		101	70-130			
Anthracene	48.3	10	"	50.5		95.6	70-130			
Di-n-butyl Phthalate	61.2	10	"	53.0		115	70-130			
Fluoranthene	49.7	10	"	51.0		97.5	70-130			
Pyrene	42.5	10	"	52.0		81.7	70-130			
Surrogate: 2-Fluorophenol	*61.8*		*"*	*48.8*		*127*	*70-130*			
Surrogate: 2-Fluorobiphenyl	*46.0*		*"*	*45.1*		*102*	*70-130*			
Surrogate: 2,4,6-Tribromophenol	*62.2*		*"*	*45.9*		*136*	*70-130*			*S-A*
Surrogate: Phenol-d6	*51.4*		*"*	*45.4*		*113*	*70-130*			

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Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31537 - 3520C BNA Cont Liq										
Reference (1J31537-SRM1)				Prepared: 10/15/03		Analyzed: 10/20/03				
Surrogate: Terphenyl-dl4	*38.0*		*ug/l*	*45.1*		*84.3*	*70-130*			
Surrogate: Nitrobenzene-d5	*42.3*		*"*	*46.2*		*91.6*	*70-130*			

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Novi, MI 48375

Work Order: 13J0548

Determination of Polychlorinated Biphenyls (PCB) - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31638 - 3510C NP/OC Sep Fnl										
Blank (1J31638-BLK1)				Prepared: 10/16/03		Analyzed: 10/24/03				
Arochlor 1016	ND	0.10	ug/l							
Arochlor 1221	ND	0.20	"							
Arochlor 1232	ND	0.20	"							
Arochlor 1242	ND	0.20	"							
Arochlor 1248	ND	0.20	"							
Arochlor 1254	ND	0.10	"							
Arochlor 1260	ND	0.10	"							
Surrogate: Decachlorobiphenyl	*0.335*		"	*0.962*		*34.8*	*55-130*			*S-*
LCS (1J31638-BS1)				Prepared: 10/16/03		Analyzed: 10/24/03				
Arochlor 1016	3.035	0.10	ug/l	2.800		108	60-140			
Arochlor 1260	2.900	0.10	"	2.800		104	71-140			
Surrogate: Decachlorobiphenyl	*0.215*		"	*0.962*		*22.3*	*55-130*			*S-*
Calibration Check (1J31638-CCV1)				Prepared: 10/16/03		Analyzed: 10/24/03				
Arochlor 1016	1.134		ug/l	1.120		101	75-125			
Arochlor 1260	1.138		"	1.120		102	75-125			
Matrix Spike (1J31638-MS1)		**Source: 13J0548-02**		Prepared: 10/16/03		Analyzed: 10/24/03				
Arochlor 1016	3.056	0.10	ug/l	3.008	ND	102	60-140			
Arochlor 1260	3.072	0.10	"	3.008	ND	102	60-140			
Surrogate: Decachlorobiphenyl	*0.602*		"	*1.033*		*58.3*	*55-130*			
Matrix Spike Dup (1J31638-MSD1)		**Source: 13J0548-02**		Prepared: 10/16/03		Analyzed: 10/24/03				
Arochlor 1016	3.059	0.10	ug/l	3.053	ND	100	60-140	0.0981	30	
Arochlor 1260	2.988	0.10	"	3.053	ND	97.9	60-140	2.77	30	
Surrogate: Decachlorobiphenyl	*0.583*		"	*1.049*		*55.6*	*55-130*			

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Novi, MI 48375

October 27, 2003

Work Order: 13J0548

Determination of Polychlorinated Biphenyls (PCB) - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31638 - 3510C NP/OC Sep Fnl										
Reference (1J31638-SRM1)				Prepared: 10/16/03		Analyzed: 10/24/03				
Arochlor 1016	2.925	0.10	ug/l	2.800		104	70-130			
Arochlor 1260	2.900	0.10	"	2.800		104	70-130			
Surrogate: Decachlorobiphenyl	*0.915*		*"*	*0.962*		*95.1*	*70-130*			

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Novi, MI 48375

Work Order: 13J0548

October 27, 2003

Determination of Total Metals - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31306 - EPA 3020A Total GFAA										
Blank (1J31306-BLK1)				Prepared: 10/13/03		Analyzed: 10/15/03				
Arsenic, total	ND	0.005	mg/l							
Cadmium, total	ND	0.0010	"							
Selenium, total	ND	0.005	"							
LCS (1J31306-BS1)				Prepared: 10/13/03		Analyzed: 10/15/03				
Arsenic, total	0.0256	0.005	mg/l	0.0250		102	84-132			
Cadmium, total	0.00092	0.0010	"	0.00100		92.0	78-121			
Selenium, total	0.0246	0.005	"	0.0250		98.4	84-127			
Calibration Check (1J31306-CCV1)				Prepared: 10/13/03		Analyzed: 10/15/03				
Arsenic, total	0.0247		mg/l	0.0250		98.8	90-110			
Selenium, total	0.0234		"	0.0250		93.6	90-110			
Calibration Check (1J31306-CCV2)				Prepared: 10/13/03		Analyzed: 10/15/03				
Arsenic, total	0.0252		mg/l	0.0250		101	85-115			
Selenium, total	0.0221		"	0.0250		88.4	85-115			
Calibration Check (1J31306-CCV3)				Prepared: 10/13/03		Analyzed: 10/15/03				
Cadmium, total	0.00103		mg/l	0.00100		103	90-110			
Calibration Check (1J31306-CCV4)				Prepared: 10/13/03		Analyzed: 10/15/03				
Cadmium, total	0.00097		mg/l	0.00100		97.0	85-115			
Matrix Spike (1J31306-MS1)		**Source: 13J0530-02**		Prepared: 10/13/03		Analyzed: 10/15/03				
Arsenic, total	0.0212	0.005	mg/l	0.0250	ND	84.8	62-130			
Cadmium, total	0.00068	0.0010	"	0.00100	ND	68.0	54-111			
Selenium, total	0.0228	0.005	"	0.0250	0.0009	87.6	68-110			

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Work Order: 13J0548

October 27, 2003

Determination of Total Metals - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31306 - EPA 3020A Total GFAA										
Matrix Spike Dup (1J31306-MSD1)		**Source: 13J0530-02**		Prepared: 10/13/03		Analyzed: 10/15/03				
Arsenic, total	0.0206	0.005	mg/l	0.0250	ND	82.4	62-130	2.87	13	
Cadmium, total	0.00065	0.0010	"	0.00100	ND	65.0	54-111	4.51	21	
Selenium, total	0.0225	0.005	"	0.0250	0.0009	86.4	68-110	1.32	10	
Post Spike (1J31306-PS1)		**Source: 13J0530-02**		Prepared: 10/13/03		Analyzed: 10/15/03				
Arsenic, total	0.0117		mg/l	0.0125		93.6	63-139			
Selenium, total	0.0125		"	0.0125	0.000900	92.8	68-117			
Post Spike (1J31306-PS2)		**Source: 13J0530-02**		Prepared: 10/13/03		Analyzed: 10/15/03				
Cadmium, total	0.00035		mg/l	0.000500		70.0	53-117			
Reference (1J31306-SRM1)				Prepared: 10/13/03		Analyzed: 10/15/03				
Arsenic, total	0.0098	0.005	mg/l	0.0100		98.0	80-120			
Selenium, total	0.0112	0.005	"	0.0100		112	80-120			
Reference (1J31306-SRM2)				Prepared: 10/13/03		Analyzed: 10/15/03				
Cadmium, total	0.00078	0.0010	mg/l	0.000750		104	80-120			
Batch 1J31401 - EPA 3010A Total ICP										
Blank (1J31401-BLK1)				Prepared & Analyzed: 10/14/03						
Barium, total	ND	0.010	mg/l							
Chromium, total	ND	0.005	"							
Lead, total	ND	0.005	"							
Silver, total	ND	0.010	"							
LCS (1J31401-BS1)				Prepared & Analyzed: 10/14/03						
Barium, total	0.216	0.010	mg/l	0.200		108	90-116			
Chromium, total	0.207	0.005	"	0.200		104	90-110			
Lead, total	0.209	0.005	"	0.200		104	90-112			
Silver, total	0.199	0.010	"	0.200		99.5	87-112			

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Work Order: 13J0548

October 27, 2003

Determination of Total Metals - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31401 - EPA 3010A Total ICP										
Calibration Check (1J31401-CCV1)				Prepared & Analyzed: 10/14/03						
Barium, total	1.08		mg/l	1.00		108	85-115			
Chromium, total	1.03		"	1.00		103	85-115			
Lead, total	1.06		"	1.00		106	85-115			
Silver, total	1.00		"	1.00		100	85-115			
Calibration Check (1J31401-CCV2)				Prepared & Analyzed: 10/14/03						
Barium, total	1.08		mg/l	1.00		108	85-115			
Chromium, total	1.06		"	1.00		106	85-115			
Lead, total	1.08		"	1.00		108	85-115			
Silver, total	1.01		"	1.00		101	85-115			
Matrix Spike (1J31401-MS1)		**Source: 13J0547-03**		Prepared & Analyzed: 10/14/03						
Barium, total	0.278	0.010	mg/l	0.200	0.065	106	79-119			
Chromium, total	0.239	0.005	"	0.200	0.034	102	84-114			
Lead, total	0.215	0.005	"	0.200	0.004	106	89-117			
Silver, total	0.196	0.010	"	0.200	ND	98.0	81-122			
Matrix Spike Dup (1J31401-MSD1)		**Source: 13J0547-03**		Prepared & Analyzed: 10/14/03						
Barium, total	0.278	0.010	mg/l	0.200	0.065	106	79-119	0.00	12	
Chromium, total	0.236	0.005	"	0.200	0.034	101	84-114	1.26	8	
Lead, total	0.213	0.005	"	0.200	0.004	104	89-117	0.935	10	
Silver, total	0.194	0.010	"	0.200	ND	97.0	81-122	1.03	12	
Post Spike (1J31401-PS1)		**Source: 13J0547-03**		Prepared & Analyzed: 10/14/03						
Barium, total	0.270	0.010	mg/l	0.200	0.065	102	78-108			
Chromium, total	0.229	0.005	"	0.200	0.034	97.5	74-111			
Lead, total	0.206	0.005	"	0.200	0.004	101	76-114			
Silver, total	0.188	0.010	"	0.200	ND	94.0	69-110			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0548

October 27, 2003

Determination of Total Metals - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1J31401 - EPA 3010A Total ICP										
Reference (1J31401-SRM1)				Prepared & Analyzed: 10/14/03						
Barium, total	0.545		mg/l	0.500		109	85-115			
Chromium, total	0.531		"	0.500		106	85-115			
Lead, total	0.552		"	0.500		110	85-115			
Silver, total	0.521		"	0.500		104	85-115			
Batch 1J31416 - EPA 245.1 Hg Dig										
Blank (1J31416-BLK1)				Prepared: 10/14/03 Analyzed: 10/15/03						
Mercury, total	ND	0.00050	mg/l							
LCS (1J31416-BS1)				Prepared: 10/14/03 Analyzed: 10/15/03						
Mercury, total	0.00224	0.00050	mg/l	0.00200		112	77-111			QS-02
LCS (1J31416-BS2)				Prepared: 10/14/03 Analyzed: 10/15/03						
Mercury, total	0.00219	0.00050	mg/l	0.00200		110	77-111			
Matrix Spike (1J31416-MS1)		**Source: 13J0547-05**		Prepared: 10/14/03 Analyzed: 10/15/03						
Mercury, total	0.00201	0.00050	mg/l	0.00200	0.00005	98.0	70-110			
Matrix Spike Dup (1J31416-MSD1)		**Source: 13J0547-05**		Prepared: 10/14/03 Analyzed: 10/15/03						
Mercury, total	0.00234	0.00050	mg/l	0.00200	0.00005	114	70-110	15.2	15	QM-19

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13J0548

October 27, 2003

Notes and Definitions

QM-19	The MS or MSD recovery was outside acceptance limits.This resulted in an unacceptable RPD. All other QC was acceptable.
QR-06	The reference standard was outside of established control limits.
QS-02	The spike recovery for this QC sample exceeded established acceptance limits. However, all samples were below the reporting and/or regulatory limit so the data is acceptable.
S-07	The surrogate recovery for this sample is outside of established control limits.
S-07	The surrogate recovery for this sample is outside of established control limits.
S-AC	Acid surrogate recovery outside of control limits. The data was accepted based on valid recovery of remaining two acid surrogates.
S-BN	Base/Neutral surrogate recovery outside of control limits. The data was accepted based on valid recovery of remaining two base/neutral surrogates.

End of Report

Jeffrey King

Keystone Laboratories, Inc.
Jeffrey King, Ph.D.
Laboratory Director

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Cooler # Silver 2

Keystone Laboratories, Inc. Cooler/ Sample Receipt Form

Client: Montgomery Watson Harza-MT **Work Order:** 1310548 **Date Received:** 10-11-03 **Initials:** YMLM

Delivered By: UPS/FedX/AirBrn Pry Exp/ Mail/ Walk-in/ Courier / Other:_____ **Air Bill Number:** 841763039430

Type of packing material: Bubble/ Foam/ Paper/ Peanuts/ Vermiculite/ NA/ Other_____

Custody Seal: ❑ Present ☒ Absent ❑ Broken Seal No. _____ **COC signed and dated:** Yes / No

Samples cooled by: Ice/Ice Packs/ NA/ Other_____ **Cooler Temperature (includes correction factor):** 2.9

Sample Receipt Discrepancies: ☒ No ❑ Yes (if Yes, see detail below)

❑ Chain of Custody not present ❑ Information obtained from PO/ letter received with samples	❑ Broken or leaking containers: _____
❑ Container Problems: ❑ Label Absent ❑ Incorrect Containers for tests indicated ❑ Insufficient amount of sample for tests indicated	❑ Sample listed on COC not received:
❑ COC incomplete ❑ COC missing time sampled, time obtained from sample container. ❑ COC missing date sampled, date obtained from sample container ❑ Sample excluded from COC: _____	❑ Air bubbles in VOA vials: _____ ❑ Sample description on container label different from COC: _____

Detailed Description/comments: _____

Client contacted regarding cooler/sample receipt conditions: Yes / No Contacted by_____ Date/Time:_____

Who was contacted:_____ Remarks:_____

Cooler # Blue

Keystone Laboratories, Inc. Cooler/ Sample Receipt Form

Client: Mon-Wat-Haz. **Work Order:** 13)0548 **Date Received:** 10-11-03 **Initials:** [illegible]

Delivered By: UPS/ FedX/ AirBrn Pry Exp/ Mail/ Walk-in/ Courier / Other:_____ **Air Bill Number:** 841763039430

Type of packing material: Bubble/ Foam/ Paper/ Peanuts/ Vermiculite/ NA/ Other_____

Custody Seal: ❑ Present ☒ Absent ❑ Broken Seal No. _____ **COC signed and dated:** Yes / No

Samples cooled by: Ice/ Ice Packs/ NA/ Other_____ **Cooler Temperature (includes correction factor):** 4.3

Sample Receipt Discrepancies: ☒ No ❑ Yes (if Yes, see detail below)

❑ Chain of Custody not present ❑ Information obtained from PO/ letter received with samples	❑ Broken or leaking containers: _____
❑ Container Problems: ❑ Label Absent ❑ Incorrect Containers for tests indicated ❑ Insufficient amount of sample for tests indicated	❑ Sample listed on COC not received:
❑ COC incomplete ❑ COC missing time sampled, time obtained from sample container. ❑ COC missing date sampled, date obtained from sample container ❑ Sample excluded from COC: _____	❑ Air bubbles in VOA vials: _____ ❑ Sample description on container label different from COC: _____

Detailed Description/comments: _____

Client contacted regarding cooler/sample receipt conditions: Yes / No Contacted by_____ Date/Time:_____

Who was contacted:_____ Remarks:_____

Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Accreditations:
Iowa DNR: 095
New Jersey DEP: IA001
Kansas DHE: E-10287

ANALYTICAL REPORT

December 19, 2003

Work Order: 13L0340

Report To

Diane Krueger
Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order Information

Date Received: 12/06/2003 1:00PM
Collector: Diane Krueger
Phone: (248) 344-0205
PO Number:

Project : Jefferson Barracks ANG
Project Number: Jefferson Barracks ANG

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-01 MW-1				Matrix: Water		Collected: 12/04/03 16:25	
Determination of Volatile Organic Compounds							
Chloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Vinyl Chloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Bromomethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Chloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
1,1-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Acetone	<10.0 ug/l	10.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Carbon Disulfide	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Methylene Chloride	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
trans-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
1,1-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
cis-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
2-Butanone (MEK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Chloroform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
1,1,1-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Carbon Tetrachloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Benzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
1,2-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Trichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
1,2-Dichloropropane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Bromodichloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
cis-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Toluene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
trans-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
1,1,2-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Tetrachloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
2-Hexanone (MBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Dibromochloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Chlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Ethylbenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-01 MW-1				Matrix: Water		Collected: 12/04/03 16:25	
Determination of Volatile Organic Compounds							
Xylenes, total	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Bromoform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
1,1,2,2-Tetrachloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
1,3-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
1,4-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
1,2-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Naphthalene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 22:51	
Surrogate: Dibromofluoromethane	*104 %*			*78-124*	TVK	12/11/03 22:51	
Surrogate: 1,2-Dichloroethane-d4	*96.0 %*			*72-122*	TVK	12/11/03 22:51	
Surrogate: Toluene-d8	*102 %*			*84-120*	TVK	12/11/03 22:51	
Surrogate: 4-Bromofluorobenzene	*102 %*			*80-124*	TVK	12/11/03 22:51	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<10 ug/l	10	1L31010	EPA 8015	JRF	12/09/03 22:04	
Surrogate: Chlorobenzene	*92.6 %*			*65-120*	JRF	12/09/03 22:04	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 18:08	
TEH, as #2 diesel fuel	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 18:08	
TEH, as waste oil	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 18:08	
Total Extractable Hydrocarbons	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 18:08	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Phenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Aniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Bis(2-Chloroethyl) Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2-Chlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
1,3-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
1,4-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Benzyl Alcohol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
1,2-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
n-Nitroso-di-n-propylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2-Methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Bis(2-Chloroisopropyl) Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
(3 & 4)-Methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Hexachloroethane	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Nitrobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Isophorone	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2-Nitrophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2,4-Dimethylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Bis(2-Chloroethoxy) Methane	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2,4-Dichlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
1,2,4-Trichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-01 MW-1				Matrix: Water		Collected: 12/04/03 16:25	
Determination of Base/Neutral/Acid Extractable Compounds							
Naphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
4-Chloroaniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Hexachlorobutadiene	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:21	
4-Chloro-3-methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2-Methylnaphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Hexachlorocyclopentadiene	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2,4,6-Trichlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2,4,5-Trichlorophenol	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2-Chloronaphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2-Nitroaniline	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Dimethylphthalate	<15 ug/l	15	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Acenaphthylene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2,6-Dinitrotoluene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
3-Nitroaniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Acenaphthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2,4-Dinitrophenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Dibenzofuran	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
2,4-Dinitrotoluene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
4-Nitrophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Diethyl Phthalate	5 <10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Fluorene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
4-Chlorophenyl Phenyl Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
4-Nitroaniline	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:21	
4,6-Dinitro-2-methylphenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:21	
N-Nitrosodiphenylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Azobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
4-Bromophenyl Phenyl Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Hexachlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Pentachlorophenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Phenanthrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Anthracene	5 <10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Di-n-butyl Phthalate	5 <10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Benzidine	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Butyl Benzyl Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
3,3'-Dichlorobenzidine	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Benzo(a)anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Chrysene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Bis(2-Ethylhexyl) Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-01 MW-1				Matrix: Water		Collected: 12/04/03 16:25	
Determination of Base/Neutral/Acid Extractable Compounds							
Di-n-octyl Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Benzo(b)Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Benzo(k)Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Benzo(a)Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Indeno(1,2,3-cd)Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Dibenzo(a,h)anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Benzo(g,h,i)perylene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:21	
Surrogate: 2-Fluorophenol	*72.3 %*			*45-110*	EPP	12/12/03 13:21	
Surrogate: 2-Fluorobiphenyl	*84.4 %*			*50-110*	EPP	12/12/03 13:21	
Surrogate: 2,4,6-Tribromophenol	*91.4 %*			*59-130*	EPP	12/12/03 13:21	
Surrogate: Phenol-d6	*67.4 %*			*44-115*	EPP	12/12/03 13:21	
Surrogate: Terphenyl-dl4	*71.2 %*			*40-110*	EPP	12/12/03 13:21	
Surrogate: Nitrobenzene-d5	*81.1 %*			*47-123*	EPP	12/12/03 13:21	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 9:24	
Arochlor 1221	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 9:24	
Arochlor 1232	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 9:24	
Arochlor 1242	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 9:24	
Arochlor 1248	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 9:24	
Arochlor 1254	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 9:24	
Arochlor 1260	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 9:24	
Surrogate: Decachlorobiphenyl	*72.5 %*			*50-125*	EPP	12/18/03 9:24	
Determination of Total Metals							
Arsenic, total	<0.005 mg/l	0.005	1L30921	EPA 7060A	LAR	12/10/03 16:50	
Barium, total	**0.045 mg/l**	**0.010**	1L30901	EPA 6010B	RVV	12/09/03 13:26	
Cadmium, total	<0.0010 mg/l	0.0010	1L30921	EPA 7131A	LAR	12/11/03 10:58	
Chromium, total	<0.005 mg/l	0.005	1L30901	EPA 6010B	RVV	12/09/03 13:26	
Lead, total	<0.005 mg/l	0.005	1L30901	EPA 6010B	RVV	12/09/03 13:26	
Mercury, total	<0.0005 mg/l	0.00050	1L31028	EPA 7470A	MAQ	12/11/03 14:05	
Selenium, total	<0.005 mg/l	0.005	1L30921	EPA 7740	LAR	12/10/03 15:16	
Silver, total	<0.010 mg/l	0.010	1L30901	EPA 6010B	RVV	12/09/03 13:26	
13L0340-02 DUP-1				Matrix: Water		Collected: 12/04/03 00:00	
Determination of Volatile Organic Compounds							
Chloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Vinyl Chloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Bromomethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Chloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
1,1-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Acetone	<10.0 ug/l	10.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Carbon Disulfide	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-02 DUP-1				Matrix: Water		Collected: 12/04/03 00:00	
Determination of Volatile Organic Compounds							
Methylene Chloride	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
trans-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
1,1-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
cis-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
2-Butanone (MEK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Chloroform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
1,1,1-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Carbon Tetrachloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Benzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
1,2-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Trichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
1,2-Dichloropropane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Bromodichloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
cis-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Toluene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
trans-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
1,1,2-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Tetrachloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
2-Hexanone (MBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Dibromochloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Chlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Ethylbenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Xylenes, total	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Bromoform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
1,1,2,2-Tetrachloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
1,3-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
1,4-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
1,2-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Naphthalene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/11/03 23:30	
Surrogate: Dibromofluoromethane	*104 %*			*78-124*	TVK	12/11/03 23:30	
Surrogate: 1,2-Dichloroethane-d4	*96.8 %*			*72-122*	TVK	12/11/03 23:30	
Surrogate: Toluene-d8	*104 %*			*84-120*	TVK	12/11/03 23:30	
Surrogate: 4-Bromofluorobenzene	*101 %*			*80-124*	TVK	12/11/03 23:30	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<10 ug/l	10	1L31506	EPA 8015	JRF	12/12/03 18:52	
Surrogate: Chlorobenzene	*95.6 %*			*65-120*	JRF	12/12/03 18:52	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 18:58	
TEH, as #2 diesel fuel	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 18:58	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-02 DUP-1				Matrix: Water		Collected: 12/04/03 00:00	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as waste oil	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 18:58	
Total Extractable Hydrocarbons	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 18:58	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Phenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Aniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Bis(2-Chloroethyl) Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2-Chlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
1,3-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
1,4-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Benzyl Alcohol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
1,2-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
n-Nitroso-di-n-propylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2-Methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Bis(2-Chloroisopropyl) Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
(3 & 4)-Methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Hexachloroethane	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Nitrobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Isophorone	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2-Nitrophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2,4-Dimethylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Bis(2-Chloroethoxy) Methane	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2,4-Dichlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
1,2,4-Trichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Naphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
4-Chloroaniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Hexachlorobutadiene	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:56	
4-Chloro-3-methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2-Methylnaphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Hexachlorocyclopentadiene	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2,4,6-Trichlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2,4,5-Trichlorophenol	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2-Chloronaphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2-Nitroaniline	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Dimethylphthalate	<15 ug/l	15	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Acenaphthylene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2,6-Dinitrotoluene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
3-Nitroaniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Acenaphthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2,4-Dinitrophenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:56	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-02 DUP-1				Matrix: Water		Collected: 12/04/03 00:00	
Determination of Base/Neutral/Acid Extractable Compounds							
Dibenzofuran	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
2,4-Dinitrotoluene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
4-Nitrophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Diethyl Phthalate	5 <10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Fluorene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
4-Chlorophenyl Phenyl Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
4-Nitroaniline	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:56	
4,6-Dinitro-2-methylphenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:56	
N-Nitrosodiphenylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Azobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
4-Bromophenyl Phenyl Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Hexachlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Pentachlorophenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Phenanthrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Di-n-butyl Phthalate	5 <10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Benzidine	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Butyl Benzyl Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
3,3'-Dichlorobenzidine	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Benzo(a)anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Chrysene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Bis(2-Ethylhexyl) Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Di-n-octyl Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Benzo(b)Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Benzo(k)Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Benzo(a)Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Indeno(1,2,3-cd)Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Dibenzo(a,h)anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Benzo(g,h,i)perylene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 13:56	
Surrogate: 2-Fluorophenol	*67.8 %*			*45-110*	EPP	12/12/03 13:56	
Surrogate: 2-Fluorobiphenyl	*76.6 %*			*50-110*	EPP	12/12/03 13:56	
Surrogate: 2,4,6-Tribromophenol	*91.3 %*			*59-130*	EPP	12/12/03 13:56	
Surrogate: Phenol-d6	*59.3 %*			*44-115*	EPP	12/12/03 13:56	
Surrogate: Terphenyl-dl4	*66.7 %*			*40-110*	EPP	12/12/03 13:56	
Surrogate: Nitrobenzene-d5	*76.2 %*			*47-123*	EPP	12/12/03 13:56	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 9:54	
Arochlor 1221	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 9:54	
Arochlor 1232	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 9:54	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-02 DUP-1				Matrix: Water		Collected: 12/04/03 00:00	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1242	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 9:54	
Arochlor 1248	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 9:54	
Arochlor 1254	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 9:54	
Arochlor 1260	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 9:54	
Surrogate: Decachlorobiphenyl	*87.3 %*			*50-125*	EPP	12/18/03 9:54	
Determination of Total Metals							
Arsenic, total	<0.005 mg/l	0.005	1L30921	EPA 7060A	LAR	12/10/03 16:50	
Barium, total	**0.046 mg/l**	**0.010**	1L30901	EPA 6010B	RVV	12/10/03 12:15	
Cadmium, total	<0.0010 mg/l	0.0010	1L30921	EPA 7131A	LAR	12/11/03 10:58	
Chromium, total	<0.005 mg/l	0.005	1L30901	EPA 6010B	RVV	12/10/03 12:15	
Lead, total	<0.005 mg/l	0.005	1L30901	EPA 6010B	RVV	12/10/03 12:15	
Mercury, total	<0.0005 mg/l	0.00050	1L31028	EPA 7470A	MAQ	12/11/03 14:05	
Selenium, total	<0.005 mg/l	0.005	1L30921	EPA 7740	LAR	12/10/03 15:16	
Silver, total	<0.010 mg/l	0.010	1L30901	EPA 6010B	RVV	12/10/03 12:15	
13L0340-03 MW-2				Matrix: Water		Collected: 12/05/03 09:20	
Determination of Volatile Organic Compounds							
Chloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Vinyl Chloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Bromomethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Chloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
1,1-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Acetone	<10.0 ug/l	10.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Carbon Disulfide	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Methylene Chloride	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
trans-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
1,1-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
cis-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
2-Butanone (MEK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Chloroform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
1,1,1-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Carbon Tetrachloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Benzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
1,2-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Trichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
1,2-Dichloropropane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Bromodichloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
cis-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-03 MW-2				Matrix: Water		Collected: 12/05/03 09:20	
Determination of Volatile Organic Compounds							
Toluene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
trans-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
1,1,2-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Tetrachloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
2-Hexanone (MBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Dibromochloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Chlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Ethylbenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Xylenes, total	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Bromoform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
1,1,2,2-Tetrachloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
1,3-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
1,4-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
1,2-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Naphthalene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:08	
Surrogate: Dibromofluoromethane	*104 %*			*78-124*	TVK	12/12/03 0:08	
Surrogate: 1,2-Dichloroethane-d4	*96.3 %*			*72-122*	TVK	12/12/03 0:08	
Surrogate: Toluene-d8	*103 %*			*84-120*	TVK	12/12/03 0:08	
Surrogate: 4-Bromofluorobenzene	*101 %*			*80-124*	TVK	12/12/03 0:08	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<10 ug/l	10	1L31506	EPA 8015	JRF	12/12/03 19:33	
Surrogate: Chlorobenzene	*94.5 %*			*65-120*	JRF	12/12/03 19:33	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 19:47	
TEH, as #2 diesel fuel	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 19:47	
TEH, as waste oil	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 19:47	
Total Extractable Hydrocarbons	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 19:47	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Phenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Aniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Bis(2-Chloroethyl) Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2-Chlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
1,3-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
1,4-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Benzyl Alcohol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
1,2-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
n-Nitroso-di-n-propylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2-Methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Bis(2-Chloroisopropyl) Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
(3 & 4)-Methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-03 MW-2				Matrix: Water		Collected: 12/05/03 09:20	
Determination of Base/Neutral/Acid Extractable Compounds							
Hexachloroethane	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Nitrobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Isophorone	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2-Nitrophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2,4-Dimethylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Bis(2-Chloroethoxy) Methane	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2,4-Dichlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
1,2,4-Trichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Naphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
4-Chloroaniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Hexachlorobutadiene	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 14:31	
4-Chloro-3-methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2-Methylnaphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Hexachlorocyclopentadiene	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2,4,6-Trichlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2,4,5-Trichlorophenol	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2-Chloronaphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2-Nitroaniline	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Dimethylphthalate	<15 ug/l	15	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Acenaphthylene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2,6-Dinitrotoluene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
3-Nitroaniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Acenaphthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2,4-Dinitrophenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Dibenzofuran	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
2,4-Dinitrotoluene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
4-Nitrophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Diethyl Phthalate	5 <10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Fluorene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
4-Chlorophenyl Phenyl Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
4-Nitroaniline	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 14:31	
4,6-Dinitro-2-methylphenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 14:31	
N-Nitrosodiphenylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Azobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
4-Bromophenyl Phenyl Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Hexachlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Pentachlorophenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Phenanthrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Di-n-butyl Phthalate	5 <10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-03 MW-2				Matrix: Water		Collected: 12/05/03 09:20	
Determination of Base/Neutral/Acid Extractable Compounds							
Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Benzidine	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Butyl Benzyl Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
3,3'-Dichlorobenzidine	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Benzo(a)anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Chrysene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Bis(2-Ethylhexyl) Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Di-n-octyl Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Benzo(b)Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Benzo(k)Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Benzo(a)Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Indeno(1,2,3-cd)Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Dibenzo(a,h)anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Benzo(g,h,i)perylene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 14:31	
Surrogate: 2-Fluorophenol	*74.3 %*			*45-110*	EPP	12/12/03 14:31	
Surrogate: 2-Fluorobiphenyl	*87.1 %*			*50-110*	EPP	12/12/03 14:31	
Surrogate: 2,4,6-Tribromophenol	*93.0 %*			*59-130*	EPP	12/12/03 14:31	
Surrogate: Phenol-d6	*69.2 %*			*44-115*	EPP	12/12/03 14:31	
Surrogate: Terphenyl-dl4	*74.7 %*			*40-110*	EPP	12/12/03 14:31	
Surrogate: Nitrobenzene-d5	*83.9 %*			*47-123*	EPP	12/12/03 14:31	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 10:24	
Arochlor 1221	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 10:24	
Arochlor 1232	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 10:24	
Arochlor 1242	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 10:24	
Arochlor 1248	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 10:24	
Arochlor 1254	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 10:24	
Arochlor 1260	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 10:24	
Surrogate: Decachlorobiphenyl	*75.5 %*			*50-125*	EPP	12/18/03 10:24	
Determination of Total Metals							
Arsenic, total	<0.005 mg/l	0.005	1L30921	EPA 7060A	LAR	12/10/03 16:50	
Barium, total	**0.037 mg/l**	**0.010**	1L30901	EPA 6010B	RVV	12/10/03 12:19	
Cadmium, total	<0.0010 mg/l	0.0010	1L30921	EPA 7131A	LAR	12/11/03 10:58	
Chromium, total	<0.005 mg/l	0.005	1L30901	EPA 6010B	RVV	12/10/03 12:19	
Lead, total	<0.005 mg/l	0.005	1L30901	EPA 6010B	RVV	12/10/03 12:19	
Mercury, total	<0.0005 mg/l	0.00050	1L31028	EPA 7470A	MAQ	12/11/03 14:05	
Selenium, total	<0.005 mg/l	0.005	1L30921	EPA 7740	LAR	12/10/03 15:16	
Silver, total	<0.010 mg/l	0.010	1L30901	EPA 6010B	RVV	12/10/03 12:19	

13L0340-04 MW-3 Matrix: Water Collected: 12/05/03 14:30

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-04 MW-3				Matrix: Water		Collected: 12/05/03 14:30	
Determination of Volatile Organic Compounds							
Chloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Vinyl Chloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Bromomethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Chloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
1,1-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Acetone	<10.0 ug/l	10.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Carbon Disulfide	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Methylene Chloride	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
trans-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
1,1-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
cis-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
2-Butanone (MEK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Chloroform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
1,1,1-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Carbon Tetrachloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Benzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
1,2-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Trichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
1,2-Dichloropropane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Bromodichloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
cis-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Toluene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
trans-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
1,1,2-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Tetrachloroethylene	**1.9 ug/l**	**1.0**	1L31216	EPA 8260B	TVK	12/12/03 0:47	
2-Hexanone (MBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Dibromochloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Chlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Ethylbenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Xylenes, total	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Bromoform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
1,1,2,2-Tetrachloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
1,3-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
1,4-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
1,2-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Naphthalene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 0:47	
Surrogate: Dibromofluoromethane	*105 %*			*78-124*	TVK	12/12/03 0:47	
Surrogate: 1,2-Dichloroethane-d4	*96.2 %*			*72-122*	TVK	12/12/03 0:47	
Surrogate: Toluene-d8	*103 %*			*84-120*	TVK	12/12/03 0:47	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-04 MW-3				Matrix: Water		Collected: 12/05/03 14:30	
Determination of Volatile Organic Compounds							
Surrogate: 4-Bromofluorobenzene	*101 %*			*80-124*	TVK	12/12/03 0:47	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<10 ug/l	10	1L31506	EPA 8015	JRF	12/12/03 20:14	
Surrogate: Chlorobenzene	*95.9 %*			*65-120*	JRF	12/12/03 20:14	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 20:35	
TEH, as #2 diesel fuel	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 20:35	
TEH, as waste oil	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 20:35	
Total Extractable Hydrocarbons	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 20:35	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Phenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Aniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Bis(2-Chloroethyl) Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2-Chlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
1,3-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
1,4-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Benzyl Alcohol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
1,2-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
n-Nitroso-di-n-propylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2-Methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Bis(2-Chloroisopropyl) Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
(3 & 4)-Methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Hexachloroethane	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Nitrobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Isophorone	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2-Nitrophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2,4-Dimethylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Bis(2-Chloroethoxy) Methane	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2,4-Dichlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
1,2,4-Trichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Naphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
4-Chloroaniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Hexachlorobutadiene	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:06	
4-Chloro-3-methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2-Methylnaphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Hexachlorocyclopentadiene	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2,4,6-Trichlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2,4,5-Trichlorophenol	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2-Chloronaphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-04 MW-3				Matrix: Water		Collected: 12/05/03 14:30	
Determination of Base/Neutral/Acid Extractable Compounds							
2-Nitroaniline	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Dimethylphthalate	<15 ug/l	15	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Acenaphthylene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2,6-Dinitrotoluene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
3-Nitroaniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Acenaphthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2,4-Dinitrophenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Dibenzofuran	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
2,4-Dinitrotoluene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
4-Nitrophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Diethyl Phthalate	5 <10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Fluorene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
4-Chlorophenyl Phenyl Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
4-Nitroaniline	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:06	
4,6-Dinitro-2-methylphenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:06	
N-Nitrosodiphenylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Azobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
4-Bromophenyl Phenyl Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Hexachlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Pentachlorophenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Phenanthrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Di-n-butyl Phthalate	5 <10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Benzidine	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Butyl Benzyl Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
3,3'-Dichlorobenzidine	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Benzo(a)anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Chrysene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Bis(2-Ethylhexyl) Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Di-n-octyl Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Benzo(b)Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Benzo(k)Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Benzo(a)Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Indeno(1,2,3-cd)Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Dibenzo(a,h)anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Benzo(g,h,i)perylene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:06	
Surrogate: 2-Fluorophenol	*74.2 %*			*45-110*	EPP	12/12/03 15:06	
Surrogate: 2-Fluorobiphenyl	*87.7 %*			*50-110*	EPP	12/12/03 15:06	
Surrogate: 2,4,6-Tribromophenol	*95.4 %*			*59-130*	EPP	12/12/03 15:06	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-04 MW-3				Matrix: Water		Collected: 12/05/03 14:30	
Determination of Base/Neutral/Acid Extractable Compounds							
Surrogate: Phenol-d6	*68.0 %*			*44-115*	EPP	12/12/03 15:06	
Surrogate: Terphenyl-d14	*66.5 %*			*40-110*	EPP	12/12/03 15:06	
Surrogate: Nitrobenzene-d5	*83.3 %*			*47-123*	EPP	12/12/03 15:06	
13L0340-05 MW-4				Matrix: Water		Collected: 12/05/03 11:30	
Determination of Volatile Organic Compounds							
Chloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Vinyl Chloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Bromomethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Chloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
1,1-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Acetone	<10.0 ug/l	10.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Carbon Disulfide	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Methylene Chloride	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
trans-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
1,1-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
cis-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
2-Butanone (MEK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Chloroform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
1,1,1-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Carbon Tetrachloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Benzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
1,2-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Trichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
1,2-Dichloropropane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Bromodichloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
cis-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Toluene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
trans-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
1,1,2-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Tetrachloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
2-Hexanone (MBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Dibromochloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Chlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Ethylbenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Xylenes, total	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Bromoform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
1,1,2,2-Tetrachloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-05 MW-4				Matrix:Water		Collected: 12/05/03 11:30	
Determination of Volatile Organic Compounds							
1,3-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
1,4-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
1,2-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Naphthalene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 1:26	
Surrogate: Dibromofluoromethane	*104 %*			*78-124*	TVK	12/12/03 1:26	
Surrogate: 1,2-Dichloroethane-d4	*96.9 %*			*72-122*	TVK	12/12/03 1:26	
Surrogate: Toluene-d8	*103 %*			*84-120*	TVK	12/12/03 1:26	
Surrogate: 4-Bromofluorobenzene	*101 %*			*80-124*	TVK	12/12/03 1:26	
Determination of Volatile Petroleum Hydrocarbons							
TPH, as gasoline	<10 ug/l	10	1L31506	EPA 8015	JRF	12/12/03 20:56	
Surrogate: Chlorobenzene	*96.1 %*			*65-120*	JRF	12/12/03 20:56	
Determination of Extractable Petroleum Hydrocarbons							
TEH, as gasoline	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 21:24	
TEH, as #2 diesel fuel	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 21:24	
TEH, as waste oil	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 21:24	
Total Extractable Hydrocarbons	<0.1 mg/l	0.1	1L31035	EPA 8015	SMG	12/17/03 21:24	
Determination of Base/Neutral/Acid Extractable Compounds							
N-Nitrosodimethylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Phenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Aniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Bis(2-Chloroethyl) Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2-Chlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
1,3-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
1,4-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Benzyl Alcohol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
1,2-Dichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
n-Nitroso-di-n-propylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2-Methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Bis(2-Chloroisopropyl) Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
(3 & 4)-Methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Hexachloroethane	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Nitrobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Isophorone	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2-Nitrophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2,4-Dimethylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Bis(2-Chloroethoxy) Methane	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2,4-Dichlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
1,2,4-Trichlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Naphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
4-Chloroaniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Hexachlorobutadiene	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:41	

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Keystone LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-05 MW-4				Matrix:Water		Collected: 12/05/03 11:30	
Determination of Base/Neutral/Acid Extractable Compounds							
4-Chloro-3-methylphenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2-Methylnaphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Hexachlorocyclopentadiene	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2,4,6-Trichlorophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2,4,5-Trichlorophenol	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2-Chloronaphthalene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2-Nitroaniline	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Dimethylphthalate	<15 ug/l	15	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Acenaphthylene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2,6-Dinitrotoluene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
3-Nitroaniline	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Acenaphthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2,4-Dinitrophenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Dibenzofuran	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
2,4-Dinitrotoluene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
4-Nitrophenol	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Diethyl Phthalate	5 <10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Fluorene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
4-Chlorophenyl Phenyl Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
4-Nitroaniline	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:41	
4,6-Dinitro-2-methylphenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:41	
N-Nitrosodiphenylamine	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Azobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
4-Bromophenyl Phenyl Ether	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Hexachlorobenzene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Pentachlorophenol	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Phenanthrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Di-n-butyl Phthalate	5 <10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Benzidine	<50 ug/l	50	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Butyl Benzyl Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
3,3'-Dichlorobenzidine	<20 ug/l	20	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Benzo(a)anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Chrysene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Bis(2-Ethylhexyl) Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Di-n-octyl Phthalate	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Benzo(b)Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Benzo(k)Fluoranthene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-05 MW-4				Matrix: Water		Collected: 12/05/03 11:30	
Determination of Base/Neutral/Acid Extractable Compounds							
Benzo(a)Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Indeno(1,2,3-cd)Pyrene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Dibenzo(a,h)anthracene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Benzo(g,h,i)perylene	<10 ug/l	10	1L30918	EPA 8270C	EPP	12/12/03 15:41	
Surrogate: 2-Fluorophenol	*79.1 %*			*45-110*	EPP	12/12/03 15:41	
Surrogate: 2-Fluorobiphenyl	*88.0 %*			*50-110*	EPP	12/12/03 15:41	
Surrogate: 2,4,6-Tribromophenol	*95.1 %*			*59-130*	EPP	12/12/03 15:41	
Surrogate: Phenol-d6	*70.7 %*			*44-115*	EPP	12/12/03 15:41	
Surrogate: Terphenyl-d14	*63.1 %*			*40-110*	EPP	12/12/03 15:41	
Surrogate: Nitrobenzene-d5	*81.3 %*			*47-123*	EPP	12/12/03 15:41	
Determination of Polychlorinated Biphenyls (PCB)							
Arochlor 1016	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 10:54	
Arochlor 1221	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 10:54	
Arochlor 1232	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 10:54	
Arochlor 1242	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 10:54	
Arochlor 1248	<0.20 ug/l	0.20	1L31113	EPA 8082	EPP	12/18/03 10:54	
Arochlor 1254	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 10:54	
Arochlor 1260	<0.10 ug/l	0.10	1L31113	EPA 8082	EPP	12/18/03 10:54	
Surrogate: Decachlorobiphenyl	*51.6 %*			*50-125*	EPP	12/18/03 10:54	
Determination of Total Metals							
Arsenic, total	<0.005 mg/l	0.005	1L30921	EPA 7060A	LAR	12/10/03 16:50	
Barium, total	**0.064 mg/l**	**0.010**	1L30901	EPA 6010B	RVV	12/10/03 12:23	
Cadmium, total	<0.0010 mg/l	0.0010	1L30921	EPA 7131A	LAR	12/11/03 10:58	
Chromium, total	<0.005 mg/l	0.005	1L30901	EPA 6010B	RVV	12/10/03 12:23	
Lead, total	<0.005 mg/l	0.005	1L30901	EPA 6010B	RVV	12/10/03 12:23	
Mercury, total	<0.0005 mg/l	0.00050	1L31028	EPA 7470A	MAQ	12/11/03 14:05	
Selenium, total	<0.005 mg/l	0.005	1L30921	EPA 7740	LAR	12/10/03 15:16	
Silver, total	<0.010 mg/l	0.010	1L30901	EPA 6010B	RVV	12/10/03 12:23	
13L0340-06 Drum Water				Matrix: Water		Collected: 12/05/03 15:15	
Determination of Volatile Organic Compounds							
Benzene	<1.0 ug/l	1.0	1L31021	EPA 624	TVK	12/09/03 15:05	
Toluene	<1.0 ug/l	1.0	1L31021	EPA 624	TVK	12/09/03 15:05	
Ethylbenzene	<1.0 ug/l	1.0	1L31021	EPA 624	TVK	12/09/03 15:05	
Xylenes, total	<2.0 ug/l	2.0	1L31021	EPA 624	TVK	12/09/03 15:05	
Surrogate: Dibromofluoromethane	*103 %*			*88-122*	TVK	12/09/03 15:05	
Surrogate: 1,2-Dichloroethane-d4	*96.9 %*			*77-120*	TVK	12/09/03 15:05	
Surrogate: Toluene-d8	*104 %*			*88-123*	TVK	12/09/03 15:05	
Surrogate: 4-Bromofluorobenzene	*102 %*			*87-113*	TVK	12/09/03 15:05	
Determination of Conventional Chemistry Parameters							
Chemical Oxygen Demand	<10 mg/l	10	1L31111	EPA 410.4	MAQ	12/11/03 16:08	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-06 Drum Water				Matrix: Water		Collected: 12/05/03 15:15	
Determination of Conventional Chemistry Parameters							
Oil and Grease	**1 mg/l**	**1**	1L31505	EPA 413.1	MAQ	12/15/03 16:00	
Determination of Physical/Conventional Chemistry Parameters							
Solids, total suspended	**46 mg/l**	**4**	1L30909	USGS I-3765-85	SNT	12/09/03 8:44	
Determination of Total Metals							
Lead, total	<0.005 mg/l	0.005	1L30901	EPA 200.7	RVV	12/10/03 12:27	
Zinc, total	**0.014 mg/l**	**0.010**	1L30901	EPA 200.7	RVV	12/10/03 12:27	
13L0340-07 Trip Blank 12-2-03 2:30 GJD Sealed				Matrix: Water		Collected: 12/04/03 00:00	
Determination of Volatile Organic Compounds							
Chloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Vinyl Chloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Bromomethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Chloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
1,1-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Acetone	<10.0 ug/l	10.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Carbon Disulfide	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Methylene Chloride	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
trans-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
1,1-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
cis-1,2-Dichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
2-Butanone (MEK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Chloroform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
1,1,1-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Carbon Tetrachloride	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Benzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
1,2-Dichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Trichloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
1,2-Dichloropropane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Bromodichloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
cis-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Toluene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
trans-1,3-Dichloropropene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
1,1,2-Trichloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Tetrachloroethylene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
2-Hexanone (MBK)	<5.0 ug/l	5.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Dibromochloromethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Chlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Ethylbenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
13L0340-07 Trip Blank 12-2-03 2:30 GJD Sealed				Matrix: Water		Collected: 12/04/03 00:00	
Determination of Volatile Organic Compounds							
Xylenes, total	<2.0 ug/l	2.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Bromoform	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
1,1,2,2-Tetrachloroethane	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
1,3-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
1,4-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
1,2-Dichlorobenzene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Naphthalene	<1.0 ug/l	1.0	1L31216	EPA 8260B	TVK	12/12/03 2:04	
Surrogate: Dibromofluoromethane	*103 %*			*78-124*	TVK	12/12/03 2:04	
Surrogate: 1,2-Dichloroethane-d4	*95.3 %*			*72-122*	TVK	12/12/03 2:04	
Surrogate: Toluene-d8	*103 %*			*84-120*	TVK	12/12/03 2:04	
Surrogate: 4-Bromofluorobenzene	*101 %*			*80-124*	TVK	12/12/03 2:04	

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31021 - EPA 5030B										
Blank (1L31021-BLK1)				Prepared & Analyzed: 12/09/03						
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	2.0	"							
Surrogate: Dibromofluoromethane	*51.73*		"	*50.00*		*103*	*88-122*			
Surrogate: 1,2-Dichloroethane-d4	*48.60*		"	*50.00*		*97.2*	*77-120*			
Surrogate: Toluene-d8	*51.79*		"	*50.20*		*103*	*88-123*			
Surrogate: 4-Bromofluorobenzene	*50.93*		"	*50.00*		*102*	*87-113*			
LCS (1L31021-BS1)				Prepared & Analyzed: 12/09/03						
Benzene	51.46	1.0	ug/l	50.00		103	74-129			
Toluene	51.10	1.0	"	50.00		102	65-139			
Ethylbenzene	52.05	1.0	"	50.00		104	70-130			
Xylenes, total	154.7	2.0	"	150.0		103	67-140			
Surrogate: Dibromofluoromethane	*49.81*		"	*50.00*		*99.6*	*88-122*			
Surrogate: 1,2-Dichloroethane-d4	*49.25*		"	*50.00*		*98.5*	*77-120*			
Surrogate: Toluene-d8	*50.38*		"	*50.20*		*100*	*88-123*			
Surrogate: 4-Bromofluorobenzene	*49.88*		"	*50.00*		*99.8*	*87-113*			
Calibration Check (1L31021-CCV1)				Prepared & Analyzed: 12/09/03						
Benzene	51.65	1.0	ug/l	50.00		103	70-130			
Toluene	51.69	1.0	"	50.00		103	70-130			
Ethylbenzene	51.63	1.0	"	50.00		103	70-130			
Xylenes, total	155.6	2.0	"	150.0		104	70-130			
Surrogate: Dibromofluoromethane	*50.35*		"	*50.00*		*101*	*88-122*			
Surrogate: 1,2-Dichloroethane-d4	*49.83*		"	*50.00*		*99.7*	*77-120*			
Surrogate: Toluene-d8	*50.26*		"	*50.20*		*100*	*88-123*			
Surrogate: 4-Bromofluorobenzene	*49.07*		"	*50.00*		*98.1*	*87-113*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31021 - EPA 5030B										
Matrix Spike (1L31021-MS1)		**Source: 13L0246-02**		Prepared & Analyzed: 12/09/03						
Benzene	57.40	1.0	ug/l	51.20	0.9	110	87-128			
Toluene	55.31	1.0	"	50.50	1.6	106	85-129			
Surrogate: Dibromofluoromethane	*51.35*		"	*50.00*		*103*	*88-122*			
Surrogate: 1,2-Dichloroethane-d4	*48.74*		"	*50.00*		*97.5*	*77-120*			
Surrogate: Toluene-d8	*51.59*		"	*50.20*		*103*	*88-123*			
Surrogate: 4-Bromofluorobenzene	*50.35*		"	*50.00*		*101*	*87-113*			
Matrix Spike Dup (1L31021-MSD1)		**Source: 13L0246-02**		Prepared & Analyzed: 12/09/03						
Benzene	55.67	1.0	ug/l	51.20	0.9	107	87-128	3.06	16	
Toluene	53.37	1.0	"	50.50	1.6	103	85-129	3.57	11	
Surrogate: Dibromofluoromethane	*51.31*		"	*50.00*		*103*	*88-122*			
Surrogate: 1,2-Dichloroethane-d4	*49.46*		"	*50.00*		*98.9*	*77-120*			
Surrogate: Toluene-d8	*51.61*		"	*50.20*		*103*	*88-123*			
Surrogate: 4-Bromofluorobenzene	*50.76*		"	*50.00*		*102*	*87-113*			
Batch 1L31216 - EPA 5030B										
Blank (1L31216-BLK1)				Prepared & Analyzed: 12/11/03						
Chloromethane	ND	1.0	ug/l							
Vinyl Chloride	ND	1.0	"							
Bromomethane	ND	1.0	"							
Chloroethane	ND	1.0	"							
1,1-Dichloroethylene	ND	1.0	"							
Acetone	ND	10.0	"							
Carbon Disulfide	ND	1.0	"							
Methylene Chloride	ND	5.0	"							
trans-1,2-Dichloroethylene	ND	1.0	"							
Methyl-t-butyl Ether (MTBE)	ND	2.0	"							
1,1-Dichloroethane	ND	1.0	"							
cis-1,2-Dichloroethylene	ND	1.0	"							
2-Butanone (MEK)	ND	5.0	"							
Chloroform	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Carbon Tetrachloride	ND	1.0	"							
Benzene	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31216 - EPA 5030B										
Blank (1L31216-BLK1)				Prepared & Analyzed: 12/11/03						
Trichloroethylene	ND	1.0	ug/l							
1,2-Dichloropropane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
4-Methyl-2-pentanone (MIBK)	ND	5.0	"							
Toluene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
Tetrachloroethylene	ND	1.0	"							
2-Hexanone (MBK)	ND	5.0	"							
Dibromochloromethane	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	2.0	"							
Bromoform	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
Naphthalene	ND	1.0	"							
Surrogate: Dibromofluoromethane	*52.59*		*"*	*50.00*		*105*	*78-124*			
Surrogate: 1,2-Dichloroethane-d4	*48.26*		*"*	*50.00*		*96.5*	*72-122*			
Surrogate: Toluene-d8	*51.84*		*"*	*50.20*		*103*	*84-120*			
Surrogate: 4-Bromofluorobenzene	*50.30*		*"*	*50.00*		*101*	*80-124*			
LCS (1L31216-BS1)				Prepared & Analyzed: 12/11/03						
Chloromethane	115.7	1.0	ug/l	100.0		116	70-130			
Vinyl Chloride	118.5	1.0	"	100.0		118	70-130			
Bromomethane	88.18	1.0	"	100.0		88.2	70-130			
Chloroethane	113.2	1.0	"	100.0		113	70-130			
1,1-Dichloroethylene	55.30	1.0	"	50.00		111	70-130			
Acetone	171.5	10.0	"	168.0		102	70-130			
Carbon Disulfide	204.3	1.0	"	186.0		110	70-130			
Methylene Chloride	50.36	5.0	"	50.00		101	70-130			
trans-1,2-Dichloroethylene	53.97	1.0	"	50.00		108	70-130			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31216 - EPA 5030B										
LCS (1L31216-BS1)				Prepared & Analyzed: 12/11/03						
Methyl-t-butyl Ether (MTBE)	158.3	2.0	ug/l	151.0		105	65-134			
1,1-Dichloroethane	52.53	1.0	"	50.00		105	70-130			
cis-1,2-Dichloroethylene	53.67	1.0	"	50.00		107	70-130			
2-Butanone (MEK)	166.6	5.0	"	164.0		102	70-130			
Chloroform	52.81	1.0	"	50.00		106	70-130			
1,1,1-Trichloroethane	54.33	1.0	"	50.00		109	70-130			
Carbon Tetrachloride	53.09	1.0	"	50.00		106	70-130			
Benzene	52.84	1.0	"	50.00		106	69-140			
1,2-Dichloroethane	51.61	1.0	"	50.00		103	70-130			
Trichloroethylene	53.22	1.0	"	50.00		106	80-124			
1,2-Dichloropropane	52.18	1.0	"	50.00		104	70-130			
Bromodichloromethane	51.44	1.0	"	50.00		103	70-130			
cis-1,3-Dichloropropene	53.26	1.0	"	50.00		107	70-130			
4-Methyl-2-pentanone (MIBK)	180.4	5.0	"	178.0		101	70-130			
Toluene	53.27	1.0	"	50.00		107	69-137			
trans-1,3-Dichloropropene	52.50	1.0	"	50.00		105	70-130			
1,1,2-Trichloroethane	49.65	1.0	"	50.00		99.3	70-130			
Tetrachloroethylene	53.93	1.0	"	50.00		108	81-120			
2-Hexanone (MBK)	158.4	5.0	"	160.0		99.0	70-130			
Dibromochloromethane	49.23	1.0	"	50.00		98.5	70-130			
Chlorobenzene	52.91	1.0	"	50.00		106	78-128			
Ethylbenzene	53.45	1.0	"	50.00		107	73-137			
Xylenes, total	162.4	2.0	"	150.0		108	75-137			
Bromoform	46.75	1.0	"	50.00		93.5	70-130			
1,1,2,2-Tetrachloroethane	50.73	1.0	"	50.00		101	70-130			
1,3-Dichlorobenzene	51.88	1.0	"	50.00		104	70-130			
1,4-Dichlorobenzene	53.69	1.0	"	50.00		107	70-130			
1,2-Dichlorobenzene	52.13	1.0	"	50.00		104	70-130			
Naphthalene	40.42	1.0	"	50.00		80.8	61-125			
Surrogate: Dibromofluoromethane	*50.43*		"	*50.00*		*101*	*78-124*			
Surrogate: 1,2-Dichloroethane-d4	*49.30*		"	*50.00*		*98.6*	*72-122*			
Surrogate: Toluene-d8	*50.04*		"	*50.20*		*99.7*	*84-120*			
Surrogate: 4-Bromofluorobenzene	*49.20*		"	*50.00*		*98.4*	*80-124*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31216 - EPA 5030B										
Calibration Check (1L31216-CCV1)				Prepared & Analyzed: 12/11/03						
Chloromethane	104.8	1.0	ug/l	100.0		105	70-130			
Vinyl Chloride	104.8	1.0	"	100.0		105	70-130			
Bromomethane	93.66	1.0	"	100.0		93.7	70-130			
Chloroethane	99.83	1.0	"	100.0		99.8	70-130			
1,1-Dichloroethylene	51.96	1.0	"	50.00		104	70-130			
Acetone	153.0	10.0	"	168.0		91.1	70-130			
Carbon Disulfide	178.7	1.0	"	186.0		96.1	70-130			
Methylene Chloride	47.82	5.0	"	50.00		95.6	70-130			
trans-1,2-Dichloroethylene	50.54	1.0	"	50.00		101	70-130			
Methyl-t-butyl Ether (MTBE)	140.3	2.0	"	151.0		92.9	70-130			
1,1-Dichloroethane	49.72	1.0	"	50.00		99.4	70-130			
cis-1,2-Dichloroethylene	51.10	1.0	"	50.00		102	70-130			
2-Butanone (MEK)	147.4	5.0	"	164.0		89.9	70-130			
Chloroform	49.63	1.0	"	50.00		99.3	70-130			
1,1,1-Trichloroethane	50.50	1.0	"	50.00		101	70-130			
Carbon Tetrachloride	48.58	1.0	"	50.00		97.2	70-130			
Benzene	49.67	1.0	"	50.00		99.3	70-130			
1,2-Dichloroethane	48.68	1.0	"	50.00		97.4	70-130			
Trichloroethylene	49.85	1.0	"	50.00		99.7	70-130			
1,2-Dichloropropane	49.43	1.0	"	50.00		98.9	70-130			
Bromodichloromethane	48.05	1.0	"	50.00		96.1	70-130			
cis-1,3-Dichloropropene	49.95	1.0	"	50.00		99.9	70-130			
4-Methyl-2-pentanone (MIBK)	158.5	5.0	"	178.0		89.0	70-130			
Toluene	50.15	1.0	"	50.00		100	70-130			
trans-1,3-Dichloropropene	49.38	1.0	"	50.00		98.8	70-130			
1,1,2-Trichloroethane	47.28	1.0	"	50.00		94.6	70-130			
Tetrachloroethylene	51.07	1.0	"	50.00		102	70-130			
2-Hexanone (MBK)	141.1	5.0	"	160.0		88.2	70-130			
Dibromochloromethane	46.27	1.0	"	50.00		92.5	70-130			
Chlorobenzene	49.48	1.0	"	50.00		99.0	70-130			
Ethylbenzene	50.40	1.0	"	50.00		101	70-130			
Xylenes, total	152.6	2.0	"	150.0		102	70-130			
Bromoform	44.04	1.0	"	50.00		88.1	70-130			
1,1,2,2-Tetrachloroethane	48.96	1.0	"	50.00		97.9	70-130			
1,3-Dichlorobenzene	50.42	1.0	"	50.00		101	70-130			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31216 - EPA 5030B										
Calibration Check (1L31216-CCV1)				Prepared & Analyzed: 12/11/03						
1,4-Dichlorobenzene	50.54	1.0	ug/l	50.00		101	70-130			
1,2-Dichlorobenzene	50.54	1.0	"	50.00		101	70-130			
Naphthalene	37.42	1.0	"	50.00		74.8	70-130			
Surrogate: Dibromofluoromethane	*50.72*		"	*50.00*		*101*	*78-124*			
Surrogate: 1,2-Dichloroethane-d4	*49.88*		"	*50.00*		*99.8*	*72-122*			
Surrogate: Toluene-d8	*50.33*		"	*50.20*		*100*	*84-120*			
Surrogate: 4-Bromofluorobenzene	*49.63*		"	*50.00*		*99.3*	*80-124*			
Matrix Spike (1L31216-MS1)		**Source: 13L0340-01**		Prepared: 12/11/03		Analyzed: 12/12/03				
1,1-Dichloroethylene	58.74	1.0	ug/l	50.00	ND	117	81-144			
Benzene	52.55	1.0	"	51.20	ND	103	69-137			
Trichloroethylene	55.93	1.0	"	54.20	ND	103	88-123			
Toluene	49.80	1.0	"	50.50	ND	98.6	69-136			
Chlorobenzene	63.25	1.0	"	64.20	ND	98.5	86-119			
Surrogate: Dibromofluoromethane	*51.48*		"	*50.00*		*103*	*78-124*			
Surrogate: 1,2-Dichloroethane-d4	*47.93*		"	*50.00*		*95.9*	*72-122*			
Surrogate: Toluene-d8	*52.45*		"	*50.20*		*104*	*84-120*			
Surrogate: 4-Bromofluorobenzene	*50.74*		"	*50.00*		*101*	*80-124*			
Matrix Spike Dup (1L31216-MSD1)		**Source: 13L0340-01**		Prepared: 12/11/03		Analyzed: 12/12/03				
1,1-Dichloroethylene	60.17	1.0	ug/l	50.00	ND	120	81-144	2.41	19	
Benzene	53.88	1.0	"	51.20	ND	105	69-137	2.50	17	
Trichloroethylene	56.99	1.0	"	54.20	ND	105	88-123	1.88	11	
Toluene	51.59	1.0	"	50.50	ND	102	69-136	3.53	15	
Chlorobenzene	64.82	1.0	"	64.20	ND	101	86-119	2.45	11	
Surrogate: Dibromofluoromethane	*51.12*		"	*50.00*		*102*	*78-124*			
Surrogate: 1,2-Dichloroethane-d4	*48.23*		"	*50.00*		*96.5*	*72-122*			
Surrogate: Toluene-d8	*52.06*		"	*50.20*		*104*	*84-120*			
Surrogate: 4-Bromofluorobenzene	*50.19*		"	*50.00*		*100*	*80-124*			

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41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Volatile Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31010 - EPA 5030B										
Blank (1L31010-BLK1)				Prepared & Analyzed: 12/09/03						
TPH, as gasoline	ND	10	ug/l							
Surrogate: Chlorobenzene	*95.3*		"	*102.5*		*93.0*	*65-120*			
Calibration Check (1L31010-CCV1)				Prepared & Analyzed: 12/09/03						
Surrogate: Chlorobenzene	*109.7*		*ug/l*	*102.5*		*107*	*65-120*			
Calibration Check (1L31010-CCV2)				Prepared & Analyzed: 12/09/03						
TPH, as gasoline	1038	10	ug/l	1068		97.2	80-120			
Surrogate: Chlorobenzene	*97.8*		"	*102.5*		*95.4*	*65-120*			
Calibration Check (1L31010-CCV3)				Prepared: 12/09/03 Analyzed: 12/10/03						
Surrogate: Chlorobenzene	*92.4*		*ug/l*	*102.5*		*90.1*	*65-120*			
Calibration Check (1L31010-CCV4)				Prepared: 12/09/03 Analyzed: 12/10/03						
TPH, as gasoline	1043	10	ug/l	1068		97.7	80-120			
Surrogate: Chlorobenzene	*92.6*		"	*102.5*		*90.3*	*65-120*			
Matrix Spike (1L31010-MS1)		**Source: 13L0340-01**		Prepared & Analyzed: 12/09/03						
Surrogate: Chlorobenzene	*94.8*		*ug/l*	*102.5*		*92.5*	*65-120*			
Matrix Spike Dup (1L31010-MSD1)		**Source: 13L0340-01**		Prepared & Analyzed: 12/09/03						
Surrogate: Chlorobenzene	*90.9*		*ug/l*	*102.5*		*88.7*	*65-120*			
Batch 1L31506 - EPA 5030B										
Blank (1L31506-BLK1)				Prepared & Analyzed: 12/12/03						
TPH, as gasoline	ND	10	ug/l							
Surrogate: Chlorobenzene	*101.5*		"	*102.5*		*99.0*	*65-120*			

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Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Volatile Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31506 - EPA 5030B										
Calibration Check (1L31506-CCV1)				Prepared & Analyzed: 12/12/03						
Surrogate: Chlorobenzene	*87.8*		*ug/l*	*102.5*		*85.7*	*65-120*			
Calibration Check (1L31506-CCV2)				Prepared & Analyzed: 12/12/03						
TPH, as gasoline	961.6	10	ug/l	1068		90.0	80-120			
Surrogate: Chlorobenzene	*94.4*		*"*	*102.5*		*92.1*	*65-120*			
Calibration Check (1L31506-CCV3)				Prepared: 12/12/03 Analyzed: 12/13/03						
Surrogate: Chlorobenzene	*96.2*		*ug/l*	*102.5*		*93.9*	*65-120*			
Calibration Check (1L31506-CCV4)				Prepared: 12/12/03 Analyzed: 12/13/03						
TPH, as gasoline	1005	10	ug/l	1068		94.1	80-120			
Surrogate: Chlorobenzene	*97.3*		*"*	*102.5*		*94.9*	*65-120*			
Matrix Spike (1L31506-MS1)		**Source: 13L0483-01**		Prepared: 12/12/03 Analyzed: 12/13/03						
Surrogate: Chlorobenzene	*97.0*		*ug/l*	*102.5*		*94.6*	*65-120*			
Matrix Spike Dup (1L31506-MSD1)		**Source: 13L0483-01**		Prepared: 12/12/03 Analyzed: 12/13/03						
Surrogate: Chlorobenzene	*98.6*		*ug/l*	*102.5*		*96.2*	*65-120*			

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Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Extractable Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31035 - 3510C OA-2 Sep Fnl										
Blank (1L31035-BLK1)				Prepared: 12/10/03		Analyzed: 12/17/03				
TEH, as gasoline	ND	0.1	mg/l							
TEH, as #2 diesel fuel	ND	0.1	"							
TEH, as waste oil	ND	0.1	"							
Total Extractable Hydrocarbons	ND	0.1	"							
LCS (1L31035-BS1)				Prepared: 12/10/03		Analyzed: 12/18/03				
TEH, as #2 diesel fuel	8.70	0.1	mg/l	10.03		86.7	65-110			
Calibration Check (1L31035-CCV1)				Prepared: 12/10/03		Analyzed: 12/17/03				
TEH, as gasoline	2049		mg/l	2140		95.7	85-115			
TEH, as #2 diesel fuel	1933		"	2070		93.4	85-115			
TEH, as waste oil	2063		"	2040		101	85-115			
Calibration Check (1L31035-CCV2)				Prepared: 12/10/03		Analyzed: 12/18/03				
TEH, as gasoline	2138		mg/l	2140		99.9	85-115			
TEH, as #2 diesel fuel	2034		"	2070		98.3	85-115			
TEH, as waste oil	2131		"	2040		104	85-115			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30918 - 3520C BNA Cont Liq										
Blank (1L30918-BLK1)				Prepared: 12/09/03 Analyzed: 12/12/03						
N-Nitrosodimethylamine	ND	10	ug/l							
Phenol	ND	10	"							
Aniline	ND	10	"							
Bis(2-Chloroethyl) Ether	ND	10	"							
2-Chlorophenol	ND	10	"							
1,3-Dichlorobenzene	ND	10	"							
1,4-Dichlorobenzene	ND	10	"							
Benzyl Alcohol	ND	10	"							
1,2-Dichlorobenzene	ND	10	"							
n-Nitroso-di-n-propylamine	ND	10	"							
2-Methylphenol	ND	10	"							
Bis(2-Chloroisopropyl) Ether	ND	10	"							
(3 & 4)-Methylphenol	ND	10	"							
Hexachloroethane	ND	10	"							
Nitrobenzene	ND	10	"							
Isophorone	ND	10	"							
2-Nitrophenol	ND	10	"							
2,4-Dimethylphenol	ND	10	"							
Bis(2-Chloroethoxy) Methane	ND	10	"							
2,4-Dichlorophenol	ND	10	"							
1,2,4-Trichlorobenzene	ND	10	"							
Naphthalene	ND	10	"							
4-Chloroaniline	ND	10	"							
Hexachlorobutadiene	ND	20	"							
4-Chloro-3-methylphenol	ND	10	"							
2-Methylnaphthalene	ND	10	"							
Hexachlorocyclopentadiene	ND	20	"							
2,4,6-Trichlorophenol	ND	10	"							
2,4,5-Trichlorophenol	ND	50	"							
2-Chloronaphthalene	ND	10	"							
2-Nitroaniline	ND	50	"							
Dimethylphthalate	ND	15	"							
Acenaphthylene	ND	10	"							
2,6-Dinitrotoluene	ND	10	"							
3-Nitroaniline	ND	10	"							

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Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30918 - 3520C BNA Cont Liq										
Blank (1L30918-BLK1)				Prepared: 12/09/03 Analyzed: 12/12/03						
Acenaphthene	ND	10	ug/l							
2,4-Dinitrophenol	ND	20	"							
Dibenzofuran	ND	10	"							
2,4-Dinitrotoluene	ND	10	"							
4-Nitrophenol	ND	10	"							
Diethyl Phthalate	ND	10	"							
Fluorene	ND	10	"							
4-Chlorophenyl Phenyl Ether	ND	10	"							
4-Nitroaniline	ND	20	"							
4,6-Dinitro-2-methylphenol	ND	20	"							
N-Nitrosodiphenylamine	ND	10	"							
Azobenzene	ND	10	"							
4-Bromophenyl Phenyl Ether	ND	10	"							
Hexachlorobenzene	ND	10	"							
Pentachlorophenol	ND	20	"							
Phenanthrene	ND	10	"							
Anthracene	ND	10	"							
Di-n-butyl Phthalate	ND	10	"							
Fluoranthene	ND	10	"							
Benzidine	ND	50	"							
Pyrene	ND	10	"							
Butyl Benzyl Phthalate	ND	10	"							
3,3'-Dichlorobenzidine	ND	20	"							
Benzo(a)anthracene	ND	10	"							
Chrysene	ND	10	"							
Bis(2-Ethylhexyl) Phthalate	ND	10	"							
Di-n-octyl Phthalate	ND	10	"							
Benzo(b)Fluoranthene	ND	10	"							
Benzo(k)Fluoranthene	ND	10	"							
Benzo(a)Pyrene	ND	10	"							
Indeno(1,2,3-cd)Pyrene	ND	10	"							
Dibenzo(a,h)anthracene	ND	10	"							
Benzo(g,h,i)perylene	ND	10	"							
Surrogate: 2-Fluorophenol	*38.2*		*"*	*48.8*		*78.3*	*45-110*			
Surrogate: 2-Fluorobiphenyl	*41.0*		*"*	*45.1*		*90.9*	*50-110*			

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Work Order: 13L0340

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30918 - 3520C BNA Cont Liq										
Blank (1L30918-BLK1)				Prepared: 12/09/03		Analyzed: 12/12/03				
Surrogate: 2,4,6-Tribromophenol	*42.2*		*ug/l*	*45.9*		*91.9*	*59-130*			
Surrogate: Phenol-d6	*31.7*		*"*	*45.4*		*69.8*	*44-115*			
Surrogate: Terphenyl-dl4	*35.4*		*"*	*45.1*		*78.5*	*40-110*			
Surrogate: Nitrobenzene-d5	*40.6*		*"*	*46.2*		*87.9*	*47-123*			
LCS (1L30918-BS1)				Prepared: 12/09/03		Analyzed: 12/12/03				
Phenol	34.7	10	ug/l	51.4		67.5	55-116			
2-Chlorophenol	35.3	10	"	50.0		70.6	46-121			
1,4-Dichlorobenzene	35.7	10	"	50.4		70.8	47-110			
n-Nitroso-di-n-propylamine	30.0	10	"	50.0		60.0	46-110			
(3 & 4)-Methylphenol	37.0	10	"	49.8		74.3	70-130			
Nitrobenzene	40.8	10	"	54.4		75.0	70-130			
2-Nitrophenol	44.8	10	"	52.0		86.2	70-130			
4-Chloro-3-methylphenol	42.7	10	"	50.8		84.1	59-123			
2,6-Dinitrotoluene	48.5	10	"	52.6		92.2	57-132			
Diethyl Phthalate	15.6	10	"	53.4		29.2	66-138			QS-03
4,6-Dinitro-2-methylphenol	60.1	20	"	52.6		114	70-130			
Pentachlorophenol	54.5	20	"	52.2		104	51-138			
Phenanthrene	43.2	10	"	50.0		86.4	70-130			
Anthracene	35.8	10	"	50.6		70.8	70-130			
Di-n-butyl Phthalate	31.3	10	"	53.2		58.8	70-130			QS-03
Fluoranthene	42.3	10	"	50.8		83.3	70-130			
Pyrene	40.4	10	"	52.2		77.4	48-119			
Surrogate: 2-Fluorophenol	*35.9*		*"*	*48.8*		*73.6*	*45-110*			
Surrogate: 2-Fluorobiphenyl	*39.2*		*"*	*45.1*		*86.9*	*50-110*			
Surrogate: 2,4,6-Tribromophenol	*43.8*		*"*	*45.9*		*95.4*	*59-130*			
Surrogate: Phenol-d6	*29.7*		*"*	*45.4*		*65.4*	*44-115*			
Surrogate: Terphenyl-dl4	*35.9*		*"*	*45.1*		*79.6*	*40-110*			
Surrogate: Nitrobenzene-d5	*33.3*		*"*	*46.2*		*72.1*	*47-123*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

December 19, 2003

Work Order: 13L0340

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30918 - 3520C BNA Cont Liq										
Calibration Check (1L30918-CCV1)				Prepared: 12/09/03		Analyzed: 12/12/03				
N-Nitrosodimethylamine	34.6		ug/l	42.0		82.4	80-120			
Phenol	44.9		"	42.0		107	80-120			
Aniline	41.3		"	42.0		98.3	80-120			
Bis(2-Chloroethyl) Ether	43.0		"	42.0		102	80-120			
2-Chlorophenol	39.6		"	42.0		94.3	80-120			
1,3-Dichlorobenzene	42.8		"	42.0		102	80-120			
1,4-Dichlorobenzene	44.2		"	42.0		105	80-120			
Benzyl Alcohol	41.7		"	42.0		99.3	80-120			
1,2-Dichlorobenzene	42.7		"	42.4		101	80-120			
n-Nitroso-di-n-propylamine	44.9		"	42.0		107	80-120			
2-Methylphenol	39.8		"	42.0		94.8	80-120			
Bis(2-Chloroisopropyl) Ether	39.9		"	42.0		95.0	80-120			
(3 & 4)-Methylphenol	42.2		"	42.0		100	80-120			
Hexachloroethane	41.0		"	42.0		97.6	80-120			
Nitrobenzene	46.7		"	42.0		111	80-120			
Isophorone	44.9		"	42.0		107	80-120			
2-Nitrophenol	46.7		"	42.2		111	80-120			
2,4-Dimethylphenol	43.7		"	42.0		104	80-120			
Bis(2-Chloroethoxy) Methane	45.9		"	42.0		109	80-120			
2,4-Dichlorophenol	46.0		"	42.0		110	80-120			
1,2,4-Trichlorobenzene	45.7		"	42.0		109	80-120			
Naphthalene	36.3		"	42.0		86.4	80-120			
4-Chloroaniline	47.8		"	42.0		114	80-120			
Hexachlorobutadiene	46.0		"	42.0		110	80-120			
4-Chloro-3-methylphenol	48.5		"	42.0		115	80-120			
2-Methylnaphthalene	45.6		"	42.0		109	80-120			
Hexachlorocyclopentadiene	42.6		"	42.4		100	80-120			
2,4,6-Trichlorophenol	43.5		"	42.0		104	80-120			
2,4,5-Trichlorophenol	42.7		"	42.2		101	80-120			
2-Chloronaphthalene	43.9		"	42.0		105	80-120			
2-Nitroaniline	42.5		"	42.1		101	80-120			
Dimethylphthalate	41.4		"	42.0		98.6	80-120			
Acenaphthylene	41.3		"	42.0		98.3	80-120			
2,6-Dinitrotoluene	45.0		"	42.0		107	80-120			
3-Nitroaniline	41.5		"	42.0		98.8	80-120			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30918 - 3520C BNA Cont Liq										
Calibration Check (1L30918-CCV1)				Prepared: 12/09/03	Analyzed: 12/12/03					
Acenaphthene	42.8		ug/l	42.0		102	80-120			
2,4-Dinitrophenol	61.1		"	42.0		145	80-120			QS-02
Dibenzofuran	43.8		"	42.0		104	80-120			
2,4-Dinitrotoluene	43.1		"	42.0		103	80-120			
4-Nitrophenol	45.3		"	42.2		107	80-120			
Diethyl Phthalate	41.5		"	42.0		98.8	80-120			
Fluorene	41.5		"	42.0		98.8	80-120			
4-Chlorophenyl Phenyl Ether	42.3		"	42.0		101	80-120			
4-Nitroaniline	41.6		"	42.0		99.0	80-120			
4,6-Dinitro-2-methylphenol	53.8		"	42.2		127	80-120			QS-02
N-Nitrosodiphenylamine	39.4		"	42.1		93.6	80-120			
Azobenzene	41.9		"	42.0		99.8	80-120			
4-Bromophenyl Phenyl Ether	42.6		"	42.0		101	80-120			
Hexachlorobenzene	44.4		"	42.0		106	80-120			
Pentachlorophenol	48.9		"	42.2		116	80-120			
Phenanthrene	43.0		"	42.0		102	80-120			
Anthracene	40.6		"	42.0		96.7	80-120			
Di-n-butyl Phthalate	41.0		"	42.0		97.6	80-120			
Fluoranthene	42.4		"	42.0		101	80-120			
Pyrene	43.9		"	42.0		105	80-120			
Butyl Benzyl Phthalate	44.6		"	42.0		106	80-120			
Benzo(a)anthracene	41.0		"	42.0		97.6	80-120			
Chrysene	41.5		"	42.0		98.8	80-120			
Bis(2-Ethylhexyl) Phthalate	47.0		"	42.0		112	80-120			
Di-n-octyl Phthalate	45.3		"	42.1		108	80-120			
Benzo(b)Fluoranthene	37.6		"	42.0		89.5	80-120			
Benzo(k)Fluoranthene	38.4		"	42.0		91.4	80-120			
Benzo(a)Pyrene	40.3		"	42.0		96.0	80-120			
Indeno(1,2,3-cd)Pyrene	56.4		"	42.0		134	80-120			QS-02
Dibenzo(a,h)anthracene	52.1		"	42.0		124	80-120			QS-02
Benzo(g,h,i)perylene	56.4		"	42.0		134	80-120			QS-02

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30918 - 3520C BNA Cont Liq										
Matrix Spike (1L30918-MS1)		**Source: 13L0340-01**		Prepared: 12/09/03		Analyzed: 12/12/03				
Phenol	43.4	10	ug/l	51.4	ND	84.4	55-116			
2-Chlorophenol	44.1	10	"	50.0	ND	88.2	46-121			
1,4-Dichlorobenzene	44.8	10	"	50.4	ND	88.9	47-110			
n-Nitroso-di-n-propylamine	38.4	10	"	50.0	ND	76.8	45-120			
(3 & 4)-Methylphenol	46.3	10	"	49.8	ND	93.0	70-130			
Nitrobenzene	46.5	10	"	54.4	ND	85.5	70-130			
2-Nitrophenol	57.1	10	"	52.0	ND	110	70-130			
4-Chloro-3-methylphenol	46.0	10	"	50.8	ND	90.6	59-123			
2,6-Dinitrotoluene	49.8	10	"	52.6	ND	94.7	57-132			
Diethyl Phthalate	15.6	10	"	53.4	ND	29.2	66-138			QM-12
4,6-Dinitro-2-methylphenol	62.3	20	"	52.6	ND	118	70-130			
Pentachlorophenol	56.9	20	"	52.2	ND	109	51-138			
Phenanthrene	44.4	10	"	50.0	ND	88.8	70-130			
Anthracene	34.2	10	"	50.6	ND	67.6	70-130			QM-07
Di-n-butyl Phthalate	26.4	10	"	53.2	ND	49.6	70-130			QM-12
Fluoranthene	42.5	10	"	50.8	ND	83.7	70-130			
Pyrene	39.5	10	"	52.2	ND	75.7	48-119			
Surrogate: 2-Fluorophenol	*42.4*		"	*48.8*		*86.9*	*45-110*			
Surrogate: 2-Fluorobiphenyl	*46.3*		"	*45.1*		*103*	*50-110*			
Surrogate: 2,4,6-Tribromophenol	*45.8*		"	*45.9*		*99.8*	*59-130*			
Surrogate: Phenol-d6	*38.6*		"	*45.4*		*85.0*	*44-115*			
Surrogate: Terphenyl-dl4	*28.7*		"	*45.1*		*63.6*	*40-110*			
Surrogate: Nitrobenzene-d5	*39.2*		"	*46.2*		*84.8*	*47-123*			
Matrix Spike Dup (1L30918-MSD1)		**Source: 13L0340-01**		Prepared: 12/09/03		Analyzed: 12/12/03				
Phenol	36.5	10	ug/l	51.4	ND	71.0	55-116	17.3	35	
2-Chlorophenol	39.6	10	"	50.0	ND	79.2	46-121	10.8	36	
1,4-Dichlorobenzene	41.0	10	"	50.4	ND	81.3	47-110	8.86	44	
n-Nitroso-di-n-propylamine	34.2	10	"	50.0	ND	68.4	45-120	11.6	23	
(3 & 4)-Methylphenol	40.2	10	"	49.8	ND	80.7	70-130	14.1	20	
Nitrobenzene	45.4	10	"	54.4	ND	83.5	70-130	2.39	20	
2-Nitrophenol	51.8	10	"	52.0	ND	99.6	70-130	9.73	20	
4-Chloro-3-methylphenol	46.5	10	"	50.8	ND	91.5	59-123	1.08	28	
2,6-Dinitrotoluene	45.6	10	"	52.6	ND	86.7	57-132	8.81	11	
Diethyl Phthalate	12.0	10	"	53.4	ND	22.5	66-138	26.1	19	QM-12

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30918 - 3520C BNA Cont Liq										
Matrix Spike Dup (1L30918-MSD1)		**Source: 13L0340-01**		Prepared: 12/09/03		Analyzed: 12/12/03				
4,6-Dinitro-2-methylphenol	64.3	20	ug/l	52.6	ND	122	70-130	3.16	20	
Pentachlorophenol	59.8	20	"	52.2	ND	115	51-138	4.97	27	
Phenanthrene	42.9	10	"	50.0	ND	85.8	70-130	3.44	20	
Anthracene	35.0	10	"	50.6	ND	69.2	70-130	2.31	20	QM-07
Di-n-butyl Phthalate	21.6	10	"	53.2	ND	40.6	70-130	20.0	20	QM-12
Fluoranthene	42.1	10	"	50.8	ND	82.9	70-130	0.946	20	
Pyrene	37.4	10	"	52.2	ND	71.6	48-119	5.46	29	
Surrogate: 2-Fluorophenol	*36.5*		"	*48.8*		*74.8*	*45-110*			
Surrogate: 2-Fluorobiphenyl	*39.2*		"	*45.1*		*86.9*	*50-110*			
Surrogate: 2,4,6-Tribromophenol	*42.5*		"	*45.9*		*92.6*	*59-130*			
Surrogate: Phenol-d6	*32.0*		"	*45.4*		*70.5*	*44-115*			
Surrogate: Terphenyl-d14	*26.4*		"	*45.1*		*58.5*	*40-110*			
Surrogate: Nitrobenzene-d5	*36.5*		"	*46.2*		*79.0*	*47-123*			
Reference (1L30918-SRM1)				Prepared: 12/09/03		Analyzed: 12/12/03				
Phenol	42.3	10	ug/l	51.5		82.1	70-130			
2-Chlorophenol	42.7	10	"	50.0		85.4	70-130			
1,4-Dichlorobenzene	46.7	10	"	50.5		92.5	70-130			
n-Nitroso-di-n-propylamine	42.9	10	"	50.0		85.8	70-130			
(3 & 4)-Methylphenol	44.8	10	"	49.8		90.0	70-130			
Nitrobenzene	58.6	10	"	54.5		108	70-130			
2-Nitrophenol	67.8	10	"	52.0		130	70-130			
4-Chloro-3-methylphenol	58.4	10	"	51.0		115	70-130			
Dimethylphthalate	50.8	15	"	53.5		95.0	70-130			
2,6-Dinitrotoluene	47.0	10	"	52.5		89.5	70-130			
Diethyl Phthalate	46.9	10	"	53.5		87.7	70-130			
4,6-Dinitro-2-methylphenol	67.0	20	"	52.5		128	70-130			
Pentachlorophenol	62.5	20	"	52.0		120	70-130			
Phenanthrene	46.4	10	"	50.0		92.8	70-130			
Anthracene	45.7	10	"	50.5		90.5	70-130			
Di-n-butyl Phthalate	41.1	10	"	53.0		77.5	70-130			
Fluoranthene	44.3	10	"	51.0		86.9	70-130			
Pyrene	40.9	10	"	52.0		78.7	70-130			
Surrogate: 2-Fluorophenol	*42.4*		"	*48.8*		*86.9*	*70-130*			
Surrogate: 2-Fluorobiphenyl	*50.9*		"	*45.1*		*113*	*70-130*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Base/Neutral/Acid Extractable Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30918 - 3520C BNA Cont Liq										
Reference (1L30918-SRM1)				Prepared: 12/09/03 Analyzed: 12/12/03						
Surrogate: 2,4,6-Tribromophenol	*49.6*		*ug/l*	*45.9*		*108*	*70-130*			
Surrogate: Phenol-d6	*41.3*		*"*	*45.4*		*91.0*	*70-130*			
Surrogate: Terphenyl-dl4	*36.6*		*"*	*45.1*		*81.2*	*70-130*			
Surrogate: Nitrobenzene-d5	*52.0*		*"*	*46.2*		*113*	*70-130*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Polychlorinated Biphenyls (PCB) - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31113 - 3510C NP/OC Sep Fnl										
Blank (1L31113-BLK1)				Prepared: 12/11/03		Analyzed: 12/18/03				
Arochlor 1016	ND	0.10	ug/l							
Arochlor 1221	ND	0.20	"							
Arochlor 1232	ND	0.20	"							
Arochlor 1242	ND	0.20	"							
Arochlor 1248	ND	0.20	"							
Arochlor 1254	ND	0.10	"							
Arochlor 1260	ND	0.10	"							
Surrogate: Decachlorobiphenyl	*0.505*		"	*0.882*		*57.3*	*50-125*			
LCS (1L31113-BS1)				Prepared: 12/11/03		Analyzed: 12/18/03				
Arochlor 1016	2.350	0.10	ug/l	2.800		83.9	58-130			
Arochlor 1260	2.550	0.10	"	2.800		91.1	58-147			
Surrogate: Decachlorobiphenyl	*0.260*		"	*0.882*		*29.5*	*50-125*			*S-07*
Calibration Check (1L31113-CCV1)				Prepared: 12/11/03		Analyzed: 12/18/03				
Arochlor 1016	1.297		ug/l	1.120		116	75-125			
Arochlor 1260	1.325		"	1.120		118	75-125			
Matrix Spike (1L31113-MS1)		**Source: 13L0340-01**		Prepared: 12/11/03		Analyzed: 12/18/03				
Arochlor 1016	4.342	0.14	ug/l	3.841	ND	113	60-140			
Arochlor 1260	4.383	0.14	"	3.841	ND	114	60-140			
Surrogate: Decachlorobiphenyl	*0.967*		"	*1.210*		*79.9*	*50-125*			
Matrix Spike Dup (1L31113-MSD1)		**Source: 13L0340-01**		Prepared: 12/11/03		Analyzed: 12/18/03				
Arochlor 1016	3.767	0.10	ug/l	3.369	ND	112	60-140	14.2	30	
Arochlor 1260	4.591	0.10	"	3.369	ND	136	60-140	4.64	30	
Surrogate: Decachlorobiphenyl	*1.029*		"	*1.061*		*97.0*	*50-125*			

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Montgomery Watson Harza-MI
41551 Eleven Mile Road
Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Polychlorinated Biphenyls (PCB) - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31113 - 3510C NP/OC Sep Fnl										
Reference (1L31113-SRM1)				Prepared: 12/11/03		Analyzed: 12/18/03				
Arochlor 1016	3.480	0.10	ug/l	2.800		124	70-130			
Arochlor 1260	3.485	0.10	"	2.800		124	70-130			
Surrogate: Decachlorobiphenyl	*0.845*		"	*0.882*		*95.8*	*50-125*			

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Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Conventional Chemistry Parameters - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31111 - Wet Chem Preparation										
Blank (1L31111-BLK1)				Prepared & Analyzed: 12/11/03						
Chemical Oxygen Demand	ND	10	mg/l							
LCS (1L31111-BS1)				Prepared & Analyzed: 12/11/03						
Chemical Oxygen Demand	74.2	10	mg/l	75.0		98.9	89-115			
Matrix Spike (1L31111-MS1)		**Source: 13L0340-06**		Prepared & Analyzed: 12/11/03						
Chemical Oxygen Demand	44.7	10	mg/l	42.9	ND	104	64-132			
Matrix Spike Dup (1L31111-MSD1)		**Source: 13L0340-06**		Prepared & Analyzed: 12/11/03						
Chemical Oxygen Demand	44.7	10	mg/l	42.9	ND	104	64-132	0.00	23	
Batch 1L31505 - Wet Chem Preparation										
Blank (1L31505-BLK1)				Prepared & Analyzed: 12/15/03						
Oil and Grease	ND	1	mg/l							
LCS (1L31505-BS1)				Prepared & Analyzed: 12/15/03						
Oil and Grease	161	1	mg/l	168		95.8	83-110			
Duplicate (1L31505-DUP1)		**Source: 13L0428-01**		Prepared & Analyzed: 12/15/03						
Oil and Grease	285	1	mg/l		187			41.5	30	QR-04

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Novi, MI 48375

Work Order: 13L0340

December 19, 2003

Determination of Physical/Conventional Chemistry Parameters - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30909 - Wet Chem Preparation										
Blank (1L30909-BLK1)				Prepared & Analyzed: 12/09/03						
Solids, total suspended	ND	1	mg/l							
LCS (1L30909-BS1)				Prepared & Analyzed: 12/09/03						
Solids, total suspended	14.0	1	mg/l	15.0		93.3	73-112			
Duplicate (1L30909-DUP1)		**Source: 13L0340-06**		Prepared & Analyzed: 12/09/03						
Solids, total suspended	46.4	4	mg/l		46			0.866	27	

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Novi, MI 48375

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Determination of Total Metals - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30901 - EPA 3010A Total ICP										
Blank (1L30901-BLK1)				Prepared & Analyzed: 12/09/03						
Barium, total	ND	0.010	mg/l							
Chromium, total	ND	0.005	"							
Lead, total	ND	0.005	"							
Lead, total	ND	0.005	"							
Silver, total	ND	0.010	"							
Zinc, total	ND	0.010	"							
LCS (1L30901-BS1)				Prepared & Analyzed: 12/09/03						
Barium, total	0.212	0.010	mg/l	0.200		106	90-113			
Chromium, total	0.208	0.005	"	0.200		104	88-110			
Lead, total	0.211	0.005	"	0.200		106	88-112			
Lead, total	0.211	0.005	"	0.200		106	88-112			
Silver, total	0.207	0.010	"	0.200		104	86-110			
Zinc, total	0.209	0.010	"	0.200		104	84-115			
Calibration Check (1L30901-CCV1)				Prepared & Analyzed: 12/09/03						
Barium, total	1.07		mg/l	1.00		107	85-115			
Chromium, total	1.02		"	1.00		102	85-115			
Lead, total	1.05		"	1.00		105	85-115			
Lead, total	1.05		"	1.00		105	85-115			
Silver, total	0.986		"	1.00		98.6	85-115			
Zinc, total	1.04		"	1.00		104	85-115			
Calibration Check (1L30901-CCV2)				Prepared & Analyzed: 12/09/03						
Barium, total	1.07		mg/l	1.00		107	85-115			
Chromium, total	1.04		"	1.00		104	85-115			
Lead, total	1.06		"	1.00		106	85-115			
Lead, total	1.06		"	1.00		106	85-115			
Silver, total	0.996		"	1.00		99.6	85-115			
Zinc, total	1.07		"	1.00		107	85-115			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30901 - EPA 3010A Total ICP										
Calibration Check (1L30901-CCV5)				Prepared: 12/09/03		Analyzed: 12/10/03				
Barium, total	1.07		mg/l	1.00		107	85-115			
Chromium, total	1.03		"	1.00		103	85-115			
Lead, total	1.06		"	1.00		106	85-115			
Lead, total	1.06		"	1.00		106	85-115			
Silver, total	0.984		"	1.00		98.4	85-115			
Zinc, total	1.07		"	1.00		107	85-115			
Calibration Check (1L30901-CCV6)				Prepared: 12/09/03		Analyzed: 12/10/03				
Barium, total	1.07		mg/l	1.00		107	85-115			
Chromium, total	1.05		"	1.00		105	85-115			
Lead, total	1.08		"	1.00		108	85-115			
Lead, total	1.08		"	1.00		108	85-115			
Silver, total	0.980		"	1.00		98.0	85-115			
Zinc, total	1.10		"	1.00		110	85-115			
Matrix Spike (1L30901-MS1)		**Source: 13L0340-01**		Prepared & Analyzed: 12/09/03						
Barium, total	0.258	0.010	mg/l	0.200	0.045	106	83-117			
Chromium, total	0.210	0.005	"	0.200	ND	105	82-116			
Lead, total	0.214	0.005	"	0.200	0.004	105	87-114			
Lead, total	0.214	0.005	"	0.200	0.004	105	87-114			
Silver, total	0.208	0.010	"	0.200	ND	104	81-118			
Zinc, total	0.211	0.010	"	0.200	0.004	104	72-128			
Matrix Spike Dup (1L30901-MSD1)		**Source: 13L0340-01**		Prepared & Analyzed: 12/09/03						
Barium, total	0.260	0.010	mg/l	0.200	0.045	108	83-117	0.772	10	
Chromium, total	0.211	0.005	"	0.200	ND	106	82-116	0.475	10	
Lead, total	0.213	0.005	"	0.200	0.004	104	87-114	0.468	13	
Lead, total	0.213	0.005	"	0.200	0.004	104	87-114	0.468	13	
Silver, total	0.212	0.010	"	0.200	ND	106	81-118	1.90	10	
Zinc, total	0.213	0.010	"	0.200	0.004	104	72-128	0.943	13	

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Novi, MI 48375

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30901 - EPA 3010A Total ICP										
Post Spike (1L30901-PS1)		**Source: 13L0340-01**		Prepared & Analyzed: 12/09/03						
Barium, total	0.240	0.010	mg/l	0.200	0.045	97.5	77-119			
Chromium, total	0.194	0.005	"	0.200	ND	97.0	81-111			
Lead, total	0.200	0.005	"	0.200	0.004	98.0	81-114			
Lead, total	0.200	0.005	"	0.200	0.004	98.0	81-114			
Silver, total	0.198	0.010	"	0.200	ND	99.0	70-112			
Zinc, total	0.198	0.010	"	0.200	0.004	97.0	70-119			
Reference (1L30901-SRM1)				Prepared & Analyzed: 12/09/03						
Barium, total	0.518		mg/l	0.500		104	85-115			
Chromium, total	0.496		"	0.500		99.2	85-115			
Lead, total	0.513		"	0.500		103	85-115			
Lead, total	0.513		"	0.500		103	85-115			
Silver, total	0.498		"	0.500		99.6	85-115			
Zinc, total	0.506		"	0.500		101	85-115			
Reference (1L30901-SRM3)				Prepared: 12/09/03 Analyzed: 12/10/03						
Barium, total	0.524		mg/l	0.500		105	85-115			
Chromium, total	0.507		"	0.500		101	85-115			
Lead, total	0.524		"	0.500		105	85-115			
Lead, total	0.524		"	0.500		105	85-115			
Silver, total	0.502		"	0.500		100	85-115			
Zinc, total	0.524		"	0.500		105	85-115			
Batch 1L30921 - EPA 3020A Total GFAA										
Blank (1L30921-BLK1)				Prepared: 12/09/03 Analyzed: 12/10/03						
Arsenic, total	ND	0.005	mg/l							
Cadmium, total	ND	0.0010	"							
Selenium, total	ND	0.005	"							

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30921 - EPA 3020A Total GFAA										
LCS (1L30921-BS1)				Prepared: 12/09/03		Analyzed: 12/10/03				
Arsenic, total	0.0260	0.005	mg/l	0.0250		104	79-122			
Cadmium, total	0.00101	0.0010	"	0.00100		101	76-134			
Selenium, total	0.0286	0.005	"	0.0250		114	81-118			
Calibration Check (1L30921-CCV1)				Prepared: 12/09/03		Analyzed: 12/10/03				
Arsenic, total	0.0253		mg/l	0.0250		101	90-110			
Selenium, total	0.0257		"	0.0250		103	90-110			
Calibration Check (1L30921-CCV2)				Prepared: 12/09/03		Analyzed: 12/10/03				
Arsenic, total	0.0248		mg/l	0.0250		99.2	85-115			
Selenium, total	0.0217		"	0.0250		86.8	85-115			
Calibration Check (1L30921-CCV3)				Prepared: 12/09/03		Analyzed: 12/11/03				
Cadmium, total	0.00109		mg/l	0.00100		109	90-110			
Calibration Check (1L30921-CCV4)				Prepared: 12/09/03		Analyzed: 12/11/03				
Cadmium, total	0.00096		mg/l	0.00100		96.0	85-115			
Matrix Spike (1L30921-MS1)		**Source: 13L0340-01**		Prepared: 12/09/03		Analyzed: 12/10/03				
Arsenic, total	0.0252	0.005	mg/l	0.0250	ND	101	57-127			
Cadmium, total	0.00088	0.0010	"	0.00100	ND	88.0	51-120			
Selenium, total	0.0249	0.005	"	0.0250	0.002	91.6	64-111			
Matrix Spike Dup (1L30921-MSD1)		**Source: 13L0340-01**		Prepared: 12/09/03		Analyzed: 12/10/03				
Arsenic, total	0.0248	0.005	mg/l	0.0250	ND	99.2	57-127	1.60	15	
Cadmium, total	0.00087	0.0010	"	0.00100	ND	87.0	51-120	1.14	20	
Selenium, total	0.0248	0.005	"	0.0250	0.002	91.2	64-111	0.402	11	

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L30921 - EPA 3020A Total GFAA										
Post Spike (1L30921-PS1)		**Source: 13L0340-01**		Prepared: 12/09/03		Analyzed: 12/10/03				
Arsenic, total	0.0129		mg/l	0.0125	ND	103	59-140			
Selenium, total	0.0136		"	0.0125	0.00200	92.8	67-122			
Post Spike (1L30921-PS2)		**Source: 13L0340-01**		Prepared: 12/09/03		Analyzed: 12/11/03				
Cadmium, total	0.00028		mg/l	0.000500	ND	56.0	50-123			
Reference (1L30921-SRM1)				Prepared: 12/09/03		Analyzed: 12/10/03				
Arsenic, total	0.0102	0.005	mg/l	0.0100		102	80-120			
Selenium, total	0.0102	0.005	"	0.0100		102	80-120			
Reference (1L30921-SRM2)				Prepared: 12/09/03		Analyzed: 12/11/03				
Cadmium, total	0.00073	0.0010	mg/l	0.000750		97.3	80-120			
Batch 1L31028 - EPA 245.1 Hg Dig										
Blank (1L31028-BLK1)				Prepared: 12/10/03		Analyzed: 12/11/03				
Mercury, total	ND	0.00050	mg/l							
LCS (1L31028-BS1)				Prepared: 12/10/03		Analyzed: 12/11/03				
Mercury, total	0.00158	0.00050	mg/l	0.00200		79.0	70-129			
Calibration Check (1L31028-CCV1)				Prepared: 12/10/03		Analyzed: 12/11/03				
Mercury, total	0.00212	0.00050	mg/l	0.00200		106	80-120			
Calibration Check (1L31028-CCV2)				Prepared: 12/10/03		Analyzed: 12/11/03				
Mercury, total	0.00209	0.00050	mg/l	0.00200		104	80-120			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1L31028 - EPA 245.1 Hg Dig										
Matrix Spike (1L31028-MS1)		**Source: 13L0210-01**		Prepared: 12/10/03		Analyzed: 12/11/03				
Mercury, total	0.00192	0.00050	mg/l	0.00200	0.00006	93.0	59-116			
Matrix Spike (1L31028-MS2)		**Source: 13L0340-01**		Prepared: 12/10/03		Analyzed: 12/11/03				
Mercury, total	0.00183	0.00050	mg/l	0.00200	0.00004	89.5	59-116			
Matrix Spike Dup (1L31028-MSD1)		**Source: 13L0210-01**		Prepared: 12/10/03		Analyzed: 12/11/03				
Mercury, total	0.00189	0.00050	mg/l	0.00200	0.00006	91.5	59-116	1.57	17	
Matrix Spike Dup (1L31028-MSD2)		**Source: 13L0340-01**		Prepared: 12/10/03		Analyzed: 12/11/03				
Mercury, total	0.00180	0.00050	mg/l	0.00200	0.00004	88.0	59-116	1.65	17	

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

Notes and Definitions

QM-07	The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-12	The spike recovery was outside acceptance limits for the MS and/or MSD.
QR-04	The RPD for this analyte exceeded acceptance limits.
QS-02	The spike recovery for this QC sample exceeded established acceptance limits. However, all samples were below the reporting and/or regulatory limit so the data is acceptable.
QS-03	The blank spike recovery was below established acceptance limits.
S-07	The surrogate recovery for this sample is outside of established control limits.

End of Report

Jeffrey King

Keystone Laboratories, Inc.
Jeffrey King, Ph.D.
Laboratory Director

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APPENDIX F

Table 4
LUST Soil Cleanup Guidelines for Undisturbed Soil

Site Features*	Score 15 if True		Score 10 if True		Score 5 if True		Score 0 if True	
Depth to groundwater?	> 100 ft.		100-51 ft.		50-25 ft.		< 25 ft.	0
Groundwater potable?	No	15					Yes	
Drinking water supply proximity?	> 1,000 ft. away	15	1,000-501 ft. away		500-100 ft. away		< 100 ft. away	
Distance to surface waters?	> 5,000 ft.		5,000-2,501 ft.		2,500-1,000 ft.	5	< 1,000 ft.	
Geologic features present?	> 2,000 ft.		2,000-1,001 ft.		1,000-500 ft.		< 500 ft.	0
Man-made vertical conduits?	> 500 ft.	15	500-251 ft.		250-100 ft.		< 100 ft.	
Man-made horizontal conduits?	> 250 ft.		250-101 ft.		100-50 ft.		< 50 ft.	0
Soil permeability? (see definitions)	Low	15	Low-Moderate		Moderate-High		High	
Soil thickness? (see overburden map)	> 50 ft		50-41 ft.		40-20 ft.	5	< 20 ft.	
Environmentally sensitive receptors?	> 5,000 ft.		5,000-2,501 ft.		2,500-1,000 ft.	5	< 1,000 ft.	
Surrounding land use?	> 1,000 ft. away		1,000-501 ft. away	10	500-100 ft. away		< 100 ft. away	
Future land use?	Industrial	15	Commercial				Residential	
Off-site impact?	No	15					Yes	
Subtotals		90		10		15		0
						Total Score =	115	

Soil Cleanup Levels (ppm)					
Total Score	195-150	149-120	119-80	79-50	49 or less
BTEX	4/20/100/100	2/10/50/50	1/5/10/10	0.5/1/2/2	B+T+E+X < 2
TPH	1000	500	200	100	50
MTBE	280		140		60

* See definitions of site features following this table.