SITE ASSESSMENT REPORT
FOR
ESI ENVIRONMENTAL, INC. SITE ASSESSMENT
INDIANAPOLIS, MARION COUNTY, INDIANA

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Emergency Response Branch
Region V
77 West Jackson Boulevard
Chicago, Illinois 60604-3507

Prepared by:

WESTON SOLUTIONS, INC.
20 North Wacker Drive, Suite 1210
Chicago, Illinois 60606

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WESTON START Project Manager	Rick Mehl
Telephone Number	312-424-3312
U.S. EPA On-Scene Coordinator	Verneta Simon

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November 1, 2010

Prepared by: _____ Date: 11/1/10
Trenna Seilheimer
WESTON START Member

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TABLE OF CONTENTS

Section **Page**

1. INTRODUCTION 1

2. SITE BACKGROUND 2

2.1 SITE DESCRIPTION 2
2.2 SITE HISTORY 3
2.2.1 2007 Release Information 3
2.2.2 2007 PCB Containing Oils Information 5
2.2.3 2009 Release Information 6
2.2.4 Current Information 6

3. SITE ASSESSMENT ACTIVITIES 6

3.1 SITE OBSERVATIONS 7
3.2 SAMPLING ACTIVITIES 7

4. ANALYTICAL RESULTS 7

5. THREATS TO HUMAN HEALTH AND THE ENVIRONMENT 8

6. CONCLUSIONS AND RECOMMENDATIONS 10

6.1 CONCLUSIONS 10
6.2 RECOMMENDATIONS 11

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LIST OF FIGURES

Figure 1-1 Site Location Map

Figure 2-1 Site Features Map

Figure 2-2 Historical Sampling Events Location Map

Figure 3-1 HazCat Sampling Location Map

LIST OF TABLES

Table 2-1 Site Features Designations

Table 2-2 2007 Spill Affected Areas

Table 2-3a Summary of Historical Sampling Events

Table 2-3b City of Indianapolis-DPW Historical Sampling Event Results

Table 2-3c IDEM Historical Sampling Event Results

Table 2-3d MCHD Historical Sampling Event Results

Table 2-3e ESI Historical Sampling Event Results

Table 2-3f Keramida Historical Sampling Event Results

Table 3-1 HazCat Sampling Results

LIST OF APPENDICES

Appendix A Photographic Documentation

Appendix B HazCat Sampling Logs

Appendix C Laboratory Analytical Results

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LIST OF ABBREVIATIONS AND ACRONYMS

B&T	Barnes & Thornburg, LLP
CFR	*Code of Federal Regulations*
City	City of Indianapolis
DAF	Dissolved Air Flotation
DPW	Department of Public Works
ER	Environmental Restoration, LLC
ERO	Extended Range Organic
ERRS	Emergency and Rapid Response Services
ESI	ESI Environmental, Inc.
ft^2	Square Feet
HazCat	Hazard Characterization
IDEM	Indiana Department of Environmental Management
Marathon	Marathon Oil Company
MCHD	Marion County Health Department
MCL	Maximum Concentration Limit
mg/kg	Milligram per kilogram
mg/L	Milligram per liter
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
OSC	On-Scene Coordinator
Pace	Pace Analytical Services, Inc.
PCB	Polychlorinated Biphenyl
RISC	Risk Integrated System of Closure
RSL	Regional Screening Level
START	Superfund Technical Assessment and Response Team
SVOC	Semivolatile Organic Compound
TCLP	Toxicity Characteristic Leaching Procedure
TDD	Technical Direction Document
TPH	Total Petroleum Hydrocarbon
U.S. EPA	U.S. Environmental Protection Agency
VOC	Volatile Organic Compound
WESTON	Weston Solutions, Inc.
WWTP	Wastewater Treatment Plant

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1. INTRODUCTION

The U.S. Environmental Protection Agency (U.S. EPA) tasked the Weston Solutions, Inc. (WESTON®), Superfund Technical Assessment and Response Team (START) to assist U.S. EPA On-Scene Coordinator (OSC) Verneta Simon in performing a site assessment at the ESI Environmental, Inc. (ESI) site (Site), located in Indianapolis, Marion County, Indiana (Figure 1-1). Under Technical Direction Document (TDD) number S05-0001-1008-022, U.S. EPA requested that WESTON START document current site conditions; obtain photographic documentation; and evaluate the potential for imminent and substantial threats to human health, welfare, and the environment posed by Site-related conditions. On September 1, 2010, WESTON START conducted a site walk under the direction of OSC Verneta Simon. U.S. EPA member Bill Ryczik, Indiana Department of Environmental Management (IDEM) member Harry Atkinson, ESI President Thomas Gawlik, and legal counsel representing ESI Barnes & Thornburg, LLP (B&T) member Michael Scanlon were also present during the site walk. On October 8 and 9, 2010, WESTON START and Environmental Restoration, LLC (ER) the Emergency and Rapid Response Services (ERRS) contractor conducted a site assessment under the direction of OSC Verneta Simon. Representatives from the City of Indianapolis, IDEM, United Water, Pike Township Fire Department, and Trustee were also present during the site assessment.

This Site Assessment Report is organized into the following sections:

- **Introduction –** Provides a brief description of the objective and scope of site assessment activities
- **Site Background** – Details the Site description and its known history
- **Site Assessment Activities –** Discusses the site observations made and activities conducted during the site assessment
- **Analytical Results –** Discusses the analytical results for samples collected during historical sampling events and the site assessment
- **Threats to Human Health and the Environment –** Identifies Site-related conditions that may warrant a removal action under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP)

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- **Conclusions and Recommendations –** Summarizes the site assessment findings and recommendations for further Site activities as needed

2. SITE BACKGROUND

This section discuses the site description and history.

2.1 SITE DESCRIPTION

The Site is located at 4910 West 86th Street in Indianapolis, Marion County, Indiana and is situated in a commercial and industrial setting. The approximately 8-acre Site includes a wastewater treatment plant (WWTP) consisting of wastewater processing equipment, a sludge treatment building, a sludge treatment process, an oil dehydration process, and a truck off-loading building (Figure 2-1). The southwest parking lot was sub-leased by ESI from Asphalt Materials who leased this parcel from Marathon Oil Company (Marathon). The office/maintenance building and rail yard unloading area was leased by ESI from Marathon. The Site is bordered to the north by an industrial property, to the south by West 86th Street with commercial properties beyond, and to the east and west by open land. The coordinates for the Site are latitude 39.912866° North and longitude -86.24213° West. It should also be noted that the ESI corporate office is located at 5232 West 79th Street, Indianapolis, Marion County, Indiana.

The Site is a provider of liquid waste management services and a recycler of used oil under 40 Code of Federal Regulations (CFR) Part 279. The primary wastewater processing equipment includes API oil/water separators, dissolved air flotation (DAF) units, oil storage tanks, sand filters, rotary vacuum filters, plate and frame filter press, and oxidation pit. The facility collects, processes, recovers, and disposes of non-hazardous wastewater, a byproduct of industrial and commercial manufacturing plants. The Site has the capability to treat a variety of non-hazardous liquids and accepts bulk, drum, and containerized liquids. All loads received into the facility are treated and processed to separate contaminants. The water collected during this process is discharged separately into the City sanitary sewer system and the contaminants are further processed into a form that allows proper recycling or disposal. Any oils recovered from the

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process are shipped off-site for reclamation. The Site was designed such that all storm water falling in the Site is captured in its internal sewer system and is ultimately run through its wastewater processing equipment prior to being discharged into the City sanitary sewer system.

Figure 2-1 and Table 2-1 present the features of the Site. Over forty storage tanks (waste oil, raw water, sulfuric acid, caustics, hydrogen peroxide, and sludge), separators (oil-water), sumps (oil), and air strippers are located on-site and range in size as outlined below:

- One 1,000,000-gallon Oil Storage Tank ("A" on Figure 2-1) currently holds approximately 300,000-gallons of possible PCB containing sludge.
- Two 1,000,000-gallon Raw Water Storage Tanks ("J" on Figure 2-1) currently hold a total of approximately 1,500,000-gallons of material (East Tank contains approximately 900,000-gallons of sludge and West Tank contains approximately 600,000-gallons of sludge).
- Other storage tanks range in size from 3,000 to 90,000-gallons and contain waste oil, raw water, sulfuric acid, caustics, hydrogen peroxide, and sludge; however, the volume of material stored in each tank contents is unknown.
- Separator Tanks range in size from 3,000 to 30,000-gallons; however, the exact volume total of contents located on-site is unknown at this time.
- Sump is 4,000-gallons; however, the volume total of contents located on-site is unknown at this time.
- Air strippers range in size from 5,000 to 30,000-gallons; however, the exact volume total of contents located on-site is unknown at this time.

2.2 SITE HISTORY

The following sections present the history of the Site.

2.2.1 2007 Release Information

A Spill Report dated August 29, 2007, states that a release from the Site occurred on March 15, 2007, during a heavy rain event. The material spilled was untreated oil and water from the Site that entered the City sanitary sewer system via a by-pass sewer (used for permitted special waste), that had been left open. The amount of material released during this event is unknown; however, according to site personnel, it was less than 500-gallons. Due to the heavy rain event, the City sanitary sewers overflowed at several locations in the northern portion of Indianapolis, which resulted in the deposition of the material and sewerage onto vegetation in residential and

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commercial areas (Figure 2-2 and Table 2-2). The basement of a residence was also impacted at one location.

Contaminated soil and debris was excavated from at least 25 residential properties and two golf courses. The affected basement was cleaned and the sump pump and hot water heater were replaced at the request of the homeowner. Subsequent to excavation activities, soil samples were collected from the residential properties using a 900 square foot (ft^2) sampling grid and from the Coffin and Riverside Golf Courses using a 2,500 ft^2 sampling grid. Background samples were also collected at select areas.

Numerous sampling activities were conducted by various agencies from March through June 2007 (Table 2-3a through 2-3f) in the affected areas. Residential soil samples exceeded the IDEM Risk Integrated System of Closure (RISC) Residential Total Petroleum Hydrocarbon (TPH) Non-Default Closure Levels for extended range organics (ERO) (80 milligram per kilogram [mg/kg]). The residential exceedances ranged from 85 to 2,900 mg/kg. Several residential properties had TPH-ERO exceedances subsequent to two separate excavations. IDEM stated the remaining exceedances could stay in place since the soil may be (a) partially attributable to high background levels and (b) better remediated by natural processes including natural degradation and phytoremediation. All TPH results for the golf courses were below the applicable cleanup objectives. It should be noted that several concentrations of arsenic, mercury, chromium, lead, and various volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) exceeded IDEM RISC Residential/Industrial Soil Default Closure Levels and U.S. EPA Residential/Industrial Soil Regional Screening Levels (RSLs). It is unknown if the exceedances are related to the 2007 release.

Wipe sampling was conducted in the basement of a residence using a 1 ft^2 sampling grid. All results were below the applicable cleanup objectives.

Residential water well sampling was also conducted with all results below the applicable cleanup objectives with the exception of arsenic (0.012 to 0.016 milligram per liter [mg/L]) which exceeded the U.S. EPA Maximum Concentration Limits (MCLs). It is unknown if the exceedances are related to the 2007 release.

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A professional landscaper restored the lawns after the properties had been cleared by sampling results. The course operators restored the golf courses.

A total of 6,000 gallons of oil and water was removed from the north storm sewer cistern and transported to the Site for treatment. A total of 5,800 gallons of oil and water was removed from the Coffin Golf Course Lake and transported to the Site for treatment. A total of 1,600 yards of contaminated soil and debris was removed from impacted areas and transported offsite for disposal.

The north storm sewer cistern discovered by IDEM and Marion County Health Department (MCHD) and initially identified as a potential source of the release was determined to be a non-functioning sewer and was not the source of the oil from the incident. On April 10, 2007, the pipe from the Site to the cistern was plugged and the cistern was filled with concrete to prevent any possible problems with this structure in the future. On April 17, 2007, the by-pass sewer was permanently sealed with concrete.

2.2.2 2007 PCB Containing Oils Information

On July 18, 2007, the Site was notified by a customer that it had discovered approximately 28 mg/kg of polychlorinated biphenyl (PCBs) in a used oil shipment from the Site. The customer returned the shipment to the Site and it was placed in a segregated holding tank. Samples were collected from each of the product storage frac tanks and other process tanks located at the Site and analyzed for PCBs. The Site discovered that detectable PCBs were present in four loads of oily water from one generator/transporter. All equipment was decontaminated with kerosene beginning on August 1, 2007. The recovered kerosene was transferred to the Oil Storage Tank designated “A” on Figure 2-1. In addition to the recovered kerosene, all pumpable materials (liquid and suspended solids) that could be pumped through existing and temporary lines were pumped to this tank. Materials that could not be pumped to this tank were placed in designated frac tanks while recovered centrifuge solids were stored in the Oil Water Separator designated “H” on Figure 2-1. These materials were disposed of off-site in July 2008.

From October 2008 to August 2009, approximately 660,000-gallons from Oil Storage Tank (“A”) were transported off-site for disposal. This tank currently contains approximately 300,000

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-gallons of sludge.

2.2.3 2009 Release Information

Reportedly another release occurred in early 2009. The City-Department of Public Works (DPW) collected background, sludge, and soil samples from various residential and commercial properties in February and April 2009 (Figure 2-2 and Tables 2-3a and 2-3b). Residential soil samples exceeded the IDEM RISC Residential TPH Non-Default Closure Levels for ERO (80 mg/kg). The residential exceedances ranged from 230 to 3,800 mg/kg.

2.2.4 Current Information

In anticipation of the Site being permanently shut down, a Partial Closure Plan was drafted which focuses on managing storm water run-off post shut down to insure that the storm water remains uncontaminated and is properly drained from the Site. The storm water would be directed away from existing process equipment and allowed to flow into "Oil Creek" which runs to the east of the Site. Storm water currently empties into one of the two Raw Water Storage Tanks ("J").

In a press release dated September 27, 2010, ESI announced that it would discontinue accepting waste material and end its operations effective October 1, 2010.

3. SITE ASSESSMENT ACTIVITIES

On September 1, 2010, U.S. EPA OSC Verneta Simon; U.S. EPA member Bill Ryczik, IDEM member Harry Atkinson; ESI President Thomas Gawlik; legal counsel representing ESI B&T member Michael Scanlon; and WESTON START member Marcus Muccianti conducted the site walk.

On October 8 and 9, 2010, U.S. EPA OSC Verneta Simon, WESTON START, and ER ERRS conducted a site assessment. Representatives from the City, IDEM, United Water, Pike Township Fire Department, and Trustee were also present.

The objective for this site assessment was to determine whether the Site poses an imminent and substantial threat to human health, human welfare, and the environment. Hazard characterization

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(HazCat) was conducted by ERRS.

3.1 SITE OBSERVATIONS

Observations during the site assessment are summarized below.

- An asphalt and concrete berm surrounds the entire Site. Sand bags make up a portion of the berm near the solidification area. A secure fence is also present along the perimeter of the Site.
- The 1,000,000-gallon Oil Storage Tank ("A" on Figure 2-1) currently holds approximately 300,000-gallons of possible PCB containing sludge.
- The two 1,000,000-gallon Raw Water Storage Tanks ("J" on Figure 2-1) currently hold a total of approximately 1,500,000-gallons of material (East Tank contains approximately 900,000-gallons and West Tank contains approximately 600,000-gallons).
- All storage tanks onsite seem to have secondary containment; however, a complete assessment of the storage tanks, separators, sumps, strippers, and buildings was not completed during this site assessment.

Appendix A provides photographic documentation of Site observations.

3.2 SAMPLING ACTIVITIES

Sampling locations were selected based on site observations. Sampling locations were chosen to be representative of areas posing a potential risk to human health and the environment. The samples collected by ER ERRS were then HazCat to determine if additional analyses were needed. The HazCat Sampling Logs are presented in Appendix B.

ERRS collected 38 samples from onsite tanks, frac tanks, tankers, and roll-off boxes for HazCat. Figure 3-1 and Table 3-1 present the HazCat results. Of these samples, five (D-South, Tank, Frac 7, Frac 8, and Frac 9) were submitted to Pace Analytical Services, Inc. (Pace) for PCB analysis. In addition, the samples from D-South and Tank were also analyzed for toxicity characteristic leaching procedure (TCLP) Metal analysis.

4. ANALYTICAL RESULTS

As stated above, numerous sampling activities were conducted by various agencies from March 2007 to April 2009 (Tables 2-3a through 2-3f) in response to the releases in 2007 and 2009.

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IDEM stated the remaining residential soil exceedances could stay in place since the soil may be (a) partially attributable to high background levels and (b) better remediated by natural processes including natural degradation and phytoremediation. During sampling events in 2007, several concentrations of arsenic, mercury, chromium, lead, and various VOCs and SVOCs exceeded IDEM RISC Residential/Industrial Soil Default Closure Levels and U.S. EPA Residential/Industrial Soil RSLs. It is unknown if the exceedances are related to the 2007 release.

On March 22, 2007, eight residential properties were sampled and analyzed. Four of the eight residences had exceedances of the U.S. EPA MCLs for arsenic. It is unknown if the exceedances are related to the 2007 release.

On September 1, 2010, U.S. EPA, IDEM, ESI, B&T, and WESTON START conducted a site walk. No investigative samples were collected during these activities.

On October 8 and 9, 2010, U.S. EPA, WESTON START, and ERRS conducted a site assessment. Representatives from the City, IDEM, United Water, Pike Township Fire Department, and Trustee were also present. ERRS collected 38 samples for HazCat. Of these samples, five (D-South, Tank, Frac 7, Frac 8, and Frac 9) were submitted to Pace for PCB analysis. In addition, the samples from D-South and Tank were also analyzed for TCLP Metal analysis. The laboratory analytical results are presented in Appendix C. The results indicated the following:

- D-South: All PCB results were non-detect. TCLP Metals detected were barium, chromium, and lead; however these were below the applicable screening criteria.
- Tank: All PCB results were non-detect. TCLP Metals detected were barium and chromium; however these were below the applicable screening criteria.
- Frac 7: All PCB results were non-detect.
- Frac 8: All PCB results were non-detect.
- Frac 9: All PCB results were non-detect.

5. THREATS TO HUMAN HEALTH AND THE ENVIRONMENT

Factors to be considered in determining the appropriateness of a potential removal action at a Site are delineated in the NCP at Title 40 of the CFR 300.415(b)(2). A summary of the factors

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applicable to this Site is presented below.

- **Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances, pollutants, or contaminants**

  On March 15, 2007, a release from the Site occurred during a heavy rain event. The release was untreated oil and water from the Site that entered the City sanitary sewer system via a by-pass sewer (used for permitted special waste), that had been left open. At least 25 residential properties and two golf courses were affected by this incident.

  Reportedly another release occurred in the beginning of 2009. Sludge and soil samples were collected from eight residential properties and one golf course.

  Two releases (2007 and 2009) have occurred at the Site resulting in residential property contamination of soils with TPH-ERO exceeding the IDEM RISC Residential TPH Non-Default Closure Levels.

- **Actual or potential contamination of drinking water supplies or sensitive ecosystems**

  Subsequent to the 2007 release, of the 25 residential properties affected, 10 of them have a drinking water well present. On March 22, 2007, eight residential properties were sampled and analyzed. Four of the eight residences had exceedances of the U.S. EPA MCLs for arsenic (concentrations ranged from 0.012 to 0.016 mg/L).

  There is no data for residential water well sampling subsequent to the 2009 release.

- **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release**

  Over forty storage tanks (waste oil, raw water, sulfuric acid, caustics, hydrogen peroxide, and sludge), separators (oil-water), sumps (oil), and air strippers are located on-site and range in size from 3,000 to 1,000,000-gallons. Storm water could fill these tanks causing these tanks to overflow resulting in an offsite release.

  Two releases (2007 and 2009) have occurred at the Site resulting in residential property contamination of soils with TPH-ERO exceeding the IDEM RISC Residential TPH Non-Default Closure Levels.

- **Weather conditions that may cause hazardous substances, pollutants, or contaminants to migrate or be released**

  A release from the Site occurred on March 15, 2007, during a heavy rain event. The release was untreated oil and water from the Site that entered the City sanitary sewer system via a by-pass sewer (used for permitted special waste), that had been left open. Due to the heavy rain event, the City sanitary sewers overflowed at several locations in

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the northern portion of Indianapolis, which resulted in the deposition of the material and sewerage onto vegetation in residential and commercial areas.

Reportedly another release occurred in the beginning of 2009. Based on the additional release subsequent to the permanent closure of the north storm sewer cistern and by-pass sewer on-site, it is unknown how the material from the Site appeared in the City sanitary sewer system and was released in the above mentioned areas.

These two releases (2007 and 2009) have occurred at the Site resulting in residential property contamination of soils with TPH-ERO exceeding the IDEM RISC Residential TPH Non-Default Closure Levels.

6. CONCLUSIONS AND RECOMMENDATIONS

This section discusses the conclusions and recommendations based on the site assessment findings.

6.1 CONCLUSIONS

On September 1, 2010, U.S. EPA, IDEM, ESI, B&T, and WESTON START conducted a site walk. On October 8 and 9, 2010, U.S. EPA, WESTON START, and ERRS conducted a site assessment. Representatives from the City, IDEM, United Water, Pike Township Fire Department, and Trustee were also present. The objective for this site assessment was to determine whether the Site poses an imminent and substantial threat to human health, human welfare, and the environment. Based on the site walk, the following observations were made:

- The 1,000,000-gallon Oil Storage Tank ("A" on Figure 2-1) currently holds approximately 300,000-gallons of possible PCB containing sludge.
- The two 1,000,000-gallon Raw Water Storage Tanks ("J" on Figure 2-1) currently hold a total of approximately 1,500,000-gallons of material (East Tank contains approximately 900,000-gallons of sludge and West Tank contains approximately 600,000-gallons of sludge).
- Storm water currently empties into one of the two 1,000,000-gallon Raw Water Storage Tanks ("J"). Water from these tanks is then pumped out of the tanks and treated prior to discharge into the sanitary sewer.

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- Other storage tanks range in size from 3,000 to 90,000-gallons and contain waste oil, raw water, sulfuric acid, caustics, hydrogen peroxide, and sludge; however, the volume of material stored in each tank contents is unknown.

A release from the Site occurred on March 15, 2007, during a heavy rain event. The release was untreated oil and water from the Site that entered the City sanitary sewer system via a by-pass sewer (used for permitted special waste), that had been left open. Due to the heavy rain event, the City sanitary sewers overflowed at several locations in the northern portion of Indianapolis, which resulted in the deposition of the material and sewerage onto vegetation in residential and commercial areas. At least 25 residential properties and two golf courses were affected by this incident. On April 10, 2007, the pipe from the Site to the north storm sewer cistern was plugged and the cistern was filled with concrete to prevent any possible problems with this structure in the future. On April 17, 2007, the by-pass sewer was permanently sealed with concrete.

Reportedly another release occurred in the beginning of 2009. Eight residential properties and one golf course had sludge and soil samples collected.

These two releases (2007 and 2009) have occurred at the Site resulting in residential property contamination of soils with TPH-ERO exceeding the IDEM RISC Residential TPH Non-Default Closure Levels.

In a press release dated September 27, 2010, ESI announced that it would discontinue accepting waste material and end its operations effective October 1, 2010.

Contaminants and conditions at the Site meet criteria established in the NCP for a removal action.

6.2 RECOMMENDATIONS

Based on information gathered during the site assessment, WESTON START recommendations are summarized below.

- A removal of wastes at the ESI site should be conducted to reduce the potential for a release of contaminated materials that could result in, but not limited to, any or all of the following:

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- Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances, pollutants, or contaminants;
- Actual or potential contamination of drinking water supplies or sensitive ecosystems;
- Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release; and
- Weather conditions that may cause hazardous substances, pollutants, or contaminants to migrate or be released.

- In anticipation of the Site being permanently shut down, a Closure Plan should be implemented to manage storm water run-off post and insure that the storm water remains uncontaminated and is properly drained from the Site. Storm water currently empties into one of the two 1,000,000-gallon Raw Water Storage Tanks (“J”).

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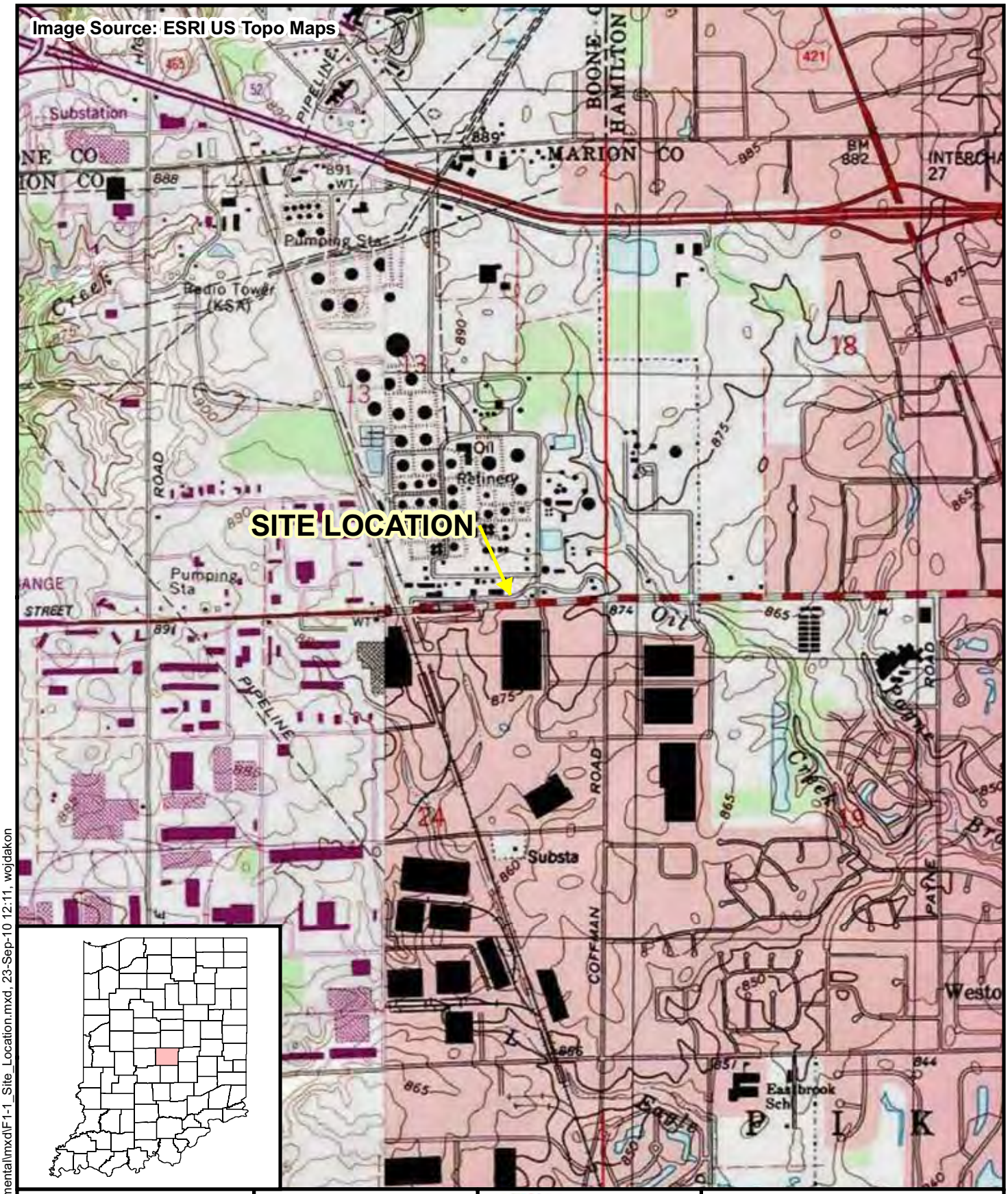
FIGURES



Legend

0 2,000 Feet

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U.S. EPA REGION V

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Figure 1-1
Site Location Map
ESI Environmental, Inc.
Indianapolis, Marion County, Indiana

File: D:\ESI_Environmental\mxd\F1-1_Site_Location.mxd, 23-Sep-10 12:11, wojdakon

Designation	Description	Size (gallon)
A	Oil Storage Tank	1,000,000
B	Oil Skimming Storage Tank	10,000
C	Sample Storage Building	--
D	Primary Separator	68,000
E	Frac Tank	22,000
F	Off Spec Oil Storage Frac Tanks	(7x) 22,000
G	Auxiliary Separator	30,000
H	Oil Water Separator	3,000
I	Chemical Building	--
J	Raw Water Storage Tanks	(2x) 1,000,000
K	Desmulsification Tank	90,000
L	Precipitation Tank	90,000
M	Caustic Storage Tank	3,000
N	Caustic Storage Tank	3,000
O	Caustic Storage Tank	10,000
P	Flocculant Building	--
Q	API Oil/Water Separator	30,000
R	API Oil/Water Separator Sump	13,000
S	Hydrogen Peroxide Storage Tank	7,000
T	Caustic Storage Tank	7,000
U	Caustic Storage Tank	10,000
V	Caustic Storage Tank	7,000
W	Sulfuric Acid Storage Tank	10,000
X	Not In Use	10,000
Y	DAF Separators	(2x) 30,000
Z	Sulfuric Acid Storage Tank	7,000
AA	Oil Unloading Sump	4,000
BB	Oil Storage Tanks	(4x) 20,000
CC	Sulfuric Acid Storage Tank	10,000
DD	Oxidation Pit	30,000
EE	Sand Filter	(3x) 2,000
FF	Sludge Tank	(4x) 12,000
GG	Off Spec Oil Storage Tanks	(3x) 15,000 20,0000 22,500 24,000
HH	Cent Feed Tank	22,000
II	Unloading Building	--
JJ	Small Air Stripper	5,000
KK	Large Air Stripper	30,000
LL	Control Building	--
MM	Storage Building	--
NN	Dehydration Building	--
OO	Solids Building	--

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Legend

- Storm Sewer Manholes
- Site Boundary

0 150 Feet

N

Prepared for:
U.S. EPA REGION V

Contract No.: EP-S5-06-04
TDD: S05-0001-1008-022
DCN: 1184-2A-AHYY

Prepared By:
WESTON SOLUTIONS, INC

750 E. Bunker Court
Suite 500
Vernon Hills, Illinois 60061

Figure 2-1
Site Features Map
ESI Environmental, Inc.
Indianapolis, Marion County, Indiana

Legend

Historical_samples

- Site
- Commercial
- Residential

0 5,000 Feet

N

Prepared for:
U.S. EPA REGION V

Contract No.: EP-S5-06-04
TDD: S05-0001-1008-022
DCN: 1184-2A-AHYY

Prepared By:
WESTON SOLUTIONS, INC

750 E. Bunker Court
Suite 500
Vernon Hills, Illinois 60061

Figure 2-2
Historical Sampling Events
Location Map
ESI Environmental, Inc.
Indianapolis, Marion County, Indiana

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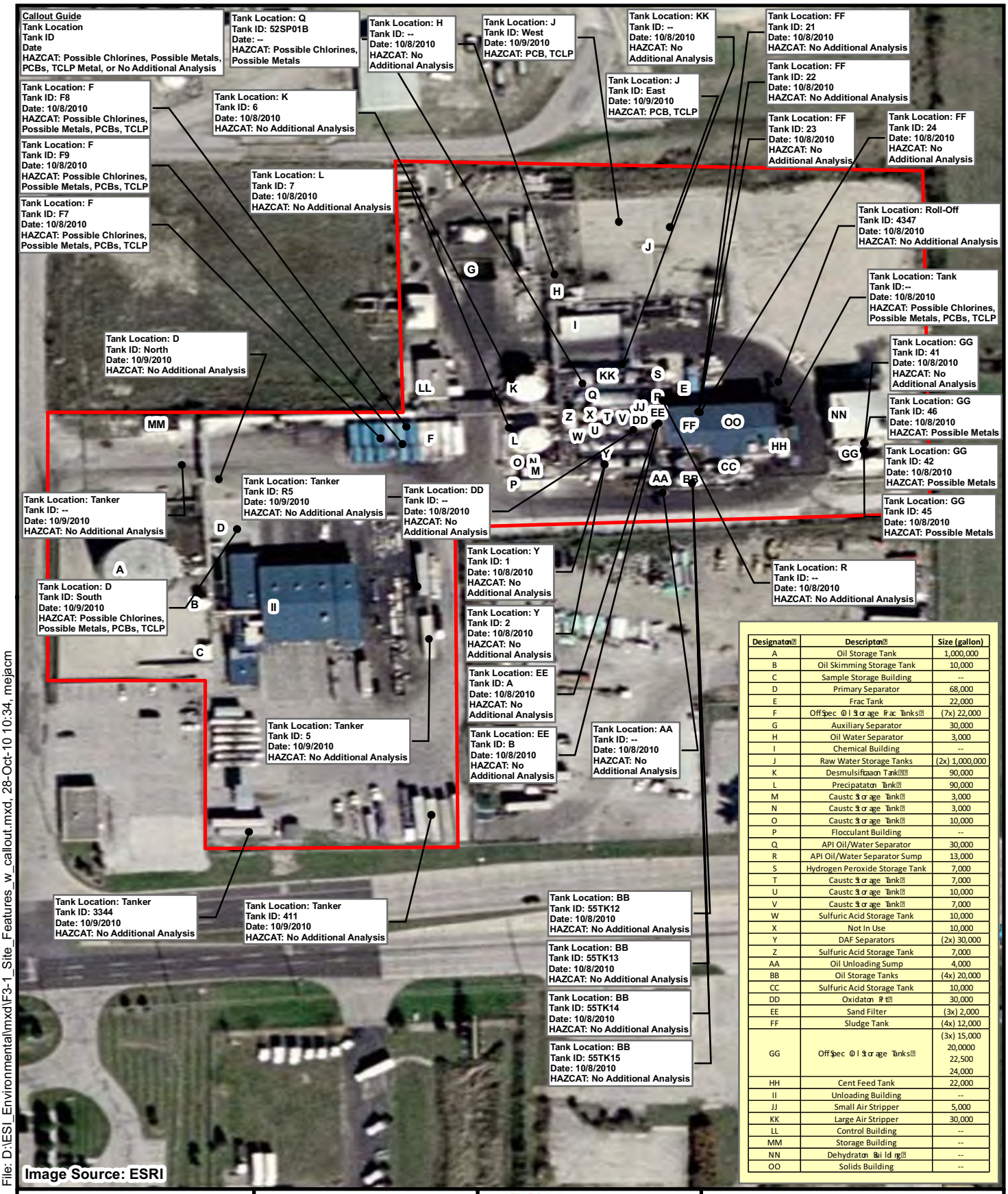

Designation	Description	Size (gallon)
A	Oil Storage Tank	1,000,000
B	Oil Skimming Storage Tank	10,000
C	Sample Storage Building	--
D	Primary Separator	68,000
E	Frac Tank	22,000
F	Off Spec Oil Storage Frac Tanks	(7x) 22,000
G	Auxiliary Separator	30,000
H	Oil Water Separator	3,000
I	Chemical Building	--
J	Raw Water Storage Tanks	(2x) 1,000,000
K	Desmulsification Tank	90,000
L	Precipitation Tank	90,000
M	Caustic Storage Tank	3,000
N	Caustic Storage Tank	3,000
O	Caustic Storage Tank	10,000
P	Flocculant Building	--
Q	API Oil/Water Separator	30,000
R	API Oil/Water Separator Sump	13,000
S	Hydrogen Peroxide Storage Tank	7,000
T	Caustic Storage Tank	7,000
U	Caustic Storage Tank	10,000
V	Caustic Storage Tank	7,000
W	Sulfuric Acid Storage Tank	10,000
X	Not In Use	10,000
Y	DAF Separators	(2x) 30,000
Z	Sulfuric Acid Storage Tank	7,000
AA	Oil Unloading Sump	4,000
BB	Oil Storage Tanks	(4x) 20,000
CC	Sulfuric Acid Storage Tank	10,000
DD	Oxidation Pit	30,000
EE	Sand Filter	(3x) 2,000
FF	Sludge Tank	(4x) 12,000
GG	Off Spec Oil Storage Tanks	(3x) 15,000 20,0000 22,500 24,000
HH	Cent Feed Tank	22,000
II	Unloading Building	--
JJ	Small Air Stripper	5,000
KK	Large Air Stripper	30,000
LL	Control Building	--
MM	Storage Building	--
NN	Dehydration Building	--
OO	Solids Building	--

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Legend

Site Boundary

0 150 Feet

N

Prepared for:
U.S. EPA REGION V

Contract No.: EP-S5-06-04
TDD: S05-0001-1008-022
DCN: 1184-2A-AHYY

Prepared By:
WESTON SOLUTIONS, INC

750 E. Bunker Court
Suite 500
Vernon Hills, Illinois 60061

Figure 3-1
HAZCAT Sampling Location Map
ESI Environmental, Inc.
Indianapolis, Marion County, Indiana

TABLES

Table 2-1
Site Features Designations
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, IN

Designation	Description	Size (gallon)
A	Oil Storage Tank	1,000,000
B	Oil Skimming Storage Tank	10,000
C	Sample Storage Building	--
D	Primary Separator	68,000
E	Frac Tank	22,000
F	Off Spec Oil Storage Frac Tanks	(7x) 22,000
G	Auxiliary Separator	30,000
H	Oil Water Separator	3,000
I	Chemical Building	--
J	Raw Water Storage Tanks	(2x) 1,000,000
K	Desmulsification Tank	90,000
L	Precipatation Tank	90,000
M	Caustic Storage Tank	3,000
N	Caustic Storage Tank	3,000
O	Caustic Storage Tank	10,000
P	Flocculant Building	--
Q	API Oil/Water Separator	30,000
R	API Oil/Water Separator Sump	13,000
S	Hydrogen Peroxide Storage Tank	7,000
T	Caustic Storage Tank	7,000
U	Caustic Storage Tank	10,000
V	Caustic Storage Tank	7,000
W	Sulfuric Acid Storage Tank	10,000
X	Not In Use	10,000
Y	DAF Separators	(2x) 30,000
Z	Sulfuric Acid Storage Tank	7,000
AA	Oil Unloading Sump	4,000
BB	Oil Storage Tanks	(4x) 20,000
CC	Sulfuric Acid Storage Tank	10,000
DD	Oxidation Pit	30,000
EE	Sand Filter	(3x) 2,000
FF	Sludge Tank	(4x) 12,000
GG	Off Spec Oil Storage Tanks	(3x) 15,000 20,0000 22,500 24,000
HH	Cent Feed Tank	22,000
II	Unloading Building	--
JJ	Small Air Stripper	5,000
KK	Large Air Stripper	30,000
LL	Control Building	--
MM	Storage Building	--
NN	Dehydration Building	--
OO	Solids Building	--

Notes:
Refer to Figure 2-1 for designation locations on-site

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Table 2-2
2007 Spill Affected Areas
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Designation	Address	Water Well Present (Y/N)	Affected Area
Site	4910 West 86th Street, Indianapolis, IN	N	
Residential	8247 Quetico Drive, Indianapolis, IN	N	basement floor drain back-up and flooded with sewage/oil
Residential	2851 West 76th Street, Indianapolis, IN	Y	manhole overflowed in side yard
Residential	1701 West 66th Street, Indianapolis, IN	N	manhole overflowed in front yard
Residential	1707 West 66th Street, Indianapolis, IN	N	manhole overflowed in front yard
Residential	1717 West 66th Street, Indianapolis, IN	N	manhole overflowed in front yard
Residential	1723 West 66th Street, Indianapolis, IN	N	manhole overflowed in front yard
Residential	1733 West 66th Street, Indianapolis, IN	N	manhole overflowed in front yard
Residential	1743 West 66th Street, Indianapolis, IN	Y	manhole overflowed in front yard
Residential	5934 Grandview Drive, Indianapolis, IN	N	manhole overflowed in back yard
Residential	5980 Grandview Drive, Indianapolis, IN	N	manhole overflowed in back yard
Residential	6100 Grandview Drive, Indianapolis, IN	N	manhole overflowed along Grandview Drive
Residential	6500 Grandview Drive, Indianapolis, IN	N	manhole overflowed along Grandview Drive
Residential	6600 Grandview Drive, Indianapolis, IN	N	manhole overflowed in neighboring properties
Residential	6601 Grandview Drive, Indianapolis, IN	N	manhole overflowed along Grandview Drive
Residential	5764 Coburn Avenue, Indianapolis, IN	Y	manhole overflowed in back yard
Residential	5806 Coburn Avenue, Indianapolis, IN	N	manhole overflowed in back yard
Residential	4215 Springwood Trail, Indianapolis, IN	Y	manholes overflowed in Springwood Trail roadbed
Residential	4218 Springwood Trail, Indianapolis, IN	Y	manholes overflowed in Springwood Trail roadbed
Residential	4225 Springwood Trail, Indianapolis, IN	Y	manholes overflowed in Springwood Trail roadbed
Residential	4235 Springwood Trail, Indianapolis, IN	Y	manholes overflowed in Springwood Trail roadbed
Residential	4239 Springwood Trail, Indianapolis, IN	Y	manholes overflowed in Springwood Trail roadbed
Residential	4241 Springwood Trail, Indianapolis, IN	Y	manholes overflowed in Springwood Trail roadbed
Residential	4259 Springwood Trail, Indianapolis, IN	Y	manholes overflowed in Springwood Trail roadbed
Residential	4325 Springwood Trail, Indianapolis, IN	N	manhole overflowed in back yard of neighboring property
Residential	4335 Springwood Trail, Indianapolis, IN	N	manhole overflowed in back yard of neighboring property
Residential	4345 Springwood Trail, Indianapolis, IN	N	manhole overflowed in back yard
Public	Manhole #930137	N	manhole overflowed in undeveloped woodland area
Public	Manhole #930009	N	manhole overflowed in undeveloped woodland area
Public	Manhole #930032	N	manhole overflowed in undeveloped woodland area
Public	Manhole #930033	N	manhole overflowed in undeveloped woodland area
Public	Manhole #930036	N	manhole overflowed in undeveloped woodland area
Commercial	Coffin Golf Course 2401 Coldspring Road, Indianapolis, IN	N	manhole overflowed in area of 11th Hole
Commercial	Riverside Golf Course 3502 White River Parkway, Indianapolis, IN	N	manhole overflowed in area of 5th, 6th, 10th, and 13th Holes and small pond

Notes:
Refer to Figure 2-2 for designation locations on-site

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Table 2-3a
Summary of Historical Sampling Events
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample Date	Sampled By	Sample Area	Sample Type	Analyses					
				TPH[1]	VOC	SVOC	PCB	Metals	TCLP[2]
3/16/2007	IDEM	Unknown	Solid (soil)	✓	✓	✓		✓	
			Liquid (sewer)	✓ (no DRO)					
			Liquid (creek)	✓					
			Liquid (other)						
			Sludge (oil)	✓ (no DRO)		✓		✓	
3/16/2007	MCHD	Various Residential	Solid (soil)		✓			✓	
		ESI							
3/19/2007	ESI	ESI	Solid (soil)						✓ (no SVOC)
3/21/2007	City-DPW	Commercial (golf courses)	Solid (soil, bg)	✓				✓	✓
			Liquid (pond)		✓	✓			
3/22/2007	ESI	Various Residential	Liquid (water wells)		✓	✓	✓	✓	
3/26/2007	City-DPW	ESI-Storm Inlet	Sludge (oil)	✓				✓	✓
4/2007-5/2007	Keramida	Various Residential	Solid (soil, bg)	✓ (no DRO)	✓ (only PCE)				
		Commercial (golf courses)							
6/7/2007	Keramida	Residential	Wipe	✓	✓				
11/19/2008	City-DPW	Various Residential	Solid (soil, bg)	✓ (no DRO)					
			Solid (manhole)						
2/12/2009	City-DPW	Commercial (golf course)	Solid (soil, bg)	✓ (only ERO)					
		Various Residential							
4/7/2009	City-DPW	Various Residential	Solid (soil)	✓ (no DRO)					
			Solid (soil, bg)				✓		

Notes:

[1]-TPH includes DRO, GRO, ERO

[2]-TCLP includes VOCs, SVOCs, Metals

bg – background
City – City of Indianapolis
DPW – Department of Public Works
DRO - Diesel Range Organic
ERO - Extended Range Organic
ESI – ESI Environmental, Inc.
GRO - Gasoline Range Organic
IDEM – Indiana Department of Environmental Management
Keramida – Keramida Environmental
MCHD – Marion County Health Department
PCB – Polychlorinated Biphenyl
PCE - Tetrachloroethane
SVOC – Semivolatile Organic Compound
TCLP – Toxicity Characteristic Leaching Procedure
TPH – Total Petroleum Hydrocarbon
VOC – Volatile Organic Compound

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Table 2-3b
City of Indianapolis-DPW Historical Sampling Event Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample ID	Sample Date	TPH-GRO (mg/kg)	TPH-ERO (mg/kg)	TPH-DRO (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	PCBs (mg/kg)	Total Metals (mg/kg)								TCLP (mg/L)									
								As	Ba	Cd	Cr	Pb	Se	Ag	Hg	VOCs (µg/L)	SVOCs (µg/L)	As	Ba	Cd	Cr	Pb	Se	Ag	Hg (µg/L)
2851 West 76th Street, Indianapolis, IN																									
Sludge	02/12/09	--	*3,000,000*	*67,000*	--	--	--	--	--	--	--	--	--	--	--	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Background		--	52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1		--	780	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1733 West 66th Street, Indianapolis, IN																									
1	04/18/07	BDL	1,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2		BDL	2,900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3		BDL	1,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4		BDL	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Background	11/19/08	BDL	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1		--	78	--	--	--	--	--	--	--	--	--	--	--	--	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Sludge	02/12/09	--	*340,000*	*130,000*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Background		--	6.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1		--	8.9	--	--	--	--	--	--	--	--	--	--	--	--	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Background	04/07/09	0.36	400	--	--	--	BRL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1		0.11	1,100	--	--	--	BRL	--	--	--	--	--	--	--	--	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
5764 Coburn Street, Indianapolis, IN																									
Sludge	02/12/09	--	*390,000*	*96,000*	--	--	--	--	--	--	--	--	--	--	--	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Background		--	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1		--	3,100	--	--	--	--	--	--	--	--	--	--	--	--	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
5800 Coburn Street, Indianapolis, IN																									
Background	04/07/09	0.11	40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1		0.84	1,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4241 Springwood Trail, Indianapolis, IN																									
1	04/07/09	9.1	3,800	--	--	--	--	--	--	--	--	--	--	--	--	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
4253 Springwood Trail, Indianapolis, IN																									
Sludge	02/12/09	--	*450,000*	*82,000*	--	--	BRL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Background		--	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1		--	230	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Riverside Golf Course																									
Background	03/21/07	BRL	20	BRL	--	--	--	6.04	96.9	BRL	12.6	21.0	BRL	BRL	BRL	BRL	BRL	BRL	0.392	BRL	BRL	BRL	BRL	BRL	BRL
1		BRL	210	BRL	--	--	--	5.84	89.2	BRL	13.4	24.1	BRL	BRL	183	BRL	BRL	BRL	0.297	BRL	BRL	BRL	BRL	BRL	BRL
Coffin Golf Course																									
Background	03/21/07	BRL	37	BRL	--	--	--	4.63	58.9	BRL	7.1	37.2	BRL	BRL	246	BRL	BRL	BRL	0.588	BRL	BRL	BRL	BRL	BRL	BRL
1		BRL	26	BRL	--	--	--	4.97	61.8	BRL	8.38	18.5	BRL	BRL	1120	BRL	BRL	BRL	0.713	BRL	BRL	BRL	BRL	BRL	BRL
2		BRL	BRL	BRL	--	--	--	3.3	66.1	BRL	7.56	14.6	BRL	BRL	54	BRL	BRL	BRL	0.701	BRL	BRL	BRL	BRL	BRL	BRL
Pond		BRL	BRL	7	BRL	BRL	--	0.062	1.74	BRL	0.145	0.195	BRL	BRL	1.03	--	--	--	--	--	--	--	--	--	--
Background	02/12/09	--	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1		--	270	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ESI - 4910 West 86th Street, Indianapolis, IN																									
Storm Inlet	03/26/07	190	*62,000*	*2,200*	--	--	--	1.08	43.9	0.367	16.3	17	BRL	BRL	BRL	70* (benzene)	140* (cresols)	BRL	0.322	BRL	BRL	BRL	BRL	BRL	BRL

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Table 2-3b
City of Indianapolis-DPW Historical Sampling Event Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample ID	Sample Date	TPH-GRO (mg/kg)	TPH-ERO (mg/kg)	TPH-DRO (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	PCBs (mg/kg)	Total Metals (mg/kg)								TCLP (mg/L)									
								As	Ba	Cd	Cr	Pb	Se	Ag	Hg	VOCs (µg/L)	SVOCs (µg/L)	As	Ba	Cd	Cr	Pb	Se	Ag	Hg (µg/L)
1326 Munsee Circle, Indianapolis, IN																									
Sludge	02/12/09	--	*410,000*	*120,000*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Background		--	73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1		--	37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1	04/07/09	1.1	410	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7041 Grandview Drive, Indianapolis, IN																									
1	04/07/09	0.14	75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
Exceeds IDEM RISC Residential Soil Default Closure Levels
Exceeds IDEM RISC Industrial Soil Default Closure Levels
Exceeds IDEM RISC TPH Residential Soil Non-Default Closure Levels (Migration to Groundwater) - most stringent
Exceeds IDEM RISC TPH Industrial Soil Non-Default Closure Levels (Migration to Groundwater) - most stringent
Exceeds U.S. EPA Residential Soil Regional Screening Levels
Exceeds U.S. EPA Industrial Soil Regional Screening Levels
* - all other constituents BRL
"--" - not analyzed
mg/kg - millgram per kilogram
mg/L - milligram per liter
µg/L - microgram per liter
Ag - silver
As - arsenic
Ba - barium
BDL - below detection limit
BRL - below reporting limit
Cd - cadmium
Cr - chromium
DRO - diesel range organic
ERO - extended range organic
GRO - gasoline range organic
Hg - mercury
ID - identification
Pb - lead
PCB - polychlorinated biphynels
Se - selenium
SVOC - semivolatile organic compound
TCLP - toxicity characteristic leaching procedure
TPH - total petroleum hydrocarbon
VOC - volatile organic compound

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Table 2-3c
IDEM Historical Sampling Event Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample ID	Sample Date	TPH-GRO (mg/kg)	TPH-ERO (mg/kg)	Non-Halogenated Organics** (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	Total Metals (mg/kg)							
							As	Ba	Cd	Cr	Pb	Se	Ag	Hg
Soil (LQ4137)	03/16/07	BDL	82000	*220000*	*0.49 (Eth) 1.5 (Sty) 2.7 (Xyl) 1.8 (Naph)	BDL	3.4	160	0.2	47	64	0.41	1.1	0.21
Soil (LQ4138)	03/17/07	220	370000	*800000*	*5.1 (Ace) 2.1 (2-But) 3.6 (Eth) 12 (Sty) 0.56 (PCE) 4.9 (Tol) 18 (Xyl) 0.92 (Iso) 4.9 (Naph)	BDL	3	410	0.98	150	130	0.33	3.4	0.54
Soil (LQ4139)	03/17/07	740	240000	NA	*2.7 (MIK) 5.5 (Ace) 7.4 (Ben) 1.1 (2-But) 0.45 (Chloro) 22 (Eth) 1 (Met) 1.4 (Sty) 1.7 (PCE) 89 (Tol) 0.62 (TCE) 100 (Xyl) 1.6 (Iso) 8.4 (Naph)	*440 (2-Met) 300 (Bis)	2.5	230	1.6	65	78	0.46	1.8	0.21

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Table 2-3c
IDEM Historical Sampling Event Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample ID	Sample Date	TPH-GRO (mg/kg)	TPH-ERO (mg/kg)	Non-Halogenated Organics* (mg/kg)	VOCs (mg/kg)	SVOCs (mg/kg)	Total Metals (mg/kg)							
							As	Ba	Cd	Cr	Pb	Se	Ag	Hg
Soil (LQ4140)	03/17/07	370	330000	*800000*	*0.74 (Ben) 1.1 (2-But) 8.2 (Eth) 48 (Sty) 1.2 (PCE) 14 (Tol) 37 (Xyl) 1.4 (Iso) 9 (Naph)	BDL	2.9	350	0.61	160	130	0.37	3.8	0.79
Soil (LQ4141)	03/18/07	370	380000	*880000*	*0.85 (Ben) 1.3 (2-But) 7.9 (Eth) 13 (Sty) 1.8 (PCE) 14 (Tol) 38 (Xyl) 1.6 (Iso) 13 (Naph)	BDL	3.9	410	0.87	130	110	0.43	2.5	0.44
Liquid-Sewer (LQ4142)	03/17/07	3400	450000	BDL	*19 (Ben) 0.8 (Chlorob) 0.86 (Chloro) 1.6 (Cis-1,2-DCE) 71 (Eth) 6.8 (Sty) 15 (PCE) 180 (Tol) 6 (TCE) 310 (Xyl) 15 (Iso) 67 (Naph)	*530 (2-Met) 320 (Bis) 160 (Phen)	0.66	25	0.23	10	22	0.2	BDL	BDL
Sludge-Oil (LQ4145)	03/17/07	BDL	*1300000*	BDL	BDL	BDL	BDL	5.3	BDL	0.14	BDL	BDL	BDL	BDL

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Table 2-3c
IDEM Historical Sampling Event Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample ID	Sample Date	TPH-GRO (mg/L)	TPH-ERO (mg/L)	Non-Halogenated Organics** (mg/L)	VOCs (mg/L)	SVOCs (mg/L)	Total Metals (mg/L)							
							As	Ba	Cd	Cr	Pb	Se	Ag	Hg
Liquid-Creek (LQ4143)	03/19/07	BDL	2	5.1	BDL	BDL	BDL	0.059	BDL	BDL	0.008	BDL	BDL	BDL
Liquid-Other (LQ4144)	03/20/07	NA	NA	NA	BDL	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Exceeds IDEM RISC Residential Soil Default Closure Levels
Exceeds IDEM RISC Industrial Soil Default Closure Levels
Exceeds IDEM RISC TPH Residential Soil Non-Default Closure Levels (Migration to Groundwater) - most stringent
Exceeds IDEM RISC TPH Industrial Soil Non-Default Closure Levels (Migration to Groundwater) - most stringent
Exceeds U.S. EPA Residential Soil Regional Screening Levels
Exceeds U.S. EPA Industrial Soil Regional Screening Levels
* - all other constituents BDL
** - client provided material
mg/kg - millgram per kilogram
mg/L - milligram per liter
2-But - 2-butanone
1-Met - 2-methylnaphthalene
Ace - acetone
Ag - silver
As - arsenic
Ba - barium
Ben - benzene
BDL - below detection limit
Bis - bis(2-ethylhexyl)phlatate
Cd - cadmium
Chloro - chloroform
Chlorob - Chlorobenzene
Cis-1,2-DCE - cis-1,2-dichloroethene
Cr - chromium
ERO - extended range organic
Eth - ethylbenzene
GRO - gasoline range organic
Hg - mercury
ID - identification
Iso - isopropylbenzene
Met - methylene chloride
MIK - methyl isobutyl ketone
NA - not analyzed
Naph - naphthalene
Pb - lead
PCE - tetrachloroethane
Phen - phenanthrene
Se - selenium
Sty - styrene
SVOC - semivolatile organic compound
TCE - trichloroethene
Tol - toluene
TPH - total petroleum hydrocarbon
VOC - volatile organic compound
Xyl - xylene

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Table 2-3d
MCHD Historical Sampling Event Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample ID	Sample Date	VOC (mg/kg)	Total Metals (mg/kg)									
			As	Ba	Cd	Cr	Pb	Cu	Ni	Fe (µg/L)	Zn	Hg
2851 West 76th Street, Indianapolis, IN												
1	03/16/07	BDL	4.0	345	1.1	65.9	96.7	690	60.1	13400	559	0.95
8247 Quetico Drive, Indianapolis, IN												
1	03/16/07	BDL	7.5	745	1.9	141	124	1190	107	NA	1020	1.6
ESI - 4910 West 86th Street, Indianapolis, IN												
1	03/16/07	*321 (toluene) 222 (xylene)	2.4	43.6	0.52	17.9	36.6	139	27.3	NA	152	0.17
1733 West 66th Street, Indianapolis, IN												
1	03/16/07	BDL	4.3	358	1.0	70.5	112	861	66.8	NA	615	1.2
5764 Coburn Street, Indianapolis, IN												
1	03/16/07	BDL	4.3	407	1.2	80.6	112	783	69.0	NA	604	1.2

Notes:
Exceeds IDEM RISC Residential Soil Default Closure Levels
Exceeds IDEM RISC Industrial Soil Default Closure Levels
Exceeds IDEM RISC TPH Residential Soil Non-Default Closure Levels (Migration to Groundwater) - most stringent
Exceeds IDEM RISC TPH Industrial Soil Non-Default Closure Levels (Migration to Groundwater) - most stringent
Exceeds U.S. EPA Residential Soil Regional Screening Levels
Exceeds U.S. EPA Industrial Soil Regional Screening Levels

* - all other constituents BDL
mg/kg - millgram per kilogram
µg/L - microgram per liter
As - arsenic
Ba - barium
BDL - below detection limit
Cd - cadmium
Cr - chromium
Cu - copper
Fe - iron
Hg - mercury
ID - identification
Ni - nickel
Pb - lead
VOC - volatile organic compound
Zn - zinc

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Table 2-3e
ESI Historical Sampling Event Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample ID	Sample Date	VOC (µg/L)	SVOC (µg/L)	PCB (µg/L)	Total Metals (mg/L)								TCLP (ppm)								
					As	Ba	Cd	Cr	Pb	Se	Ag	Hg	VOC	As	Ba	Cd	Cr	Pb	Se	Ag	Hg
Soil Scrapings	03/19/07	--	--	--	--	--	--	--	--	--	--	--	BDL	BDL	3.23	BDL	BDL	BDL	BDL	BDL	BDL
2851 West 76th Street, Indianapolis, IN																					
1	03/22/07	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	--	--	--	--	--	--	--	--	--
1743 West 66th Street, Indianapolis, IN																					
1	03/22/07	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	--	--	--	--	--	--	--	--	--
5764 Coburn Street, Indianapolis, IN																					
1	03/22/07	BDL	BDL	BDL	BDL	0.23	BDL	BDL	BDL	BDL	BDL	BDL	--	--	--	--	--	--	--	--	--
4215 Springwood Trail, Indianapolis, IN																					
1	03/22/07	BDL	BDL	BDL	0.014	0.18	BDL	BDL	BDL	BDL	BDL	BDL	--	--	--	--	--	--	--	--	--
4218 Springwood Trail, Indianapolis, IN																					
1	03/22/07	BDL	BDL	BDL	0.012	0.26	BDL	BDL	BDL	BDL	BDL	BDL	--	--	--	--	--	--	--	--	--
4239 Springwood Trail, Indianapolis, IN																					
1	03/22/07	BDL	BDL	BDL	0.014	BDL	BDL	BDL	BDL	BDL	BDL	BDL	--	--	--	--	--	--	--	--	--
4241 Springwood Trail, Indianapolis, IN																					
1	03/22/07	BDL	BDL	BDL	0.016	0.3	BDL	BDL	BDL	BDL	BDL	BDL	--	--	--	--	--	--	--	--	--
4259 Springwood Trail, Indianapolis, IN																					
1	03/22/07	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	--	--	--	--	--	--	--	--	--

Notes:
Exceeds U.S. EPA Maximum Contaminant Levels
"--" - not analyzed
mg/L - milligram per liter
µg/L - microgram per liter
Ag - silver
As - arsenic
Ba - barium
BDL - below detection limit
Cd - cadmium
Cr - chromium
Hg - mercury
ID - identification
Pb - lead
PCB - polychlorinated biphynels
ppm - part per million
Se - selenium
SVOC - semivolatile organic compound
TCLP - toxicity characteristic leaching procedure
VOC - volatile organic compound

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Table 2-3f
Keramida Historical Sampling Event Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample ID	Sample Date 1	PCE (µg/kg)	TPH-GRO (mg/kg)	TPH-ERO (mg/kg)	TPH-DRO (mg/kg)	BTEX (mg)	Sample Date 2	TPH-ERO (mg/kg)
2851 West 76th Street, Indianapolis, IN								
1	04/17/07	BDL	16	800	NA	NA	05/21/07	420
2	04/17/07	BDL	BDL	730	NA	NA	05/21/07	230
3	04/17/07	BDL	BDL	430	NA	NA	NA	
4	04/17/07	BDL	BDL	650	NA	NA	05/21/07	420
5	04/17/07	BDL	BDL	280	NA	NA	NA	
6	04/17/07	BDL	BDL	340	NA	NA	NA	
1701 West 66th Street, Indianapolis, IN								
1	04/18/07	BDL	BDL	610	NA	NA	NA	
2	04/18/07	BDL	BDL	1200	NA	NA	05/18/07	210
1707 West 66th Street, Indianapolis, IN								
1	04/18/07	BDL	BDL	440	NA	NA	05/18/07	250
2	04/18/07	BDL	BDL	200	NA	NA	NA	
1717 West 66th Street, Indianapolis, IN								
1	04/18/07	BDL	BDL	460	NA	NA	NA	
2	04/18/07	BDL	BDL	980	NA	NA	05/18/07	180
1723 West 66th Street, Indianapolis, IN								
1	04/18/07	BDL	BDL	2300	NA	NA	NA	
2	04/18/07	BDL	BDL	2200	NA	NA	05/18/07	110
1733 West 66th Street, Indianapolis, IN								
1	04/18/07	BDL	BDL	1300	NA	NA	NA	
2	04/18/07	BDL	BDL	2900	NA	NA	05/18/07	160
3	04/18/07	BDL	BDL	1200	NA	NA	NA	
4	04/18/07	BDL	BDL	500	NA	NA	NA	
1743 West 66th Street, Indianapolis, IN								
1	04/17/07	BDL	BDL	100	NA	NA	NA	
2	04/17/07	BDL	BDL	86	NA	NA	05/21/07	39
3	04/17/07	BDL	BDL	120	NA	NA	NA	
4	04/17/07	BDL	BDL	190	NA	NA	NA	
5	04/17/07	BDL	BDL	460	NA	NA	NA	
1745 West 66th Street, Indianapolis, IN								
Background	05/08/07	NA	NA	49	NA	NA	NA	
6500 Grandview Drive, Indianapolis, IN								
1	04/19/07	BDL	BDL	190	NA	NA	NA	
2	04/19/07	BDL	BDL	88	NA	NA	NA	
6550 Grandview Drive, Indianapolis, IN								
Background	05/08/07	NA	NA	140	NA	NA	NA	
6600 Grandview Drive, Indianapolis, IN								
1	04/19/07	BDL	BDL	340	NA	NA	NA	

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Table 2-3f
Keramida Historical Sampling Event Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample ID	Sample Date 1	PCE (µg/kg)	TPH-GRO (mg/kg)	TPH-ERO (mg/kg)	TPH-DRO (mg/kg)	BTEX (mg)	Sample Date 2	TPH-ERO (mg/kg)
6601 Grandview Drive, Indianapolis, IN								
1	04/18/07	BDL	BDL	160	NA	NA	NA	
2	04/18/07	BDL	BDL	85	NA	NA	NA	
3	04/18/07	BDL	BDL	220	NA	NA	NA	
4	04/18/07	BDL	BDL	120	NA	NA	NA	
5	04/18/07	BDL	BDL	210	NA	NA	NA	
6	04/18/07	BDL	BDL	420	NA	NA	NA	
7	04/18/07	BDL	BDL	350	NA	NA	NA	
8	04/18/07	BDL	BDL	490	NA	NA	NA	
9	04/19/07	BDL	BDL	510	NA	NA	NA	
10	04/19/07	BDL	BDL	110	NA	NA	NA	
11	04/19/07	BDL	BDL	450	NA	NA	NA	
5764 Coburn Street, Indianapolis, IN								
1	04/20/07	BDL	BDL	340	NA	NA	NA	
2	04/20/07	BDL	BDL	560	NA	NA	NA	
3	04/20/07	BDL	BDL	570	NA	NA	NA	
4	04/20/07	BDL	BDL	280	NA	NA	NA	
5	04/20/07	BDL	BDL	170	NA	NA	NA	
6	04/20/07	BDL	BDL	90	NA	NA	NA	
7	04/20/07	BDL	BDL	34	NA	NA	NA	
5806 Coburn Street, Indianapolis, IN								
1	04/19/07	BDL	BDL	170	NA	NA	NA	
2	04/19/07	BDL	BDL	330	NA	NA	NA	
3	04/20/07	BDL	BDL	190	NA	NA	NA	
5980 Coburn Street, Indianapolis, IN								
1	04/19/07	0.011	BDL	35	NA	NA	NA	
2851 West 76th Street, Indianapolis, IN								
7	04/20/07	**0.0060**	13	120	NA	NA	NA	
4218 Springwood Trail, Indianapolis, IN								
1	04/23/07	BDL	BDL	280	NA	NA	NA	
4225 Springwood Trail, Indianapolis, IN								
1	04/23/07	BDL	BDL	460	NA	NA	NA	
4235 Springwood Trail, Indianapolis, IN								
1	04/23/07	BDL	BDL	1100	NA	NA	NA	
4239 Springwood Trail, Indianapolis, IN								
1	04/23/07	BDL	BDL	170	NA	NA	NA	
4241 Springwood Trail, Indianapolis, IN								
1	04/23/07	BDL	BDL	420	NA	NA	NA	
4259 Springwood Trail, Indianapolis, IN								
1	04/23/07	BDL	BDL	71	NA	NA	NA	
2	04/23/07	BDL	BDL	270	NA	NA	NA	
4335 Springwood Trail, Indianapolis, IN								
1	04/23/07	BDL	BDL	860	NA	NA	NA	
2	05/01/07	BDL	BDL	89	NA	NA	NA	
3	05/01/07	BDL	BDL	100	NA	NA	NA	
4	05/01/07	BDL	BDL	23	NA	NA	NA	

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Table 2-3f
Keramida Historical Sampling Event Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample ID	Sample Date 1	PCE (µg/kg)	TPH-GRO (mg/kg)	TPH-ERO (mg/kg)	TPH-DRO (mg/kg)	BTEX (mg)	Sample Date 2	TPH-ERO (mg/kg)
4345 Springwood Trail, Indianapolis, IN								
1	04/23/07	BDL	BDL	250	NA	NA	NA	
2	04/23/07	BDL	BDL	560	NA	NA	NA	
3	04/23/07	BDL	BDL	470	NA	NA	NA	
4	04/23/07	BDL	BDL	410	NA	NA	NA	
Riverside Golf Course								
RSGC10-1	04/24/07	NA	BDL	74	NA	NA	NA	
RSGC10-2	04/24/07	NA	BDL	77	NA	NA	NA	
RSGC12-2-1	04/24/07	NA	BDL	270	NA	NA	NA	
RSGC12-2-2	04/24/07	NA	14	140	NA	NA	NA	
RSGC12-2-3	04/24/07	NA	BDL	73	NA	NA	NA	
RSGC12-2-4	04/24/07	NA	BDL	290	NA	NA	NA	
RSGC12-2-5	04/24/07	NA	BDL	94	NA	NA	NA	
RSGC12-3SW	04/24/07	NA	BDL	73	NA	NA	NA	
RSGC12-4N	04/24/07	NA	BDL	290	NA	NA	NA	
RSGC12-5W	04/24/07	NA	BDL	94	NA	NA	NA	
RSGC13-1E	04/24/07	NA	BDL	69	NA	NA	NA	
RSGC13-2S	04/24/07	NA	BDL	75	NA	NA	NA	
RSGC13-3N	04/24/07	NA	BDL	570	NA	NA	NA	
RSGC13-4-1	04/24/07	NA	BDL	56	NA	NA	NA	
Coffin Golf Course								
CGC11-1	05/01/07	NA	BDL	39	NA	NA	NA	
CGC11-2	05/01/07	NA	BDL	51	NA	NA	NA	
CGC11-3	05/01/07	NA	BDL	56	NA	NA	NA	
CGC11-4	05/01/07	NA	BDL	27	NA	NA	NA	
CGC11-5	05/01/07	NA	BDL	BDL	NA	NA	NA	
CGC11-6	05/01/07	NA	BDL	130	NA	NA	NA	
CGC11-7	05/01/07	NA	BDL	18	NA	NA	NA	
CGC11-8	05/01/07	NA	BDL	54	NA	NA	NA	
CGC11-9	05/01/07	NA	BDL	36	NA	NA	NA	
CGC11-10	05/01/07	NA	BDL	26	NA	NA	NA	
CGC11-11	05/01/07	NA	BDL	BDL	NA	NA	NA	
CGC11-12	05/01/07	NA	BDL	BDL	NA	NA	NA	
CGC11-13	05/01/07	NA	BDL	440	NA	NA	NA	
CGC11-14	05/02/07	NA	BDL	71	NA	NA	NA	
CGC11-15	05/02/07	NA	BDL	130	NA	NA	NA	
CGC11-16	05/02/07	NA	BDL	32	NA	NA	NA	
CGC11-17	05/02/07	NA	BDL	64	NA	NA	NA	
CGC17-18	05/02/07	NA	BDL	BDL	NA	NA	NA	
CGC10-19	05/02/07	NA	BDL	300	NA	NA	NA	
CGC10-20	05/02/07	NA	BDL	47	NA	NA	NA	
Unknown Location								
ET-1	04/24/07	NA	BDL	BDL	NA	NA	NA	
EC-1	04/24/07	NA	BDL	13	NA	NA	NA	
WC1-1	04/24/07	NA	BDL	15	NA	NA	NA	
WC1-2	04/24/07	NA	BDL	27	NA	NA	NA	
W2-1	04/24/07	NA	BDL	22	NA	NA	NA	
W2-2	04/24/07	NA	BDL	74	NA	NA	NA	

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Table 2-3f
Keramida Historical Sampling Event Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Sample ID	Sample Date 1	PCE (µg/kg)	TPH-GRO (mg/kg)	TPH-ERO (mg/kg)	TPH-DRO (mg/kg)	BTEX (mg)	Sample Date 2	TPH-ERO (mg/kg)
Product Analysis-Sewer								
AB33305	--	17.1	*16437*	*38257*	NA	NA	NA	
Product Analysis-East Million								
AB33306	--	14	*25824*	*41651*	NA	NA	NA	
8247 Quetico Drive, Indianapolis, IN								
1	06/07/07	NA	NA	NA	NA	BDL	NA	
2	06/07/07	NA	NA	NA	NA	BDL	NA	
3	06/07/07	BDL	BDL	76	BDL	NA	NA	

Notes:

Exceeds IDEM RISC TPH Residential Soil Non-Default Closure Levels (Migration to Groundwater) - most stringent

Exceeds IDEM RISC TPH Industrial Soil Non-Default Closure Levels (Migration to Groundwater) - most stringent

"--" - not available

mg - milligram
mg/kg - millgram per kilogram
µg/kg - microgram per kilogram
BDL - below detection limit
BTEX - bezene, toluene, ethylbenzene, xylene
ERO - extended range organic
GRO - gasoline range organic
ID - identification
NA - not analyzed
NL - not listed
PCE - tetrachloroethane
TPH - total petroleum hydrocarbon

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Table 3-1
HazCat Sampling Results
ESI Environmental, Inc.
4910 West 86th Street
Indianapolis, Marion County, Indiana

Tank Location	Tank ID	Date	HazCat Performed	Notes		Additional Analysis	
				Possible Chlorines	Possible Metals	PCB	TCLP Metal
J	West	10/9/2010	x			x	x
J	East	10/9/2010	x			x	x
D	North	10/9/2010	x				
D	South	10/9-12/10	x	x	x	x	x
Tank - East of Building OO	--	10/8-12/10	x	x	x	x	x
F	F8	10/8-12/10	x	x	x	x	x
F	F9	10/8-12/10	x	x	x	x	x
F	F7	10/8-12/10	x	x	x	x	x
Q	52SP01B	10/8/2010	x	x	x		
BB	55TK12	10/8/2010	x				
BB	55TK13	10/8/2010	x				
BB	55TK14	10/8/2010	x				
BB	55TK15	10/8/2010	x				
Tanker - East of Building II	R5	10/9/2010	x				
Tanker- Southeast corner of property	411	10/9/2010	x				
Tanker- South corner of property	3344	10/9/2010	x				
Tanker- East of Buidling II	5	10/9/2010	x				
Tanker- South of MM	--	10/8/2010	x				
KK	--	10/8/2010	x				
K	6	10/8/2010	x				
Roll-off- Northeast of Building OO	4347	10/8/2010	x				
L	7	10/8/2010	x				
FF	21	10/8/2010	x				
FF	22	10/8/2010	x				
FF	23	10/8/2010	x				
FF	24	10/8/2010	x				
EE	A	10/8/2010	x				
EE	B	10/8/2010	x				
DD	--	10/8/2010	x				
GG	41	10/8/2010	x				
GG	46	10/8/2010	x		x		
GG	42	10/8/2010	x		x		
GG	45	10/8/2010	x		x		
Y	1	10/8/2010	x				
Y	2	10/8/2010	x				
R	--	10/8/2010	x				
AA	--	10/8/2010	x				
H	--	10/8/2010	x				

Notes:
HazCat - hazard catergorization
ID - identification
PCB - polychlorinated biphenyls
TCLP - toxicity characteristic leaching procedure

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APPENDIX A
PHOTOGRAPHIC DOCUMENTATION

Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 1 **Date:** 9/1/10
Direction: Northwest **Photographer:** Marcus Muccianti
Subject: Oil Storage Tank (designated "A" on Figure 2-1)

Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 2 **Date:** 9/1/10
Direction: Southwest **Photographer:** Marcus Muccianti
Subject: Secondary Containment for Oil Storage Tank (designated "A" on Figure 2-1)

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Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 3 **Date:** 9/1/10
Direction: North **Photographer:** Marcus Muccianti
Subject: Unloading Building (designated "II" on Figure 2-1)

Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 4 **Date:** 9/1/10
Direction: Northwest **Photographer:** Marcus Muccianti
Subject: Primary Separator (designated "D" on Figure 2-1)

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Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 5 **Date:** 9/1/10
Direction: Northwest **Photographer:** Marcus Muccianti
Subject: Off Spec Oil Storage Frac Tanks (designated "F" on Figure 2-1)

Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 6 **Date:** 9/1/10
Direction: Northeast **Photographer:** Marcus Muccianti
Subject: Auxiliary Separator (designated "G" on Figure 2-1)

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Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 7 **Date:** 9/1/10
Direction: North **Photographer:** Marcus Muccianti
Subject: Wastewater Containment Area (located between designations "J" and "I" on Figure 2-1)

Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 8 **Date:** 9/1/10
Direction: Southwest **Photographer:** Marcus Muccianti
Subject: API Oil Water Separator (designated "Q" on Figure 2-1) with Large Air Stripper (designated "KK" on Figure 2-1) beyond

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Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 9 **Date:** 9/1/10
Direction: Southeast **Photographer:** Marcus Muccianti
Subject: Dehydration Building (designated "NN" on Figure 2-1)

Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 10 **Date:** 9/1/10
Direction: East **Photographer:** Marcus Muccianti
Subject: Off Spec Oil Storage Tanks (designated "GG" on Figure 2-1)

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Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 11 **Date:** 9/1/10
Direction: Southeast **Photographer:** Marcus Muccianti
Subject: API Oil Water Separator (designated "Q" on Figure 2-1)

Site: ESI Environmental, Inc. Site Assessment
Photograph No.: 12 **Date:** 9/1/10
Direction: East **Photographer:** Marcus Muccianti
Subject: Oil Storage Tanks (designated "BB" on Figure 2-1) with Off Spec Oil Storage Tanks (designated "GG" on Figure 2-1) beyond

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APPENDIX B
HAZCAT SAMPLING LOGS

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. H
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank			
Construction:	Steel	Poly	Fiber	Poly-lined Open-top		Closed-top Other:	
Total Volume:	85 gal	65 gal	30 gal	10gal	5gal	Other:	
Waste Volume:	100%	75%	50%	25%	Empty	Other	
Field Screening:	OVA/HNu			$\%O_2$		Red. Meter	pH
Condition:	Poor	Fair	Good				

DRUM/CONTAINER CONTENTS

Layer	Color	Clarity	Physical State	% of Total Volume
Top	Lt Green	CLR	L/Q	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	S	IH	—	8	—	—	No test	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10/9/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. AA Sump
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	DK BROWN	OPQ	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	5	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. R
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank	
Construction:	Steel	Poly	Fiber	Poly-lined Open-top	Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal	Other: _____
Waste Volume:	100%	75%	50%	25% Empty	Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____	Red. Meter _____ pH _____
Condition:	Poor	Fair	Good		

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	OPQ	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	5	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Y-1
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ~~10~~ ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank	
Construction:	Steel	Poly	Fiber	Poly-lined Open-top	Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal	Other: _____
Waste Volume:	100%	75%	50%	25% Empty	Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____	Red. Meter _____ pH _____
Condition:	Poor	Fair	Good		

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	AMBER	OPQ	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	S	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-8-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. X South
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank	
Construction:	Steel	Poly	Fiber	Poly-lined Open-top	Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____	
Waste Volume:	100%	75%	50%	25% Empty Other _____	
Field Screening:	OVA/HNu _____			$\%O_2$ _____ Red. Meter _____	pH _____
Condition:	Poor	Fair	Good		

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	Dk Brown	OPG	SDG	100
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	PS	IH	—	7	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. J WEST
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RC

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank	
Construction:	Steel	Poly	Fiber	Poly-lined Open-top	Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal	Other: _____
Waste Volume:	100%	75%	50%	25% Empty	Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____	Red. Meter _____ pH _____
Condition:	Poor	Fair	Good		

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	A			
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	5	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10/9/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

J EAST

Container No. A-1

Waste Stream _____

DRUM/CONTAINER SAMPLING LOG

GENERAL INFORMATION

Site Name: ESI Location: ~~#~~ Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank		
Construction:	Steel	Polv	Fiber	Poly-lined Open-top	Closed-top Other:	
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal	Other:	
Waste Volume:	100%	75%	50%	25% Empty	Other	
Field Screening:	OVA/HNu			$\%O_2$	Red. Meter	pH
Condition:	Poor	Fair	Good			

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	OPQ	LIQ	
Middle	"			
Bottom	BLACK	OPQ	LIQ	

high solids

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	6	—	—	—	—	—	—
Middle										
Bottom	IL	S	—	6	—	—	—	—	—	—

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. 6G South Middle
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank	
Construction:	Steel	Poly	Fiber	Poly-lined Open-top	Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal	Other: _____
Waste Volume:	100%	75%	50%	25% Empty	Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____	Red. Meter _____ pH _____
Condition:	Poor	Fair	Good		

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	OPQ	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	8	—	—	—	—	—	—
Middle										
Bottom										

metals

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. 66 Southwest
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: R

Date: 10/8/10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank			
Construction:	Steel	Poly	Fiber	Poly-lined Open-top		Closed-top Other:	
Total Volume:	85 gal	65 gal	30 gal	10gal	5gal	Other:	
Waste Volume:	100%	75%	50%	25%	Empty	Other	
Field Screening:	OVA/HNu			%O_2		Red. Meter	pH
Condition:	Poor		Fair	Good			

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	OPQ	LIQ	10
Middle	TAN	CLR	LIQ	20
Bottom	BLACK	OPQ	SDG	70

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.	
Top	IL	S	—		—	—	—	—	—	—	metals
Middle	S	IH	—	6	—	—	—	—	—	—	
Bottom	IH	S	—	—	—	—	—	—	—	—	metals

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10/9/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. GG North Middle
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RC

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	Color	Clarity	Physical State	% of Total Volume
Top	BLACK	OPQ	LIQ	10
Middle				
Bottom	Khaki	CLR	LIQ	90

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	–	–	–	–	–	–	–	–
Middle										
Bottom	S	IH	–	6	–	–	–	–	–	–

metals

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10/8/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. GG West North
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	OPQ	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	6	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10/9/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. DX
Waste Stream

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10/8/10 Time:

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Poly	Fiber	Poly-lined Open-top Closed-top Other:
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other:
Waste Volume:	100%	75%	50%	25% Empty Other
Field Screening:	OVA/HNu			%O_2 Red. Meter pH
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	Lt Khaki	CDY	LIQ	
Middle				
Bottom				

FLOATING SOLID

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	S	IH	–	7	–	–	–	–	–	–
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10/8/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. SAND FILTER A
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	GRAY	CDY	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxld.	CN	Sulf.	Cl	Flam.
Top	S	IH	–	7	–	–	–	–	–	–
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10/9/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. YARD FAC CR B
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10/8/10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	LT Tan	CDY	LIQ	
Middle				
Bottom				

SUSPENDED SOLIDS

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	S	I H	—	7	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Lake W Date: 10/9/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. 21
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank	
Construction:	Steel	Poly	Fiber	Poly-lined Open-top	Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal	Other: _____
Waste Volume:	100%	75%	50%	25% Empty	Other _____
Field Screening:	OVA/HNu _____			%O_2 _____	Red. Meter _____ pH _____
Condition:	Poor	Fair	Good		

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	OPQ	~~LIQ~~ SDG	50
Middle	GRAY	CLR	LIQ	50
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	PS (IH)	—	6	—	—	—	—	—	—
Middle	S	IH	—	6	—	—	—	—	—	—
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10/9/2010

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. C2
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Poly	Fiber	Poly-lined Open-top Closed-top Other:
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other:
Waste Volume:	100%	75%	50%	25% Empty Other
Field Screening:	OVA/HNu			$\%O_2$ Red. Meter pH
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	Color	Clarity	Physical State	% of Total Volume
Top	BLACK	OPQ	LIQ	
Middle				
Bottom				

SUSPENDED SOLID

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	S	IH	—	7	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10/9/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. 23
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BROWN	OPQ	LIQ	20
Middle	TAN	CLR	LIQ	80
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—					—	—	C
Middle										
Bottom	S	IH	—	5	—	—	—	—	—	—

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. 24
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Endy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Poly	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	Black	OPQ	SDG	100
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	S	IH	—	7	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10/8/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. (L) 07
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RA

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	Brn	OPG	LIQ	
Middle				
Bottom				

suspended solids

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxld.	CN	Sulf.	Cl	Flam.
Top	PS (L)	PS (H)	—	5	—	—	—	—	—	C
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke Cl Date: 10/8/2010

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Sulfff 9347
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Tudy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank	
Construction:	Steel	Poly	Fiber	Poly-lined Open-top	Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal	Other: _____
Waste Volume:	100%	75%	50%	25% Empty	Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____	Red. Meter _____ pH _____
Condition:	Poor	Fair	Good		

DRUM/CONTAINER CONTENTS

Layer	Color	Clarity	Physical State	% of Total Volume
Top	DK Gray	opq	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	PS	IH	–	6	–	–	–	–	–	–
Middle										
Bottom										

May have metals

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10/8/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. (K) 6
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RC

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Poly	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	Black	OPQ	LIQ / SDG	10 / 90
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	~~PS (L)~~	PS (H)	—	← 5	—	—	—	—	—	—
Middle										
Bottom	PS (L)	PS (H)		5	—	—	—	—	—	—

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-8-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. KK
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: R.G.

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Poly	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	White (x/l)	CDY	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	S	IH	—	7	—	—	N/A	N/A	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-8-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Leaking Tanker
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ISI Location: Indy Samplers: Rodney Gee

Date: 10-8-2010 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	Lt grn	CDY	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	S	IH	—	6.5-7	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: JW Date: 10/8/10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Tanker 5
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: KB

Date: 10-9-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	Color	Clarity	Physical State	% of Total Volume
Top	BLACK	OPQ	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	5	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Tanker 3344
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: KB

Date: 10-9-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	Amber	CDY	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxld.	CN	Sulf.	Cl	Flam.
Top	IL	PS	—	5	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Tanker 411
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ~~TB~~ CSI Location: Indy Samplers: KB

Date: 10-9-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Poly	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	OPQ	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	7	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Tanker B5
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: KB

Date: 10-9-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Poly	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	black	OPQ	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	5	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Separator D North
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: KB

Date: 10-9-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Poly	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	Black	opaq	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	C	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke Cu Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. BB-15
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	Color	Clarity	Physical State	% of Total Volume
Top	BLACK	OPQ	SDG	5
Middle				
Bottom	ORANGE	CLR	LIQ	95

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	5	—	—	—	—	—	—
Middle										
Bottom	S	IH	—	5	—	—	—	—	—	—

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. BB-14
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Poly	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	OPQ	LIQ	5%
Middle	TAN	CDY	LIQ	95%
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	7	—	—	—	—	—	—
Middle										
Bottom	S	IH	—	7	—	—	—	—	—	—

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. BB-13
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RC

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	CDY	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	S	IH	—	6	—	—	—	—	—	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. BB-12
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Poly	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	AMBER	OPQ	LIQ	
Middle				
Bottom	TAN	~~CDY~~ CLR	LIQ	

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	6	—	—	—	—	—	—
Middle										
Bottom	S	IH	—	6	—	—	—	—	—	—

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-8-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. G
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: _____ Location: _____ Samplers: RG _____

Date: _____ Time: _____ _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	OPQ	LIQ	~~30~~ 100
Middle				
Bottom	~~GRAY~~	~~CDY~~		

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	–	–	–	–	–	–	+	–
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: _____ Date: _____

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Frac Tank 7
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: _____ Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Poly	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	~~LB~~ DK. Brn	OPQ	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	PS (H)	—	5	-	-	—	—	— (Salmon)	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Free Tank 9
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	OPQ	LIQ	
Middle				
Bottom				

SUSPENDED SOLIDS

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxld.	CN	Sulf.	Cl	Flam.
Top	IL	S	–	6	–	–	–	–	+	c
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-8-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Frac Tank 8
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Ind. Samplers: RG

Date: _____ Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	Black	OPQ	LIQ	
Middle				
Bottom				

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	6	—	—	—	—	+	—
Middle										
Bottom										

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. Transfer Tank
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ES1 Location: Indy Samplers: RG

Date: 10-8-10 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank
Construction:	Steel	Polv	Fiber	Poly-lined Open-top Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal Other: _____
Waste Volume:	100%	75%	50%	25% Empty Other _____
Field Screening:	OVA/HNu _____			%O_2 _____ Red. Meter _____ pH _____
Condition:	Poor	Fair	Good	

DRUM/CONTAINER CONTENTS

Layer	Color	Clarity	Physical State	% of Total Volume
Top	TAN	CDY	LIQ	90
Middle				
Bottom	BLACK	OPQ	SOL	10

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	S	IH	—	6	—	—	—	—	—	—
Middle										
Bottom	IH	S	—	6	—	—	—	—	+	—

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Luke W Date: 10-9-10

ENVIRONMENTAL RESTORATION

ATTACHMENT A

Container No. D south.
Waste Stream _____

DRUM/CONTAINER SAMPLING LOG
GENERAL INFORMATION

Site Name: ESI Location: Indy Samplers: KB

Date: 10-9-2010 Time: _____

DRUM/CONTAINER INFORMATION (circle all that apply)

Type:	Drum	Vat	Pit	Tank	
Construction:	Steel	Poly	Fiber	Poly-lined Open-top	Closed-top Other: _____
Total Volume:	85 gal	65 gal	30 gal	10gal 5gal	Other: _____
Waste Volume:	100%	75%	50%	25% Empty	Other _____
Field Screening:	OVA/HNu _____			$\%O_2$ _____	Red. Meter _____ pH _____
Condition:	Poor	Fair	Good		

DRUM/CONTAINER CONTENTS

Layer	*Color*	*Clarity*	*Physical State*	*% of Total Volume*
Top	BLACK	OPQ	LIQ	15
Middle				
Bottom	~~Grey~~ BROWN	CLR	LIQ	85

Abbreviations: OPQ = Opaque CLR = Clear CDY = Cloudy LIQ = Liquid SOL = Solid SDG = Sludge

Hazard Categorization Testing Results

Layer	Water Sol.	Hex. Sol.	React.	pH	Per.	Oxid.	CN	Sulf.	Cl	Flam.
Top	IL	S	—	6	—	—	—	—	+	—
Middle										
Bottom	S	IH	—	6	—	—		—	+	—

metals

Solubility Abbreviations: S = Soluble I = Insoluble PS = Partially Soluble IL = Insoluble, Lighter IH = Insoluble, Heavier
Reactivity Abbreviations: A = Air Reactive W = Water Reactive N = No Reaction
Test Results: + = Positive Result - = Negative Result

Analyst: Eto Luke CU Date: 10-9-10

APPENDIX C
LABORATORY ANALYTICAL RESULTS

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)875-5894

October 21, 2010

Mr. Richie Byrd
Environmental Restoration, LLC
2750 Contant Comment Place
Louisville, KY 40299

RE: Project: ESI Indpls / EE5-47
Pace Project No.: 5042370

Dear Mr. Byrd:
Enclosed are the analytical results for sample(s) received by the laboratory on October 12, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Mick Mayse for
Kenneth Hunt
kenneth.hunt@pacelabs.com
Project Manager

Illinois/NELAC Certification #: 100418
Indiana Certification #: C-49-06
Kansas Certification #: E-10247
Kentucky Certification #: 0042
Louisiana Certification #: 04076
Ohio VAP: CL0065
Pennsylvania: 68-00791
West Virginia Certification #: 330

Enclosures

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Indianapolis, IN 46268
(317)875-5894

SAMPLE SUMMARY

Project: ESI Indpls / EE5-47
Pace Project No.: 5042370

Lab ID	Sample ID	Matrix	Date Collected	Date Received
5042370001	**ESI D SOUTH 10-12**	Non Aqueous	10/12/10 14:30	10/12/10 16:15
5042370002	**ESI TRANS TANK 10-12**	Non Aqueous	10/12/10 14:05	10/12/10 16:15
5042370003	**ESI FRAC 7 10-12**	Non Aqueous	10/12/10 15:00	10/12/10 16:15
5042370004	**ESI FRAC 8 10-12**	Non Aqueous	10/12/10 15:15	10/12/10 16:15
5042370005	**ESI FRAC 9 10-12**	Non Aqueous	10/12/10 15:30	10/12/10 16:15

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SAMPLE ANALYTE COUNT

Project: ESI Indpls / EE5-47
Pace Project No.: 5042370

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
5042370001	**ESI D SOUTH 10-12**	EPA 8082	LKC	8	PASI-I
5042370002	**ESI TRANS TANK 10-12**	EPA 8082	LKC	8	PASI-I
5042370003	**ESI FRAC 7 10-12**	EPA 8082	LKC	8	PASI-I
5042370004	**ESI FRAC 8 10-12**	EPA 8082	LKC	8	PASI-I
5042370005	**ESI FRAC 9 10-12**	EPA 8082	LKC	8	PASI-I

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ANALYTICAL RESULTS

Project: ESI Indpls / EE5-47
Pace Project No.: 5042370

Sample: ESI D SOUTH 10-12 **Lab ID: 5042370001** Collected: 10/12/10 14:30 Received: 10/12/10 16:15 Matrix: Non Aqueous Liquid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3580							
PCB-1016 (Aroclor 1016)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:48	12674-11-2	D3
PCB-1221 (Aroclor 1221)	ND	mg/kg	40.0	20	10/14/10 09:45	10/19/10 14:48	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:48	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:48	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:48	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:48	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:48	11096-82-5	
Tetrachloro-m-xylene (S)	0	%	55-133	20	10/14/10 09:45	10/19/10 14:48	877-09-8	S4

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ANALYTICAL RESULTS

Project: ESI Indpls / EE5-47
Pace Project No.: 5042370

Sample: ESI TRANS TANK 10-12 **Lab ID: 5042370002** Collected: 10/12/10 14:05 Received: 10/12/10 16:15 Matrix: Non Aqueous Liquid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3580							
PCB-1016 (Aroclor 1016)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:59	12674-11-2	D3
PCB-1221 (Aroclor 1221)	ND	mg/kg	40.0	20	10/14/10 09:45	10/19/10 14:59	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:59	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:59	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:59	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:59	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 14:59	11096-82-5	
Tetrachloro-m-xylene (S)	0	%	55-133	20	10/14/10 09:45	10/19/10 14:59	877-09-8	S4

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Indianapolis, IN 46268
(317)875-5894

ANALYTICAL RESULTS

Project: ESI Indpls / EE5-47
Pace Project No.: 5042370

Sample: ESI FRAC 7 10-12 **Lab ID: 5042370003** Collected: 10/12/10 15:00 Received: 10/12/10 16:15 Matrix: Non Aqueous Liquid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3580							
PCB-1016 (Aroclor 1016)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:11	12674-11-2	D3
PCB-1221 (Aroclor 1221)	ND	mg/kg	40.0	20	10/14/10 09:45	10/19/10 15:11	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:11	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:11	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:11	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:11	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:11	11096-82-5	
Tetrachloro-m-xylene (S)	0	%	55-133	20	10/14/10 09:45	10/19/10 15:11	877-09-8	S4

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ANALYTICAL RESULTS

Project: ESI Indpls / EE5-47
Pace Project No.: 5042370

Sample: ESI FRAC 8 10-12 **Lab ID: 5042370004** Collected: 10/12/10 15:15 Received: 10/12/10 16:15 Matrix: Non Aqueous Liquid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3580							
PCB-1016 (Aroclor 1016)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:23	12674-11-2	D3
PCB-1221 (Aroclor 1221)	ND	mg/kg	40.0	20	10/14/10 09:45	10/19/10 15:23	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:23	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:23	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:23	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:23	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:23	11096-82-5	
Tetrachloro-m-xylene (S)	0	%	55-133	20	10/14/10 09:45	10/19/10 15:23	877-09-8	S4

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ANALYTICAL RESULTS

Project: ESI Indpls / EE5-47
Pace Project No.: 5042370

Sample: ESI FRAC 9 10-12 **Lab ID: 5042370005** Collected: 10/12/10 15:30 Received: 10/12/10 16:15 Matrix: Non Aqueous Liquid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3580							
PCB-1016 (Aroclor 1016)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:35	12674-11-2	D3
PCB-1221 (Aroclor 1221)	ND	mg/kg	40.0	20	10/14/10 09:45	10/19/10 15:35	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:35	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:35	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:35	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:35	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	mg/kg	20.0	20	10/14/10 09:45	10/19/10 15:35	11096-82-5	
Tetrachloro-m-xylene (S)	0	%	55-133	20	10/14/10 09:45	10/19/10 15:35	877-09-8	S4

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QUALITY CONTROL DATA

Project: ESI Indpls / EE5-47
Pace Project No.: 5042370

QC Batch: OEXT/21355 Analysis Method: EPA 8082
QC Batch Method: EPA 3580 Analysis Description: 8082 GCS PCB Oil
Associated Lab Samples: 5042370001, 5042370002, 5042370003, 5042370004, 5042370005

METHOD BLANK: 494533 Matrix: Non Aqueous Liquid
Associated Lab Samples: 5042370001, 5042370002, 5042370003, 5042370004, 5042370005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	mg/kg	ND	1.0	10/19/10 14:36	
PCB-1221 (Aroclor 1221)	mg/kg	ND	2.0	10/19/10 14:36	
PCB-1232 (Aroclor 1232)	mg/kg	ND	1.0	10/19/10 14:36	
PCB-1242 (Aroclor 1242)	mg/kg	ND	1.0	10/19/10 14:36	
PCB-1248 (Aroclor 1248)	mg/kg	ND	1.0	10/19/10 14:36	
PCB-1254 (Aroclor 1254)	mg/kg	ND	1.0	10/19/10 14:36	
PCB-1260 (Aroclor 1260)	mg/kg	ND	1.0	10/19/10 14:36	
Tetrachloro-m-xylene (S)	%	108	55-133	10/19/10 14:36	

LABORATORY CONTROL SAMPLE: 494534

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	mg/kg	5	4.0	81	50-150	
PCB-1260 (Aroclor 1260)	mg/kg	5	4.8	97	50-150	
Tetrachloro-m-xylene (S)	%			102	55-133	

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Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)875-5894

QUALIFIERS

Project: ESI Indpls / EE5-47
Pace Project No.: 5042370

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-I	Pace Analytical Services - Indianapolis

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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PRECISION PETROLEUM LABS, INC.

CERTIFICATE OF ANALYSIS

LABORATORY ADDRESS	Client Name: Pace Analytical Services, Inc-IN
5915 Star Lane, Houston, TX 77057	Street Address: 7726 Moller Rd
Ph. 713-680-9425 Fax: 713-680-9564	City, State, Zip: Indianapolis, IN 46268
Website: precisionlabs.org	

INVOICE No.	46738	DATE RECEIVED	10-15-2010
LAB REFERENCE No.	2010-10-320	DATE/TIME COLLECTED	10-12-10@14:30
AUTHORIZED BY	Kenneth Hunt	MATRIX TYPE	Liquid
PRODUCT ID	5042370001		

TCLP METALS	CAS #	TEST METHOD	REPORTING LIMIT MG/L	RESULTS MG/L	REGULATORY LEVEL MG/L
Arsenic	7440-38-2	EPA-1311/6010	0.500	BRL	5.000
Barium	7440-39-3	EPA-1311/6010	0.100	1.448	100.000
Cadmium	7440-43-9	EPA-1311/6010	0.100	BRL	1.000
Chromium	7440-47-3	EPA-1311/6010	0.150	1.521	5.000
Lead	7439-92-1	EPA-1311/6010	0.390	0.646	5.000
Mercury	7439-97-6	EPA-1311/6010	0.170	BRL	0.200
Selenium	7782-49-2	EPA-1311/6010	0.630	BRL	1.000
Silver	7440-22-4	EPA-1311/6010	0.130	BRL	5.000
DATE ANALYZED:	**10-19-2010**				
ANALYST INITIALS:	**T.H.**				

Daniel Zabihi **Date: 10-19-2010**
QA Manager

PRIMARY ACCREDITATION TCEQ, #T104704203-TX
ARIZONA LICENSE # AZ0630

QUALIFIERS & ABBREVIATIONS: BRL - Below Reporting Limit; SCL - Test performed by an approved subcontract laboratory; B - Analyte was detected in the associated method blank; Matrix spike/matrix spike duplicate (M), Laboratory control sample (L), Calibration criteria (C), and Surrogate (S) recoveries were outside acceptance limits. Test deviation applied to Method 8260 (VOCS).

COMMENTS: There were no quality assurance anomalies associated with these tests.

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT. RESULTS ARE REPORTED ON AN "AS IS" BASIS, UNLESS OTHERWISE NOTED. THE TEST RESULTS RELATE ONLY TO THE SUBMITTED SAMPLE IDENTIFIED ON THIS REPORT. TEST RESULTS MEET ALL REQUIREMENTS OF NELAC FOR TESTS LISTED ON THE LABORATORY'S CURRENT FIELDS OF ACCREDITATION (EPA 1010, 6010, 8082, 8260, and 9075).

PRECISION PETROLEUM LABS, INC.

CERTIFICATE OF ANALYSIS

LABORATORY ADDRESS	Client Name: Pace Analytical Services, Inc-IN
5915 Star Lane, Houston, TX 77057	Street Address: 7726 Moller Rd
Ph. 713-680-9425 Fax: 713-680-9564	City, State, Zip: Indianapolis, IN 46268
Website: precisionlabs.org	

INVOICE No.	46738	DATE RECEIVED	10-15-2010
LAB REFERENCE No.	2010-10-321	DATE/TIME COLLECTED	10-12-10@14:05
AUTHORIZED BY	Kenneth Hunt	MATRIX TYPE	Liquid
PRODUCT ID	5042370002		

TCLP METALS	CAS #	TEST METHOD	REPORTING LIMIT MG/L	RESULTS MG/L	REGULATORY LEVEL MG/L
Arsenic	7440-38-2	EPA-1311/6010	0.500	BRL	5.000
Barium	7440-39-3	EPA-1311/6010	0.100	1.095	100.000
Cadmium	7440-43-9	EPA-1311/6010	0.100	BRL	1.000
Chromium	7440-47-3	EPA-1311/6010	0.150	0.867	5.000
Lead	7439-92-1	EPA-1311/6010	0.390	BRL	5.000
Mercury	7439-97-6	EPA-1311/6010	0.170	BRL	0.200
Selenium	7782-49-2	EPA-1311/6010	0.630	BRL	1.000
Silver	7440-22-4	EPA-1311/6010	0.130	BRL	5.000
DATE ANALYZED:	**10-19-2010**				
ANALYST INITIALS:	**T.H.**				

Daniel Zabihi **Date: 10-19-2010**
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Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1444882

Section A Required Client Information:

Company: Environmental Restoration
Address: 15400 Herriman Blvd
Noblesville, IN
Email To: r.byrd@erllc.com
Phone: (317) 491-4128 Fax: (636) 680-2459
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Richie Byrd
Copy To:
Purchase Order No.:
Project Name: ESI Indpls
Project Number: EES-47

Section C Invoice Information:

Attention:
Company Name: Environmental Restoration
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: IN

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED GRAB ~~COMPOSITE~~ START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): ~~RCRA Metals~~	TCLP RCRA 8	PCBs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 5042370
1	ESI D South 10-12	OL	G	10-12-10	1430				1	1								X	X	X		-001
2	ESI transfer tank 10-12	OL	G	10-12-10	1405				1	1								X	X	X		-002
3	ESI FRAC 7 10-12	OL	G	10-12-10	1500				1	1										X		-003
4	ESI FRAC 8 10-12	OL	G	10-12-10	1515				1	1										X		-004
5	ESI FRAC 9 10-12	OL	G	10-12-10	1530				1	1										X		-005
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		10-12-10	1615	Marda Wilson	10/12/10	1615	27°C	N	Y	Y

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

Client no dec

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: JEREMY ROBINSON

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 10-12-10

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Sample Condition Upon Receipt

Pace Analytical

Client Name: Environmental Restoration Project # 5042370

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used 1 2 3 (4) 6 A B C D E **Type of Ice:** Wet Blue (None) ☐ Samples on ice, cooling process has begun

Cooler Temperature 27.2°C **Ice Visible in Sample Containers:** ☐ yes ☑ no

Temp should be above freezing to 6°C

- Just sampled -

Date and Initials of person examining contents: 10/12/10/mw

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	5.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	6.
Containers Intact:	☑Yes	☐No	☐N/A	7.
Sample Labels match COC: -Includes date/time/ID/Analysis	☑Yes	☐No	☐N/A	8.
All containers needing preservation have been pH checked? exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☐No	☑N/A	9.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☑N/A	
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	10.
Trip Blank Present:	☐Yes	☑No	☐N/A	11.
Trip Blank Custody Seals Present	☐Yes	☑No	☐N/A	
Project Manager Review				
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	12.
Sufficient Volume:	☑Yes	☐No	☐N/A	13.
Correct Containers Used:	☑Yes	☐No	☐N/A	14.

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [signature] **Date:** 10/13/10

Form F-IN-Q290-rev.1, 06Jul2010

Sample Container Count

CLIENT: Environmental Restoration

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COC PAGE 1 of 1
COC ID#

Project # 5042370

Sample Line Item	DG9H	AG1U	WGFU	R 4/6	BP2N	BP2U	BP2S	BP3N	BP3U	BP3S	AG3S	AG1H				Comments
1		1														
2		1														
3		1														
4		1														
5		1														
6																
7																
8																
9																
10																
11																
12																

Container Codes

DG9H	40mL HCL amber voa vial	AF	Air Filter	BP1N	1 liter HNO3 plastic	DG9P	40mL TSP amber vial
AG1U	1liter unpreserved amber glass	AG1H	1 liter HCL amber glass	BP1S	1 liter H2SO4 plastic	DG9S	40mL H2SO4 amber vial
WGFU	4oz clear soil jar	AG1S	1 liter H2SO4 amber glass	BP1U	1 liter unpreserved plastic	DG9T	40mL Na Thio amber vial
R	terra core kit	AG1T	1 liter Na Thiosulfate amber gl	BP1Z	1 liter NaOH, Zn, Ac	DG9U	40mL unpreserved **amber** vial
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2A	500mL NaOH, Asc Acid plastic	I	Wipe/Swab
BP2U	500mL unpreserved plastic	AG2S	500mL H2SO4 amber glass	BP2O	500mL NaOH plastic	JGFU	4oz unpreserved amber wide
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber gla	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber gla	BP3A	250mL NaOh, Asc Acid plastic	VG9H	40mL HCL clear vial
BP3U	250mL unpreserved plastic	BG1H	1 liter HCL clear glass	BP3C	250mL NaOH plastic	VG9T	40mL Na Thio. clear vial
BP3S	250mL H2SO4 plastic	BG1S	1 liter H2SO4 clear glass	BP3Z	250mL NaOH, Zn Ac plastic	VG9U	40mL unpreserved **clear** vial
AG3S	250mL H2SO4 glass amber	BG1T	1 liter Na Thiosulfate clear gla	C	Air Cassettes	VSG	Headspace septa vial & HCL
AG1S	1 liter H2SO4 amber glass	BG1U	1 liter unpreserved glass	DG9B	40mL Na Bisulfate amber vial	WGFX	4oz wide jar w/hexane wipe
BP1U	1 liter unpreserved plastic	BP1A	1 liter NaOH, Asc Acid plastic	DG9M	40mL MeOH clear vial	ZPLC	Ziploc Bag