



Spill # 1941472

Iles Grove Station Remediation Report

RECEIVED

DEC 30 2009

COGCC

**SESE Section 15, T4N, R92W
Moffat County, Colorado**

Prepared for: Wold Oil Properties, Inc.
Mineral Resource Center
139 West Second Street, Suite 200
Casper, Wyoming 82601
307-265-7252

Prepared by: Energy Environmental Consulting, LLC
350 West A Street, Suite 203
Casper, Wyoming 82601
307-234-3395

December 2009



TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
1 INTRODUCTION	3
2 SITE DESCRIPTION	3
2.1 Location	3
2.2 Equipment	3
2.3 Areas of Contamination	3
3 FIELD ACTIVITIES	4
3.1 July 29 – 31, 2009 Excavation	4
3.1.1 Confirmation Sampling Locations	5
3.2 August 25, 2009 Excavation	7
3.3 September 11, 2009 Tank Removals	8
3.4 September 15 – 17, 2009 Excavation	9
3.4.1 Confirmation Sample Locations	10
3.5 October 12 –16, 2009 Excavation.....	11
3.5.1 Confirmation Sample Locations	12
3.6 November 25, 2009 Excavation.....	13
3.6.1 Confirmation Sample Locations	14
4 EXTENT OF SOIL CONTAMINATION AND GROUNDWATER.....	15
4.1 Soil	15
4.2 Groundwater	16
5 TANK DESCRIPTION	16
6 CONTAMINATED SOILS STORAGE.....	17
7 WASTE CHARACTERIZATION	18
8 PETROLEUM CONTAMINATED SOILS DISPOSAL.....	18
9 CONCLUSIONS/SUMMARY.....	20
10 REFERENCES	21

TABLES

Table 1. On-site Company Personnel	Attached
Table 2. PID Readings	Attached
Table 3. Tank Foundation Test Pit Results.....	10
Table 4. Summary of Sample Results.....	Attached

FIGURES

Figure 1. Location Map.....	Attached
Figure 2. Site Map.....	Attached
Figure 3. Soil Chemistry	Attached
Figure 4. Sample Locations and Excavation Extents.....	Attached
Figure 5. Sump Drawing.....	Attached
Figure 6. October 12 – 16, 2009 Sampling Locations	Attached
Figure 7. November 25, 2009 Sampling Locations	Attached

APPENDICES

Appendix A – Spill Report

Appendix B – Contact Information

Appendix C – PID Calibration Records

Appendix D – Photographs

Appendix E – Laboratory Analyses and Chain of Custody Forms

Appendix F – Moffat County Regional Landfill Correspondence

Appendix G – Sump Disposal Documentation

Appendix H – Fill Dirt Documentation

WOLD OIL PROPERTIES, INC.
ILES GROVE STATION
REMEDIATION REPORT

EXECUTIVE SUMMARY

A Site Investigation Report prepared by Fremont Environmental Inc. in December 2008 identified potential soil and groundwater contamination at the Iles Grove Station. Based on the report, it was decided to remove the suspected sump and associated petroleum contaminated soils. Work began on the project in July 2009 and was completed on November 25, 2009. The sump was removed on July 29 – 31, 2009 along with associated petroleum contaminated soils. Piping to and from the sump was plugged or blinded. During the sump removal a loose flange was found on the inlet piping to the tank. This is thought to be the source of the contamination immediately surrounding the tank at approximately 4 feet below grade. At that time it was also observed that there were additional petroleum contaminated soils, possibly from another source such as the two (2) 400 barrel storage tanks.(located within berm?) Additional soils were removed on August 25, 2009, September 15 – 17, 2009, October 12 – 16, 2009 and November 25, 2009. On September 11, 2009 the two (2) 400 barrel storage tanks were removed and the conditions of the tanks and foundations were observed. The tanks were in good condition.

During excavation soils removal process, soil samples were collected and analyzed by Energy Laboratories, Inc. to confirm that the remaining soils met the Colorado Oil and Gas Conservation Commission (COGCC) Table 910 standards. Excavation continued until the COGCC standards were met. The area within the former tank berm was excavated to a depth of approximately 7 feet.

During this time, petroleum contaminated soils were stockpiled on-site for treatment and disposal. Four shallow bermed and lined pits were constructed to contain the soils. Approximately 61.50 tons (40 cubic yards) of petroleum contaminated soils from the July 29 – 31, 2009, October 12 – 16, 2009 excavation along with those from November 25, 2009 were transported to the Moffat County Landfill with authorization from the County.

A large portion of the soils were treated on-site by aeration and returned to the excavation. In addition, clean soils from the tank berms and clean soils that sloughed into the excavation and could not be segregated were used for fill. Approximately 29.36 tons (22 yards) of clean backfill were purchased from 3B Enterprises, LLC. See **Appendix H** for documentation.

Approximately 29.36 tons (22 cubic yards) of clean fill were purchased. Clean soils from the tank berms were also used for backfill. The remainder of the excavation was backfilled with petroleum contaminated soils that were treated on-site by aeration with a backhoe.

No groundwater was encountered during the petroleum contaminated soils removal described above. There were clean clay soils beneath the petroleum contaminated soils and above the water table during the soils removal process.

It was determined that the sump was one source of contamination. The sump was removed and the piping to and from it made inoperable. The tanks and piping to the LACT Unit were also removed. This is suspected to be another source of contamination. All potential sources of contamination were removed. Based on the soil sampling that was conducted in December 2008 by Fremont Environmental and the results of the excavations performed between July 29, 2009 and November 25, 2009 the identified petroleum contaminated soils were removed. These soils were either treated in place to COGCC standards and returned to the excavation or disposed at the Moffat County Landfill.

1 INTRODUCTION

The purpose of the activities described in this report was to remove the suspected sump and determine if it was the cause of all or part of the previously documented soil and groundwater contamination based on the Site Investigation Report prepared by Fremont Environmental Inc. in December 2008. At the same time any petroleum contaminated soils were to be removed and properly disposed.

The release from the sump was reported to the Colorado Oil and Gas Conservation Commission (COGCC) using Form 19. A copy of the report is included in **Appendix A**.

The site has been identified by various names including: Iles Grove Station and Iles Station Tank Facility. Throughout this report the facility is referred to as the Iles Grove Station.

2 SITE DESCRIPTION

2.1 Location

The Iles Grove Station is located approximately 1.5 miles south of Colorado State Highway 13 on County Road 49 in Moffat County, Colorado. The intersection of County Road 49 and Colorado State Highway 13 is approximately 15 miles south of Craig, Colorado. See **Figure 1** for a location map.

2.2 Equipment

The equipment at the site consisted of:

- Two (2) 400 bbl welded steel above ground crude oil storage tanks;
- Three (3) unloading facilities;
- One (1) 10,000 bbl welded steel above ground crude oil storage tank;
- A transfer pump to move crude oil from the two (2) 400 bbl tanks into the 10,000 bbl tank;
- Two (2) Lease Automatic Custody Transfer (LACT) Units; one belonging to Taylor and one belonging to Wold; and
- A sump associated with the LACT Units, which was the object of this work, and associated piping.

The location of each piece of equipment is shown on the site map included as **Figure 2**. Also see Photographs #1 – 2. No drawings of the piping or utilities could be located prior to beginning removal of the sump.

2.3 Areas of Contamination

A previous investigation, Site Investigation Report (Fremont Environmental, 2008), identified potential soils and groundwater contamination as shown on **Figure 3** of this report. These areas were in the vicinity of the sump and near one of the unloading facilities to the northeast.

According to the previous investigation report: “Anecdotal evidence suggests that condensate and crude oil have been drained to this sump on a monthly basis during meter proving for the past several years; however, the pump has not worked during this time frame indicating that there is a leak in the sump or it overflowed when liquids were drained to it.” (Fremont Environmental, 2008).

The field activities described in Section 3 were initially centered on the sump area as described below but later expanded to the area within the tank berm.

3 FIELD ACTIVITIES

Removal activities were conducted on July 29 – 31, 2009, August 25, 2009, September 11, 2009, September 15 – 17, 2009, October 12 – 16, 2009 and November 25, 2009 and are discussed below. These removal activities included removal of the sump, two (2) 400 bbl crude oil storage tanks and petroleum contaminated soils. Personnel present during the field activities on the above dates are included in **Table 1**, attached. Contact information for these personnel of the above is included in **Appendix B**.

Equipment provided by Jim Ayres Enterprises, Inc. for the investigation included:

- Case 580K rubber tired backhoe;
- Eight (8) cubic yard dump truck; and
- Twelve (12) cubic yard dump truck.

A Photoionization Detector (PID) was rented from Geotech Environmental Equipment, Inc. for each of the soil removal events, except the October 12 – 16, 2009 activities, and was calibrated before it was shipped. Copies of the calibration records for each rental except for November 25, 2009 are included in **Appendix C**. The PID was a RAE MiniRAE 2000.

Each soil removal event will be discussed separately below. Photographs of each event are included in **Appendix D**.

3.1 July 29 – 31, 2009 Excavation

The purpose of the activities on these dates was to remove the sump and investigate the potential contamination identified in the Fremont Environmental Site Investigation Report.

During the removal, visually “clean” soils were salvaged and stock piled on-site for future use. Contaminated soils were loaded directly into the dump truck and transported to the lined storage area shown on **Figure 2**. Because the sidewalls of the excavation sloughed badly, clean soils were unavoidably mixed with contaminated soils.

During the removal of the sump it appeared that most of the contamination was on the south side of the sump from 4 feet to approximately 9 feet below the ground

surface. The contamination appeared not to have spread very far from the sump. After the sump was removed it appeared that all of the visually contaminated soils had been removed when the bank on the west side sloughed and exposed discolored soils near the surface.

This area was further investigated. This area appeared to be stained near the surface. Several layers of staining were visible, separated by gravel (Photograph #34). This could have been the result of overfilling the sump as previously described or spills at the tank.

Water was observed around the sump on the south and east sides during excavation. At first it was thought it may be groundwater. After additional excavation, it was determined to be water trapped in the soils around the sump.

No bedrock was encountered during the sump excavation and removal. The majority of the soils encountered were gray moist plastic clay. A brown sandy clay was also encountered. The gray clay had iron staining along with black organic discontinuous lenses that seemed to increase with depth. At times roots and other organic material were also observed.

During the sump removal soil samples were collected and analyzed for Volatile Organic Compounds (VOCs) in the field with a PID. Soil samples were collected and placed into re-sealable plastic 1-quart bags. The bags were allowed to warm for approximately 10 minutes and then the VOCs in the headspace were monitored. Seven (7) samples were collected and analyzed in the field for VOCs. The results are shown in **Table 2**, attached.

A telephone line was discovered near the northeast corner of the Taylor LACT Unit. The area may have been excavated for the telephone line and backfilled with clean material. However, this was also near the previous boring GP9 which was not contaminated (Fremont Environmental, 2008). Several cathodic cables were also discovered during the excavations.

3.1.1 Confirmation Sampling Locations

Following the removal of the sump, confirmation soil samples were collected for laboratory analyses. Sample containers were provided by Energy Laboratories, Inc. (ELI) in Casper, Wyoming. Each sample set consisted of one (1) 4-oz amber wide mouth glass container and one (1) 8-oz clear wide mouth glass container. Each container was filled as full as possible. Since the samples were stiff moist plastic clay, it was difficult to pack the container full and not have any voids. The lip of the container was cleaned to assure that the lid fit as tightly as possible.

Five (5) confirmation samples were collected. Each sample is described in more detail below. See the attached drawing, **Figure 4**, for the approximate sampling location of samples IG-1 through IG-4. Sample

locations IG-1 through IG-4 were also photographed to document the location (**Appendix D**).

IG-1 – This sample was collected from the north sidewall of the shallow pit (Photograph #36) approximately 3 feet below grade. It was a gray color with a slight hydrocarbon odor. The sidewall was scraped with a shovel to remove soils that had been allowed to vent over night. The sample was then collected with a large stainless steel spoon and placed directly into the sample containers. Residual soils were removed from the spoon before the next sample was collected.

IG-2 – This sample was collected from the bottom of the shallow excavation near the southwest corner near the Taylor LACT Unit at about 48 inches below grade (Photograph #38). A small pit, 8 – 10 inches deep, was dug with a shovel to remove sloughed soils and sample soils which had not been exposed to the atmosphere overnight. After the pit was dug, soils were scraped from the pit sidewall near the bottom of the shovel pit with a large stainless steel spoon and placed directly into the laboratory provided sample container. Residual soils were removed from the spoon.

IG-3 – This sample was collected near the northeast corner of the deep excavation from a depth of approximately 11.5 feet below grade (Photograph #37). The soils were gray clay with some iron staining and black organics. There was very little hydrocarbon odor. The soil sample was collected using the same technique as IG-2.

IG-4 – This sample was collected on the west side of the deep excavation from a depth of approximately 12 feet below grade, near the small pool of water that had collected in the bottom of the excavation (Photograph #39). It was eventually determined that this water was from precipitation, not groundwater. The soil sample was collected using the same technique as IG-2.

IG-5 – A composite sample was collected from eight (8) locations in the contaminated soil storage pile. Samples were randomly collected from the top and side of the pile. At each sample location a pit or hole approximately 12 – 18 inches deep was dug with a shovel. Then two (2) spoonfuls of soil were removed from the side and bottom of the pit and placed into a 3 quart mixing bowl. The soils were mixed with the spoon between each location. After all of the samples were collected the sample was mixed again and placed into the laboratory provided sample containers. Approximately 2 quarts of soil were collected for the composite sample. The spoon was wiped clean of residual soils between each sampling location. No photographs were taken of the contaminated soil stock pile sampling locations.

Samples were immediately placed on ice in a cooler provided by the laboratory. Samples were refrigerated from the time they were collected until they were hand delivered to ELI on Monday morning, August 3, 2009. No custody seals were used on the bottles or cooler since the soil samples were in the sampler's possession the entire time. A copy of the Chain of Custody is included in **Appendix E** with the laboratory results. The results are summarized in **Table 4**.

Due to the irregular shape and depth of the excavation, the size of the excavation was not measured at the completion of work on July 31, 2009. The west side of the pit was approximately 4 feet deep. The east side of the excavation that contained the sump was approximately 10.5 – 11 feet deep.

Seven (7) truck loads of contaminated soil were removed and placed in the lined storage area. It is estimated that each truck load was approximately 8 cubic yards for a total of approximately 56 cubic yards of soil. This volume estimate is probably low.

3.2 August 25, 2009 Excavation

Based on the laboratory results of the July 29 – 31, 2009 excavation included in **Appendix E** it was determined that additional excavation needed to be performed to meet the COGCC standards. The second round of soil removal was performed on August 25, 2009. The same contractor and equipment that were used for the first excavation were also utilized for this excavation.

Water was present in the excavation so the first task was to determine if it was groundwater or precipitation that had collected in the excavation. Initially the soils were saturated but as the excavation progressed deeper the soils became damp but no free water was encountered. At the same time an effort was made to determine the depth of the bedrock. The backhoe dug as deep as it could reach, approximately 14 feet 3 inches, without encountering bedrock.

The excavation proceeded east to west. Visually contaminated soils were removed from beneath the sump inlet piping and in the bottom of the pit. At approximately 13.75 feet, a brown sandy clay was encountered. A sample was collected and analyzed with the PID. The sample contained VOCs in the range of 0.3 – 3.2 ppm. It was decided that the brown clays were clean and excavation would stop when they were encountered.

As the excavation progressed westward more gray to black soils were encountered. These were determined to be petroleum contaminated soils based on the PID readings. See **Table 2**, attached, for a summary of the PID readings. Contaminated soils were located below the sump inlet piping in the deeper excavation. These were removed and the gray to black soils continued beneath the shallow excavation that was previously determined to be clean (IG-2).

It was decided to investigate the soils surrounding the sump inlet piping in the area of the former shallow excavation. As soils were removed to the north around the pipe, additional gray soils were encountered. These soils extended from just below the graveled surface to at least 6 feet below grade or approximately 2 feet below the level of the sump inlet piping. A soil sample was collected from this area for laboratory analysis but was not analyzed since it was obviously contaminated.

At that time it was decided to stop excavating. Contaminated soils were still present in the area of the excavation. However, in order to continue excavation the tank berm would have to be removed, the unloading operations disrupted, and possibly the tanks removed.

At the completion of work on August 25, 2009 the excavation was roughly measured. It was 16 feet wide, 24 feet long by 13.75 feet deep. Approximately 195 cubic yards of material had been removed and contamination had been encountered that did not appear to be caused by the sump. The approximate area excavated is shown on **Figure 4**. All of the contaminated soils were stock piled on impervious material in the northwest corner of the facility. An earthen berm was constructed and the liner was installed which extended up the inside of the berms. See Photographs #80 – 81.

Five (5) truck loads of contaminated soil were removed and placed in the second lined storage area. It is estimated that each truck load was approximately 6 cubic yards for a total of approximately 30 cubic yards of soil. This volume estimate and previous volume estimates are low based on the pit dimensions.

Photographs #63 – 82 in **Appendix D** document the activities.

3.3 **September 11, 2009 Tank Removals**

On September 11, 2009 the two (2) 400-bbl welded steel oil storage tanks belonging to Taylor were removed by Kawcak Inc. of Craig, Colorado. Prior to the tank removal, the inlet piping from the truck unloading facilities and the outlet piping to the Taylor LACT Unit were disconnected from the tanks and the contents of the tanks removed as much as possible. See Photographs #86 – 87 in **Appendix D**.

On September 11, 2009 the stairs and walkways were removed and transported off-site. Each tank was removed using a hydraulic crane, placed on a transport truck and removed from the location.

As each tank was removed the soils beneath each tank and the tank bottom were examined for signs of corrosion or possible leakage. Soil samples were collected but not analyzed. Observations during removal are described below and shown in Photographs #83 – 102 in **Appendix D**.

Tank 3332

Tank 3332, the north tank, was removed first. This tank was constructed with a sump in the bottom of the tank. The bottom of the tank, including the sump was coated with black mastic that was in good condition. There were no signs of holes or leaks in the bottom of the tank. See Photographs #92 – 94.

There was no noticeable odor in the soils beneath the tank (tank foundation) and the soils did not show any signs of hydrocarbon staining. See Photographs #89 – 91.

Tank 3333

Tank 3333, the south tank, was removed second. The bottom of the tank had only primer and paint. The tank bottom appeared to be in good condition. There were no signs of holes or leaks in the bottom of the tank. See Photograph #100.

There was no noticeable odor in the soils beneath the tank (tank foundation) and the soils did not show any signs of hydrocarbon staining. The tank foundation consisted of a few inches of well compacted sand and gravel contained in a steel ring underlain by clay. See Photographs #97 – 99 in **Appendix D**.

3.4 September 15 – 17, 2009 Excavation

On September 15, 2009, the excavation of petroleum contaminated soils resumed. Based on the first soils sampling results (Samples IG-1 through IG-4, **Appendix E**) and field observations on August 25, 2009 it was determined that additional excavation was required. The PID readings taken throughout the excavation of the soils are summarized in **Table 2**.

The activities are documented in Photographs #103 – 147 in **Appendix D**. The outlet piping supports on the west side of the two (2) 400 bbl tank locations were removed first. The southern pipe support closest to Taylor's LACT Unit was removed first. This was a concrete support approximately three (3) feet long. The bottom of the pipe support was covered with dark gray stained soils. See Photographs #103 – 105.

Test pits were dug around the tank foundations within the tank berms. Four (4) pits were dug with the backhoe to a depth of approximately 38 inches, the length of the backhoe bucket. The results are shown in **Table 3**.

Table 3. Tank Foundation Test Pit Results

Pit Number	Description
Test Pit #1	This pit was on the east side of the tanks, approximately half way between the two tanks. The first 4" – 6" of surface spoils were clean. Beneath that were black soils with a strong hydrocarbon odor. The excavation contained peat moss below the clean surface soils.
Test Pit #2	This pit was dug at the northeast corner inside the berm. The upper 12" were brown soils and peat moss. Beneath that was gray soil with some hydrocarbon odor.
Test Pit #3	This pit was dug at the northwest corner of the facility, inside the berm. This pit was brown soils down to approximately 30" that appeared to be clean.
Test Pit #4	This pit was on the west side of the south tank, Tank 3333, between the tank foundation and the berm. Some peat moss was encountered near the surface. The soils were gray with a slight hydrocarbon odor.

During the excavation of the east bank below the tank berm just south of the unloading line to Tanks 3332 and 3333 a pocket of free oil was encountered (Photographs #131 – 136). The oil appeared to be trapped in some voids in the soil. The amount was small, probably less than a cup. A sample of the free oil could not be collected. The oil was similar in appearance to the oil in the unloading catch basin.

3.4.1 Confirmation Sample Locations

Following the excavation of additional soils, confirmation soil samples were collected for laboratory analyses. Sample containers were provided by Energy Laboratories, Inc. (ELI) in Casper, Wyoming. Each sample set consisted of one (1) 4-oz amber wide mouth glass container and one (1) 8-oz clear wide mouth glass container. Each container was filled as full as possible. Since the samples were stiff moist plastic clay, it was hard to pack the container full and not have any voids. The lip of the container was cleaned to assure that the lid fit as tightly as possible.

Three (3) confirmation samples were collected. Each sample is described in more detail below. See the attached drawing, **Figure 4**, for the approximate sampling locations of IG-6 through IG-8. Sample locations were also photographed to document the location.

IG-6 – This sample was collected from the brown clays in the bottom of the excavation, below the gray clay. The soil sample was collected using the same technique as IG-2 which was previously described.

The soil sample IG-6 was collected approximately 8 feet below the top of the tank berm.

IG-7 – This sample was collected on the south bank of the excavation in the vicinity of the previous borehole GP11 (Fremont Environmental, 2008). It was a light gray to brown mixture of clay. A pit was dug into the bank and then samples were collected with a spoon and placed directly into the containers. See Photographs #128 – 129. This sample was collected approximately 3 – 4 feet below the top of the tank berm.

IG-8 – This sample was collected from the bank below the tank berm approximately 3 feet below the top of the berm. It was a black to gray clay. The soil sample was collected using the same techniques as IG-7. This sample had a very low hydrocarbon odor. See Photograph #147.

Samples were immediately placed on ice in a cooler provided by the laboratory. Samples were refrigerated from the time they were collected until they were hand delivered to ELI on Friday morning, September 18, 2009. No custody seals were used since the soil samples were in the sampler's possession the entire time. A copy of the Chain of Custody is included in **Appendix E** with the laboratory results.

In summary, sample IG-6 was “clean”. No hydrocarbons or VOC's were detected. However, laboratory results indicated that samples IG-7 and IG-8 were both contaminated and above the COGCC standards. These results, along with the previously described test pits indicated additional petroleum contaminated soils needed to be removed. It was estimated that an additional 750 cubic yards of petroleum contaminated soils may require removal and disposal. See **Table 4** for a summary of the laboratory results.

3.5 October 12 –16, 2009 Excavation

A meeting was held with Mr. Peter Wold and Mr. Kevin Meenan of Wold Oil Properties, Inc. and Thomas Jaap of Energy Environmental Consulting, LLC (EEC) on October 5, 2009 to review the status of the project including future activities. Based on the laboratory analyses of the soils remaining following the September 15 – 17, 2009 soils removal it was decided to continue the excavation of the visually contaminated soils in the vicinity of the former tanks. Excavation was performed by Jim Ayres Enterprises with supervision by Matthew Wold using the same equipment previously described. Excavation began on October 12 and continued through October 16, 2009. During this excavation, visually contaminated soils were hauled directly to the landfill on October 13 and 14, 2009 and not stored on-site. Copies of the scale tickets are included in **Appendix F**. On October 13, 2009 three truck loads were delivered to the landfill totaling 41.59 tons. On October 14, 2009 one truck load, 11.60 tons, was hauled to the landfill.

Altogether, 53.19 tons of petroleum contaminated soils were hauled to the landfill. Assuming 100 pounds per cubic foot, this is approximately 40 cubic yards of soils.

Visually contaminated soils were excavated inside the tank berms to a depth of approximately 8 – 9 feet (verbal communications, Matthew Wold , October 26, 2009) No testing was performed on either the visually contaminated soils or the visually clean soils with a PID for guidance. At the completion of the work the field staff determined by visual examination that the petroleum contaminated soils had been removed and no further excavation was required. The site at the completion of the activities on October 16, 2009 is shown in Photograph #148.

3.5.1 Confirmation Sample Locations

Soil samples were collected by Matthew Wold on October 16, 2009 and hand delivered to Thomas Jaap of EEC in Casper, Wyoming. Upon receipt of the samples they were refrigerated and then delivered to ELI on October 20, 2009 for analyses. While the samples were being logged in, the laboratory supervisor stated that there was insufficient sample volume to perform the requested analyses.

Each sample consisted on a single small clear canning jar, approximately 4-oz in size with a metal lid and retainer ring. The sample locations were not documented on a map.

Additional soil sampling was requested since the October 16, 2009 sample volume was insufficient. Confirmation soil samples were again collected by Matthew Wold on October 23, 2009, placed on ice and hand delivered to Thomas Jaap of EEC on October 24, 2009 in Casper, Wyoming. Upon receipt, the samples were placed into a refrigerator and then hand delivered to ELI on Monday morning, October 26, 2009 in a cooler with ice. The samples were collected in 1-pint canning jars with metal lids and retainer rings and labeled with a permanent marker on the top of each container. The sampling methods were not described.

The sampling locations were from within the former tank berm at three locations identified as North (N), Northeast (NE), and Northwest (NW).

Each sample was analyzed for the following:

- TPH – DRO (Method 8015 Modified)
- TPH – GRO (Method 8015 Modified)
- TPH O&G (Method 8015 Modified)
- BTEX (EPA 8020)

The samples were identified as: N 3', N 7'6", NE top 3', NE7'6", NW 3'6" and NW 7'6". The sample identification indicates the direction and

depth at which the sample was collected. The approximate locations where the samples were collected are shown on **Figure 4** and **Figure 6**.

The results of the analyses and the Chain of Custody form are included in **Appendix E**. The results are summarized in **Table 4**.

Previously excavated soils that “smelled clean” or had little odor were placed back into the excavation after they were aerated using the backhoe. No confirmation samples were collected at the time to document that the treated soils met the required COGCC standards. Soils from the tank secondary containment berms were also used as backfill as the excavation progressed.

On October 14, 2009, 13.76 tons of clean backfill were purchased from 3B Enterprises, LLC and used as backfill at the excavation. See **Appendix H** for the load ticket.

3.6 November 25, 2009 Excavation

A meeting was held with Mr. Peter Wold and Mr. Matthew Wold of Wold Oil Properties, Inc. and Thomas Jaap of EEC on November 23, 2009 to review the status of the project including future activities and the results of the October 12 – 16, 2009 soils removal. Based on the laboratory analyses of the soils remaining following the October 12 – 16, 2009 soils removal it was decided to continue the excavation of the visually contaminated soils in the vicinity of the former tanks near the north berm.

Additional excavation was conducted on November 25, 2009. Excavation was performed by Jim Ayres Enterprises with supervision by Matthew Wold. This excavation was directly north of the trench excavation dug on October 12 – 16, 2009 running east to west within the approximate limits of the tank berms. See Photograph #149.

During this time a PID was used by the field staff to guide in the removal of petroleum contaminated soils. Soil samples were collected and placed into plastic bags, the samples were allowed to warm and the head space was analyzed with the PID. PID readings of the visually clean soils were in the range of 5 – 10 ppm (Matthew Wold, personal communications, November 25, 2009).

During this excavation, visually contaminated soils were hauled directly to the Moffat County Landfill on November 25, 2009 and not stored on-site. A copy of the scale tickets is included in **Appendix F**. On November 25, 2009 one truck load, 8.31 tons, was hauled to the landfill. Assuming 100 pounds per cubic foot, this is approximately 6.2 cubic yards of soils.

To replace the soils that were excavated, 15.60 tons of clean fill dirt were purchased from 3B Enterprises, LLC. A copy of the sales receipt is included in **Appendix H**.

3.6.1 Confirmation Sample Locations

At the same time, soil samples were collected from the new trench that was excavated to remove additional petroleum contaminated soils. Three samples were collected from the trench at approximately 4 feet to confirm that the remaining soils met the COGCC standards in Table 910. The soil samples were identified as follows:

- New Ditch NW corner 4',
- New Ditch North Middle 4', and
- New Ditch NE corner 4'.

The results of the excavation sampling are summarized in **Table 4**.

All of the samples met the requirements in the COGCC Table 910 for soils. Therefore, soils removal activities were terminated.

Two soil samples were collected from the previously excavated area which was backfilled on October 12 – 16, 2009. This was done to confirm that the backfill material met the COGCC Table 910 standards for soils. The soil samples were collected at approximately 4 feet deep in a trench dug by the backhoe. One sample was collected 4 feet north of the pipe markers and the other was collected 10 feet southwest of the ditch (excavation) that was dug on this date (Matthew Wold, email, November 26, 2009). These samples were identified as “Random Hole #1 East of pipe marker” and “Random Hole #2 NW of pipe marker”. The location of the five soil samples are shown on **Figure 7**. The results of the sampling are shown in **Table 4**.

Both samples met the requirements of the COGCC Table 910, indicating that the in place treatment of the soils was satisfactory.

All of the soil samples were placed into 1-pint canning jars with metal lids and sealing rings, labeled on the lid with a permanent marker and placed into a cooler on ice. The samples were hand delivered to Thomas Jaap of EEC in Casper and delivered to ELI on Monday, November 30, 2009. See the Chain of Custody in **Appendix E** with the analytical results.

A previous soil boring, GP10, located near the northwest corner of the tank secondary containment berm was below detection limits at 11 feet below grade (Fremont Environmental, December 2008). This is consistent with the field observation and the laboratory analysis as shown on **Table 4**.

During this time a spill of approximately 20 gallons of condensate at the unloading area was also cleaned up and the contaminated soils disposed at the Moffat County landfill along with the other petroleum contaminated soils from the day's excavation (Personal communications, Matthew Wold, November 25, 2009).

4 EXTENT OF SOIL CONTAMINATION AND GROUNDWATER

4.1 Soil

No geotechnical laboratory analyses were performed on the excavated or site soils. Based on field observations, it is estimated that the soil permeability ranges from 10^{-5} to 10^{-8} centimeters per second (Design of Small Dams, Figure 5-14). Permeabilities of 10^{-6} centimeters per second or less are considered practically impermeable. It is unlikely that hydrocarbons migrated far from their source. The areas of contamination based on borehole information identified in the previous report were consistent with the observations made during the sump removal. However, additional areas of contamination were also identified.

Soils with a permeability of 1×10^{-7} or less are typically suitable for liner material.

The soils with the highest levels of petroleum contamination, based on PID readings and visual observations, were located around the sump, beginning in the vicinity of the inlet flange on the west side of the vessel. Contamination extended downward to maximum depth of approximately 13 feet. As the sump removal continued, it was evident that other activities contributed to the observed contamination. Petroleum contaminated soils were observed immediately beneath the gravel within the tank secondary containment berm. In several areas, oily moss was observed near the surface. The gravels did not appear to be stained. Also the berms did not appear to be visually contaminated and the visually contaminated soils were beneath the berm, indicating that the berm was constructed (or replaced) following what may have been a surface spill contained within the tank secondary containment berm.

Petroleum contaminated soils were removed from the area around the sump and within the tank secondary containment berm as shown on **Figure 4**. A large portion of the soils were treated on-site by aeration and returned to the excavation. In addition, clean soils from the tank berms and clean soils that sloughed into the excavation and could not be segregated were used for fill. Approximately 29.36 tons (22 yards) of clean backfill were purchased from 3B Enterprises, LLC. See **Appendix H** for documentation.

It was determined that the sump was one source of contamination. The sump was removed and the piping to and from it made inoperable. The tanks and piping to the LACT Unit were also removed. This is suspected to be another source of contamination. All potential sources of contamination have been removed. Based on the soil sampling that was conducted in December 2008 by Fremont Environmental and the results of the excavations performed between July 29,

2009 and November 25, 2009 the identified petroleum contaminated soils were removed. These soils were either treated in place to COGCC standards and returned to the excavation or disposed at the Moffat County Landfill.

4.2 Groundwater

No additional groundwater characterization was performed during the sump removal. The previous report (Fremont Environmental, 2008) indicated that the groundwater flow direction was to the northeast. During this investigation, no additional groundwater wells were installed and no groundwater was encountered.

During field activities on July 29 – 31, 2009, water was observed around the sump on the south and east sides during excavation. At first it was thought it may be groundwater. After additional excavation, it was determined to be water trapped in the soils around the sump.

Upon completion of the activities on July 30, 2009 no groundwater had been encountered in the excavation. When the staff returned on the morning of July 31, 2009 there was water present in the lowest point of the excavation. The source of this water was not determined but it was not groundwater. The water could be removed and did not return. It had rained during the night and it was felt that it was precipitation that had collected in the excavation. No sheen was observed on the water.

Water was also observed in the excavation on August 25, 2009 (Photograph #63). This was also from precipitation.

During all of the soils removal activities described above, no groundwater was encountered, contrary to the previous findings. Petroleum contamination appeared to stop at approximately 7.5 – 12.5 feet below the ground surface. Based on the field observations, it does not appear that petroleum contamination migrated to the groundwater in the area where soils excavation occurred.

5 TANK DESCRIPTION

Prior to beginning removal of the sump, the contents of the tank were measured. There was approximately 4¾ inches of crude oil remaining in the bottom of the sump. See Photographs #6 – 7. Mr. Frank Archuleta of Plains Pipeline, L.P. said that the sump had been previously pumped with a vacuum truck to remove the remaining oil. He did not indicate how much oil was in the tank before it was emptied.

The sump, or tank, was a vertical vessel approximately 36 inches in diameter by 8 feet long. It was constructed of steel plate. It had one horizontal welded seam with a vertical welded seam in each section. Approximately 48 inches down from the top was a 3 inch inlet nozzle. The nozzle had a short piece of pipe with a welded steel flange. A reinforcing pad was installed on the vessel at the nozzle connection. There was no block valve or check valve on this piece of piping. This piping served as the inlet to the vessel. A drawing of the sump is included as **Figure 5**.

The top and bottom of the tank were constructed of 3/8 inch flat steel plate welded to the cylindrical body. The top contained a vent, discharge piping and a cleanout connection. The vessel was never under pressure.

The inlet piping was not under pressure. Hydrocarbons flowed into the vessel by gravity during product sampling or meter proving or calibration. However, the discharge piping was under pressure when the transfer pump was operating.

The vessel was primed with a red primer and then had a black asphaltic coating applied over the primer. According to Mr. Frank Archuleta, the tank was within the cathodic protection system although there were no direct connections to the system.

At one time it appeared that the tank was approximately 12 inches above grade based on the white paint and where the pipe protective coating stopped. When work began, the top was flush with or slightly below grade (see Photograph #4).

The piping had to be disconnected from the sump prior to removal. The four (4) bolts on the inlet piping flange were only finger tight. After cleaning the threads with a wire brush, the nuts could be removed by hand without wrenches. Water was observed coming from this general area during excavation. This loose flange appears to be the only location that could be a source of contamination from the sump. No liquids came from the pipe when the flange was disconnected. There did not appear to be any damage to the gasket or the sealing surfaces of the flanges. The lines were plugged or blinded after the sump was removed to assure that no hydrocarbons could enter the excavation.

Upon removal, the majority of the tank was covered with soil. The soils were removed with a hand scraper and the vessel was examined for leaks. A large amount of the asphaltic coating flaked off while the soils were being removed but most of the primer remained. The entire vessel was visually examined. There were no pits in the vessel. No pin holes or other signs of leaks or corrosion were observed. The welds around the top and bottom heads were in good condition. The welds around the inlet nozzle and the reinforcing pad were also in good condition. See Photographs #51 – 55 for the condition of the tank and appurtenances following removal.

The sump was stored on-site during the petroleum contaminated soils removal. On October 23, 2009 the sump or tank was picked up by Lyster Oil Company, Inc. for use at another facility. See **Appendix G** for the paperwork documenting the transaction.

6 CONTAMINATED SOILS STORAGE

A storage area for contaminated soils was constructed to the northwest of the facility. On July 29, 2009, a shallow bermed pit was constructed and then lined with pit liner to prevent possible contamination of the area. This area was full at the completion of the first excavation (see Photographs #47 – 48). On August 25, 2009 a second shallow bermed pit was constructed immediately north of the first storage area. This

pit was lined with 6 mil black plastic. It was nearly full at the end of the second excavation on August 25, 2009 (see Photographs #80 – 81). On September 15, 2009 a third shallow bermed pit was constructed immediately south of the first storage area. This pit was lined with 6 mil black plastic. It was completely filled after field activities on September 15, 2009. On September 16, 2009 a fourth bermed area was constructed immediately east of the other three storage areas. This area was lined with 6 mil black plastic. It was nearly full at the end of excavation activities (see Photographs #144 – 145). Soils that were excavated on October 12 – 14, 2009 and November 25, 2009 were transported directly to the Moffat County landfill. The locations of the four (4) constructed storage areas are shown on **Figure 2** and in Photographs #124 and #144 – 145.

Potentially contaminated soils were excavated, placed directly into the dump truck and transported to the storage area. The soils remained there until disposal acceptance was received as discussed in **Section 8** at which time it was transported to the Moffat County Regional Landfill. Because of other activities in the area, soils were removed on September 16, placed on plastic in the truck loading area. See Photograph #120. These soils were then loaded into the dump truck and transported to the disposal area described above. The plastic liner was also removed and placed in the soils storage area for future disposal in the Moffat County Regional Landfill.

7 WASTE CHARACTERIZATION

The wastes generated during the sump removal were petroleum contaminated soils. The petroleum was a mix of both crude oil and condensate that were unloaded into the two (2) 400 bbl tanks and transferred through the Taylor LACT Unit to the 10,000 bbl tank. The soils were mostly gray or brown plastic clay.

The laboratory reports in **Appendix E** contain printouts of the Gas Chromatography-Mass Spectrometry (GCMS) results for each sample analyzed. **Table 4** shows the results of each analysis compared to the COGCC defined limits.

8 PETROLEUM CONTAMINATED SOILS DISPOSAL

Visually contaminated soils were stockpiled on the site in lined storage areas as described in Section 6 above. At the completion of the first soil excavation on July 29 – 31, 2009 a composite soil sample was collected using the following procedure:

A composite sample was collected from eight (8) locations in the contaminated soil storage pile. Samples were randomly collected from the top and side of the pile. At each sample location a pit or hole approximately 12 – 18 inches deep was dug with a shovel. Then two (2) spoonfuls of soil were removed from the side and bottom of the pit and placed into a 3 quart mixing bowl. The soils were mixed with the spoon between each location. After all of the samples were collected the sample was mixed again and placed into the laboratory provided sample containers. Approximately 2 quarts of soil were collected for the composite sample. The spoon was wiped clean of residual soils between each

sampling location. No photographs were taken of the contaminated soil stock pile sampling locations.

The sample, IG-5, was placed on ice in a cooler provided by the laboratory and hand delivered to ELI in Casper on August 3, 2009. Samples were refrigerated from the time they were collected until they were delivered to the laboratory. No custody seals were used since the soil samples were in the sampler's possession the entire time.

The results of the composite soils sampling are summarized in **Table 4**, attached. The laboratory results, including the chain of custody forms, are included in **Appendix E**.

Upon receipt of the initial sample results, a letter and the Moffat County Regional Landfill – Waste Characterization Form were prepared and submitted to Mr. Bill Mack, Landfill Manager, requesting authorization to dispose of the petroleum contaminated soils. A copy of the correspondence is included in **Appendix F**.

Mr. Gary Webber with NWCC, Inc. (NWCC), representing the Moffat County Regional Landfill requested additional analysis for paint filter test, ignitability and total metals for the eight (8) Resource Conservation and Recovery Act (RCRA) metals. The results of the additional analyses are included in **Appendix E**. The results of all of the soils analyses were also emailed to him. He also requested a copy of Energy Laboratories, Inc.'s National Environmental Laboratory Accreditation Program (NELAP) certification which is available to view at www.energylab.com/CertsFormsList.asp?branch=Casper. This certification was provided to him in PDF format in an email. A copy of the correspondence is included in **Appendix F**.

On September 28, 2009, a letter was received from NWCC regarding the waste characterization and disposal acceptance of the petroleum contaminated soils from the Iles Grove Station at the Moffat County Regional Landfill. A copy is included in **Appendix F**. A Waste Manifest form was completed and sent to Jim Ayres Enterprises, Inc. for use in transporting the wastes to the landfill. A copy is also included in **Appendix F**. A letter dated October 2, 2009 was received from the Moffat County landfill formally accepting the wastes based on the activities and documentation described above. This letter is also included in **Appendix F**.

Approximately 53.19 tons, or 40 cubic yards, of petroleum contaminated soils were disposed at the Moffat County Regional Landfill on October 13 and 14, 2009. Documentation showing the soils disposal is included in **Appendix F**. These soils included the most highly contaminated soils from the July 29 – 31, 2009 sump removal activities and the soils that were removed on October 12 – 16, 2009 and November 25, 2009 and transported directly to the Moffat County Regional Landfill (verbal communications, Matthew Wold, November 26, 2009).

This tonnage also included all of the pit liner and plastic material that was used as a liner while the soils were stockpiled on the site.

On November 25, 2009 an additional 8.31 tons of petroleum contaminated soils were taken to the Moffat County Regional Landfill. See **Appendix F** for documentation.

The remainder of the petroleum contaminated soils that were removed were aerated with a backhoe and then placed back into the excavation. Two random soil samples were collected from a depth of approximately 4 feet for laboratory analyses. The laboratory analyses confirmed that the soils treated on-site met the COGCC requirement of 500 mg/kg for Total Petroleum Hydrocarbons (TPH) (See **Table 4**).

The site at the completion of the remediation can be seen in Photograph #149.

9 CONCLUSIONS/SUMMARY

1. During the removal of the sump, a loose flange was found on the inlet piping to the sump on the west side approximately 4 feet below grade. This is believed to be the source for a portion of the observed petroleum contamination.
2. At the same time, shallower petroleum contaminated soils were observed in and around the sump. These were observed from the surface downward to a depth of approximately 4 feet. This could be the result of overfilling the sump during meter proving or from spills at the two (2) 400 bbl crude oil storage tanks. It was not possible to determine the exact source of this contamination. The observed area of shallow contamination implies a larger spill than would result from the sump being overfilled. The contaminated area included most of the area inside the berms that contained the two 400-bbl crude oil storage tanks.
3. During the excavation of the soils, a truck driver indicated that numerous spills had occurred during truck unloading operations. According to the driver, in 2009 there were at least four such incidents. This type of spillage over the years could result in the petroleum contaminated soils and gravels observed in the drainage ditch adjacent to the truck unloading facilities on the east side of the two (2) 400 bbl crude oil storage tanks.
4. A total of approximately 53.19 tons, or 40 cubic yards, of petroleum contaminated soils were transported to the Moffat County Regional Landfill for disposal. Soils were previously analyzed and a letter authorizing disposal at the landfill was received. A manifest was prepared for the soils.
5. The remaining petroleum contaminated soils that were not disposed at the Moffat County Regional Landfill were treated on-site by aeration with a backhoe and placed back into the excavation. Two random samples were collected and analyzed to confirm these soils met the COGCC regulatory requirements for soils outlined in Table 910.
6. Approximately 29.36 tons (22 cubic yards) of clean fill were purchased to replace the soils disposed at the Moffat County Regional Landfill. Clean berms were also used as backfill.

7. No groundwater was encountered during the soils removal.

The potential sources of contamination, the sump and the two (2) 400 bbl crude oil storage tanks, were removed. Any remaining petroleum contaminated soils that may have been missed will continue to treat themselves in place. The remaining soils that were removed during the remediation process were treated on-site by aeration with a backhoe until no odor was detected and then placed back into the excavation. No soil amendments were used to aid the treatment process.

10 REFERENCES

Fremont Environmental Inc. (Fremont Environmental, 2008). December 30, 2008. Site Investigation Report, Wold/Lario Iles Grove Station.

United States Department of the Interior, Bureau of Reclamation. Design of Small Dams, Third Edition. 1987.

Colorado Oil and Gas Conservation Commission (COGCC, 2009). Retrieved from a search of <http://cogcc.state.co.us> 900 Series Exploration and Production Waste Management Amended Rules Table 910.

Matthew Wold. 2009. Personal communications. Wold Oil Properties, Inc. on-site representative. Mineral Resource Center, 139 West Second Street, Suite 200, Casper, Wyoming 82601

TABLES

- Table 1. On-Site Company Personnel
- Table 2. PID Readings
- Table 3. Tank Foundation Test Pit Results
- Table 4. Summary of Sample Results

Table 1. On-site Company Personnel

Wold Oil Properties, Inc.
 Iles Grove Station

Company	Name/Title*
July 29 - 31, 2009	
Wold Oil Properties, Inc.	Matthew Wold, Company Representative
Jim Ayres Enterprises, Inc.	Jim Ayres, Backhoe Operator/Owner
Jim Ayres Enterprises, Inc.	Don Smith, Laborer
O&G Environmental Consulting, LLC	Thomas Jaap, Engineer
Plains Pipeline, L.P.	Frank Archuleta, Measurement Tech 2**
Taylor	Tim Foos, Team Leader**
August 25, 2009	
Wold Oil Properties, Inc.	Matthew Wold, Company Representative
Jim Ayres Enterprises, Inc.	Jim Ayres, Backhoe Operator/Owner
Jim Ayres Enterprises, Inc.	Don Smith, Laborer
O&G Environmental Consulting, LLC	Thomas Jaap, Engineer
September 11, 2009	
Wold Oil Properties, Inc.	Matthew Wold, Company Representative
Thomas J. Jaap	Thomas Jaap, Engineer
Taylor	Jay R. Stuart, Company Representative
Kawcak Inc.	Shane Kawcak, Owner
September 15 - 17, 2009	
Wold Oil Properties, Inc.	Matthew Wold, Company Representative
Jim Ayres Enterprises, Inc.	Jim Ayres, Backhoe Operator/Owner
Thomas J. Jaap	Thomas Jaap, Engineer
October 12 - 16, 2009	
Wold Oil Properties, Inc.	Matthew Wold, Company Representative
Jim Ayres Enterprises, Inc.	Jim Ayres, Backhoe Operator/Owner
November 25, 2009	
Wold Oil Properties, Inc.	Matthew Wold, Company Representative
Jim Ayres Enterprises, Inc.	Jim Ayres, Backhoe Operator/Owner

* Contact information for each of the above is included in **Appendix B**.

** These individuals came to the site to observe the excavation and were there only for a short period of time.

Table 2. PID Readings
Wold Oil Properties, Inc.
Iles Grove Station

Sample Number	Date	Soil	PID Reading (PPM)	Comments
July 29 - 31, 2009				
Background	7/29/2009	NA	0 – 5	Measured periodically during the day
1	7/29/2009	Stained clay	1200	45" BG South side of tank – strong odor, slightly discolored
2	7/29/2009	Gray clay	121	Slight odor, no discoloration
3	7/29/2009	Gray clay	1100	6" BG along side of sump
4	7/29/2009	Gray clay	218	36" BG Southeast side of tank
5	7/29/2009	Black clay	537	8' BG Southwest side of tank
6	7/30/2009	Gray sandy clay	300	18" BG near Taylor LACT unit
7	7/30/2009	Gray clay	90	4' BG, below black soils
August 25, 2009				
Background	8/25/2009	NA	0 – 0.6	Measured prior to each sample
1	8/25/2009	Black clay	702	Bank under sump inlet piping
2	8/25/2009	Brown clay	5.3	Bottom of pit below black streak, west side
3	8/25/2009	Brown clay	5.6	Bottom of pit below black streak, west side
4	8/25/2009	Gray – brown clay	1226	Black streak 18" below sump inlet piping
5	8/25/2009	Gray – brown clay	1382	North sidewall 6" below sump inlet piping
September 15 - 17, 2009				
Background	9/15/2009	NA	0 – 1.1	Measured prior to each sample
1	9/15/2009	Black clay	125	East side of excavation, approximately 4' deep
2	9/15/2009	Black clay	1775	East side of excavation, approximately 8' deep
3	9/15/2009	Black clay	1320	At bottom of excavation approximately 10' below top of berm
4	9/15/2009	Gray clay	1332	North east sidewall approximately 8' deep
5	9/15/2009	Gray clay	2935	North of Taylor LACT unit 5' deep
6	9/15/2009	Gray clay	860	Near electrical pedestal south of Tank 3333 location, 5' deep
7	9/15/2009	Black clay	820 – 40	Immediately below black streak 3' below grade
8	9/16/2009	Gray clay	235	North side of excavation at approximately truck unloading area grade
9	9/16/2009	Gray clay	248	South side of trench 18" below black streak
10	9/16/2009	Gray clay	118	West side of excavation below black streak below east tank berm

Table 3. Tank Foundation Test Pit Results

Wold Oil Properties, Inc.

Iles Grove Station

Pit Number	Description
Test Pit #1	This pit was on the east side of the tanks, approximately half way between the two tanks. The first 4" – 6" of surface spoils were clean. Beneath that were black soils with a strong hydrocarbon odor. The excavation contained peat moss below the clean surface soils.
Test Pit #2	This pit was dug at the northeast corner inside the berm. The upper 12" were brown soils and peat moss. Beneath that was gray soil with some hydrocarbon odor.
Test Pit #3	This pit was dug at the northwest corner of the facility, inside the berm. This pit was brown soils down to approximately 30".
Test Pit #4	This pit was on the west side of the south tank, Tank 3333 between the tank foundation and the berm. Some peat moss was encountered near the surface. The soils were gray with a slight hydrocarbon odor.

**Table 4 - Iles Grove Station
Sampling Summary**

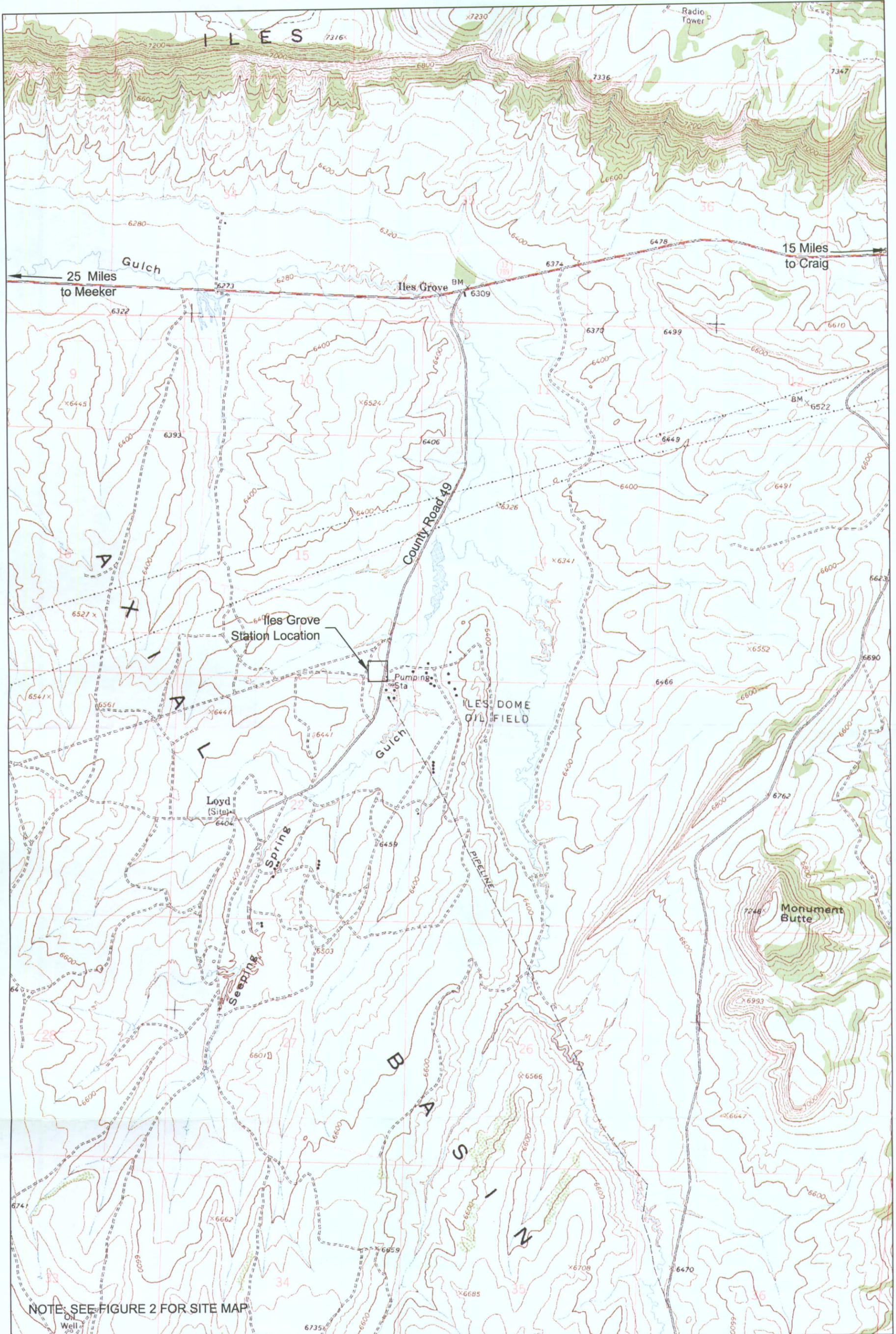
LOCATION/ SAMPLE DATE	TPH - DRO	TPH - GRO	TEH	TPH	Benzene	Ethyl- benzene	Total Xylenes	Toluene
COGCC Regulatory Limits				500	0.17	100	175	85
July 31, 2009								
IG-1	579	170	716	886	0.080	0.87	5.48	ND
IG-2	ND	ND	ND	ND	ND	ND	ND	ND
IG-3	428	300	543	843	0.70	1.3	6.6	0.10
IG-4	1100	850	1360	2210	0.99	2.6	21	1.1
IG-5 (Soils Stockpile for Disposal)	1970	1100	NA	NA	3.9	3.1	22	5.7
August 25, 2009								
No samples analyzed								
September 11, 2009 (Tank removal)								
No samples analyzed								
September 16, 2009								
IG-6	ND	ND	ND	ND	ND	ND	ND	ND
IG-7	496	122	612	734	ND	ND	1.07	ND
IG-8	31	509	57	566	3.5	0.80	4.0	ND
October 23, 2009 (For October 12-16, 2009 soil removal activities)								
N 3'	82	27	104	131	0.40	0.23	0.57	ND
N 7' 6"	296	236	393	629	1.3	1.1	3.64	ND
NE Top 3'	156	291	221	512	2.0	0.65	6.2	0.59
NE 7' 6"	437	640	590	1230	3.7	2.6	10.6	ND
NW 3' 6"	443	30	565	595	0.13	0.19	0.54	ND
NW 7' 6"	153	19	194	213	0.15	0.19	0.64	ND
November 25, 2009								
Random Hole #1 East of Pipeline Marker	ND	ND	12	12	ND	ND	ND	ND
Random Hole #2 NW of Pipe Marker	ND	ND	18	18	ND	ND	ND	ND
New Ditch NW Corner 4'	72	138	13	151	0.04	ND	0.05	ND
New Ditch North-Middle 4'	ND	ND	13	ND	ND	ND	ND	ND
New Ditch NE Corner 4'	28	ND	59	59	ND	ND	ND	ND

NOTE:

All units are in mg/kg
 TPH = total volatile and extractable petroleum hydrocarbons
 NA = Not Analyzed
 Red = COGCC exceedances

FIGURES

- Figure 1. Location Map
- Figure 2. Site Map
- Figure 3. Soil Chemistry
- Figure 4. Sample Location and Excavation Extents
- Figure 5. Sump Drawing
- Figure 6. October 12 – 16, 2009 Sample Locations
- Figure 7. November 25, 2009 Sample Locations



REFERENCE: USGS 7.5 MINUTE QUADRANGLE MAP MONUMENT BUTTE, COLO.

SITE LOCATION MAP
ILES GROVE STATION
SESE SECTION 15
TOWNSHIP 4 NORTH, RANGE 92 WEST



ENERGY ENVIRONMENTAL CONSULTING, LLC

350 WEST A STREET, SUITE 203, CASPER, WY 82601 - (307) 234-3395

COMPANY:

World Oil Properties, Inc.
 139 West 2nd Street, Suite 200
 Casper, Wyoming 82601

ILES GROVE STATION
 REMEDIATION
 SITE LOCATION MAP
 MOFFAT COUNTY, COLORADO

DRAWN BY

DRS

SIZE

B

JOB NO.

100-03

DWG NO.

FIGURE 1

DATE

September 30, 2009

SCALE

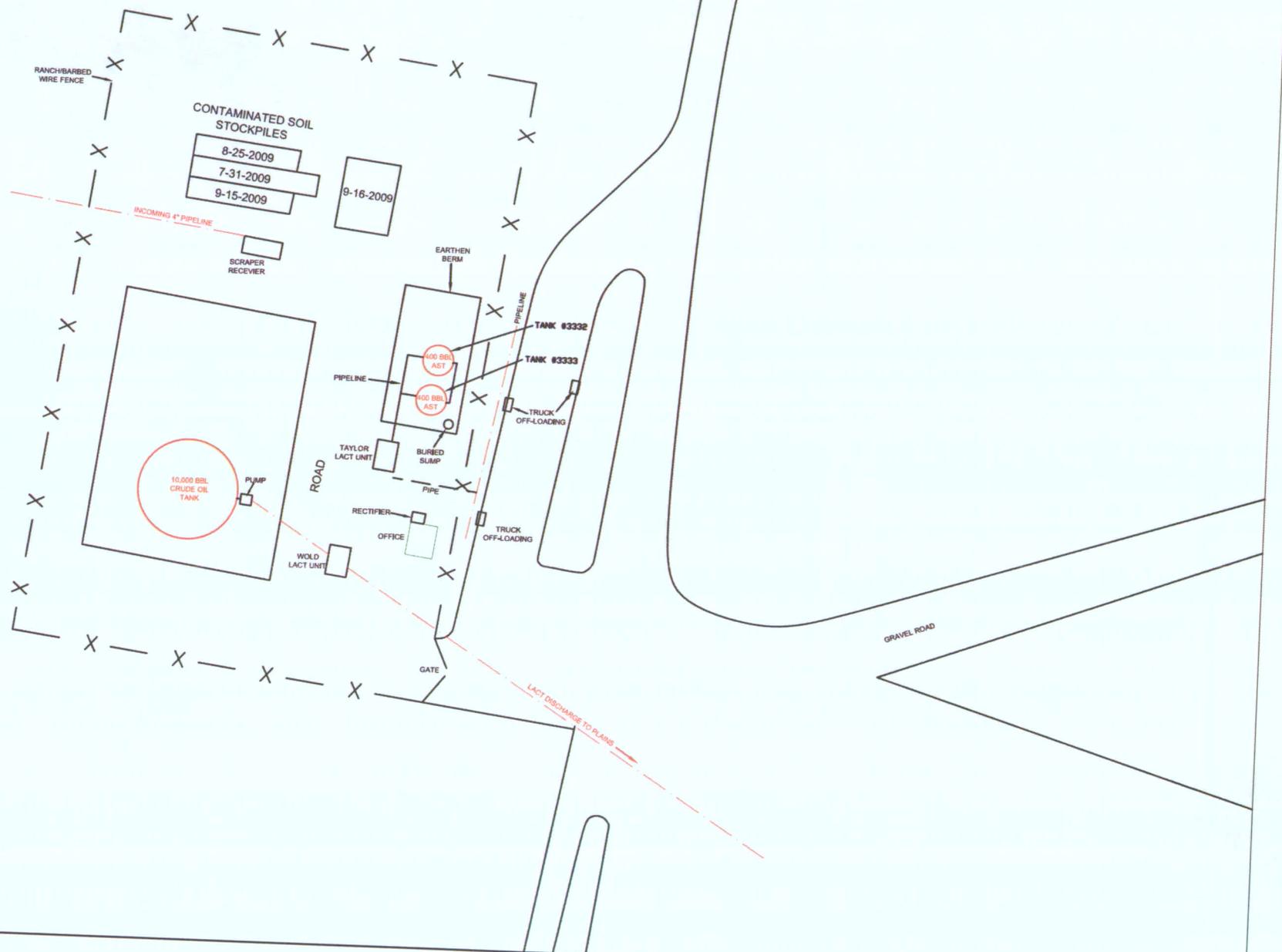
1" = 2000'

SHEET

1 of 1

REV

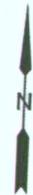
0



LEGEND

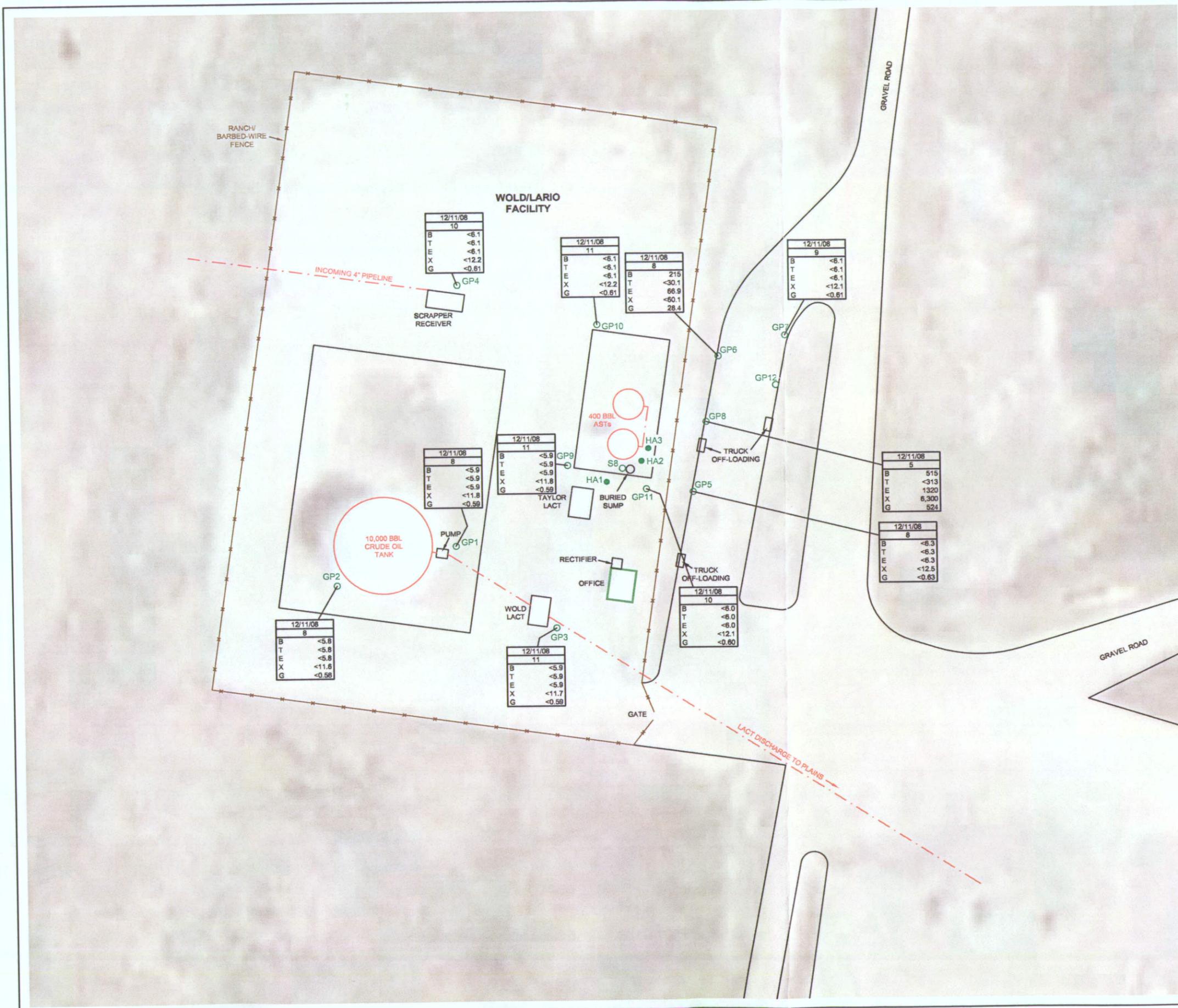
- BUILDING
- ABOVE GROUND STORAGE TANK
- FENCELINE
- PIPELINE

**SITE MAP (PRE-EXCAVATION)
ILES GROVE STATION
SESE SECTION 15
TOWNSHIP 4 NORTH, RANGE 92 WEST**



ENERGY ENVIRONMENTAL CONSULTING, LLC

350 WEST A STREET, SUITE 203, CASPER, WY 82601 - (307) 234-3395			
COMPANY: Wold Oil Properties, Inc. 139 West 2nd Street, Suite 200 Casper, Wyoming 82601		ILES GROVE STATION REMEDIAION SITE MAP MOFFAT COUNTY, COLORADO	
DRAWN BY DRS	SIZE A	JOB NO. 100-03	DWG NO. FIGURE 2
DATE September 30, 2009	SCALE 1" = 2000'	SHEET 1 of 1	REV 0



LEGEND

- SOIL BORING
- SOIL PROBE
- BUILDING
- ABOVE GROUND STORAGE TANK
- FENCE LINE
- - - PIPELINE
- · - · - INTERMITTENT STREAM

12/13/08		DATE SAMPLED
B	8	SAMPLE DEPTH (ft)
T		BENZENE (ug/kg)
E		TOLUENE (ug/kg)
X		ETHYLBENZENE (ug/kg)
G		TOTAL XYLENES (ug/kg)
		TPH-GRO (mg/kg)

NA NOT ANALYZED

12/11/08		10
B		<6.1
T		<6.1
E		<6.1
X		<12.2
G		<0.61

12/11/08		11
B		<6.1
T		<6.1
E		<6.1
X		<12.2
G		<0.61

12/11/08		8
B		215
T		<30.1
E		66.9
X		<60.1
G		28.4

12/11/08		9
B		<6.1
T		<6.1
E		<6.1
X		<12.1
G		<0.61

12/11/08		8
B		<5.9
T		<5.9
E		<5.9
X		<11.8
G		<0.59

12/11/08		11
B		<5.9
T		<5.9
E		<5.9
X		<11.8
G		<0.59

12/11/08		5
B		515
T		<313
E		1320
X		6,300
G		524

12/11/08		8
B		<6.3
T		<6.3
E		<6.3
X		<12.5
G		<0.63

12/11/08		8
B		<5.8
T		<5.8
E		<5.8
X		<11.6
G		<0.58

12/11/08		11
B		<5.9
T		<5.9
E		<5.9
X		<11.7
G		<0.59

12/11/08		10
B		<6.0
T		<6.0
E		<6.0
X		<12.1
G		<0.60

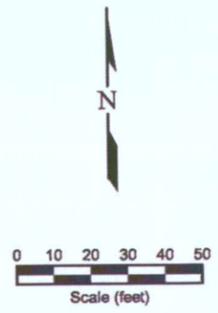
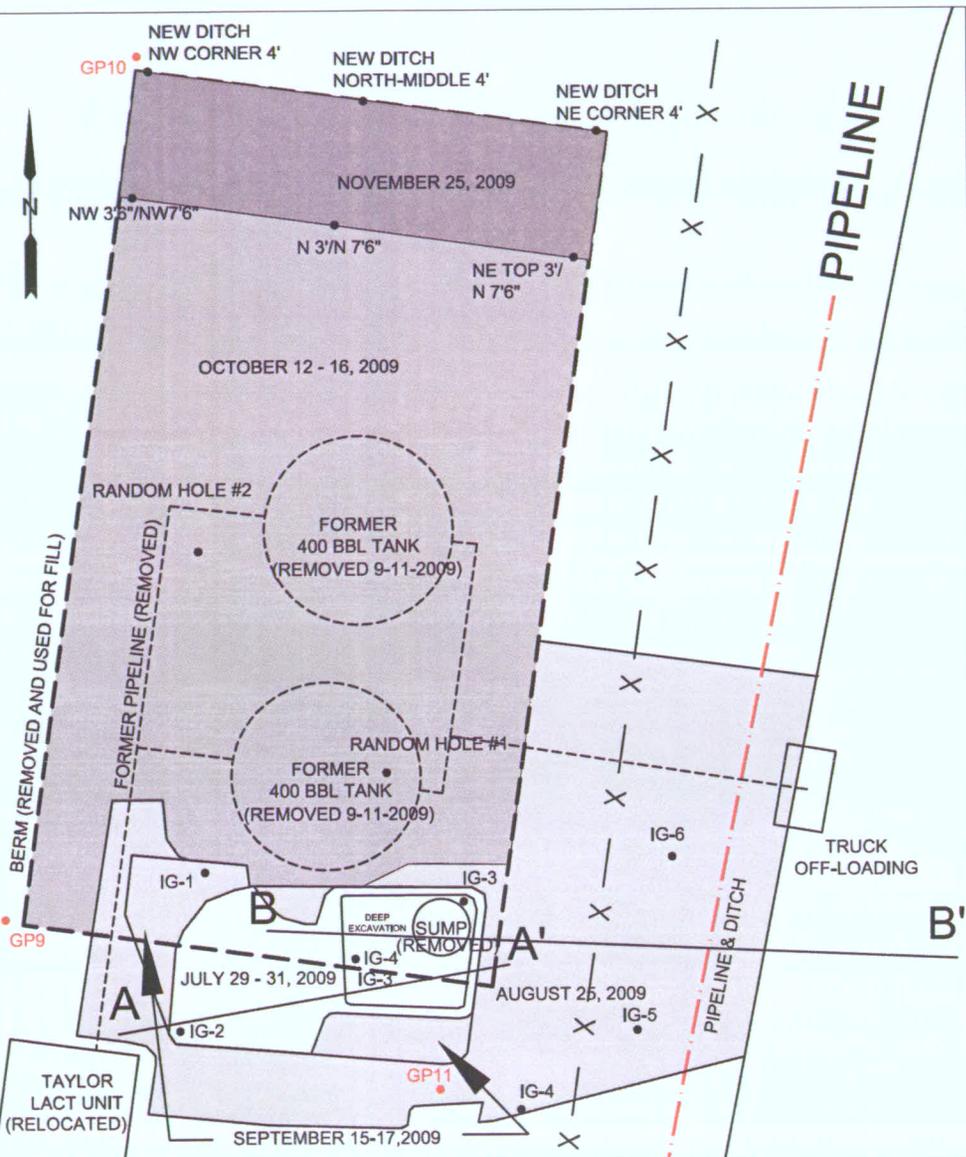


Figure 3
SOIL CHEMISTRY

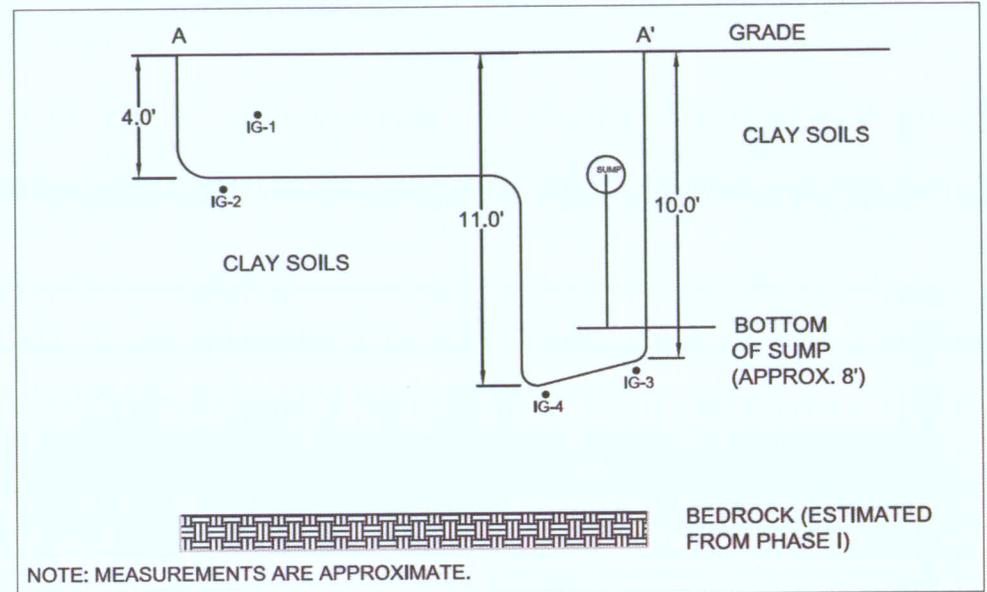
ILES GROVE STATION
TEPPCO Crude Oil
SE SE Sec 15, T4N R92W - Moffat County, Colorado

Project No. C008-020	Prepared by	Drawn by JMA
Date 12/29/08	Reviewed by	Filename 08020R



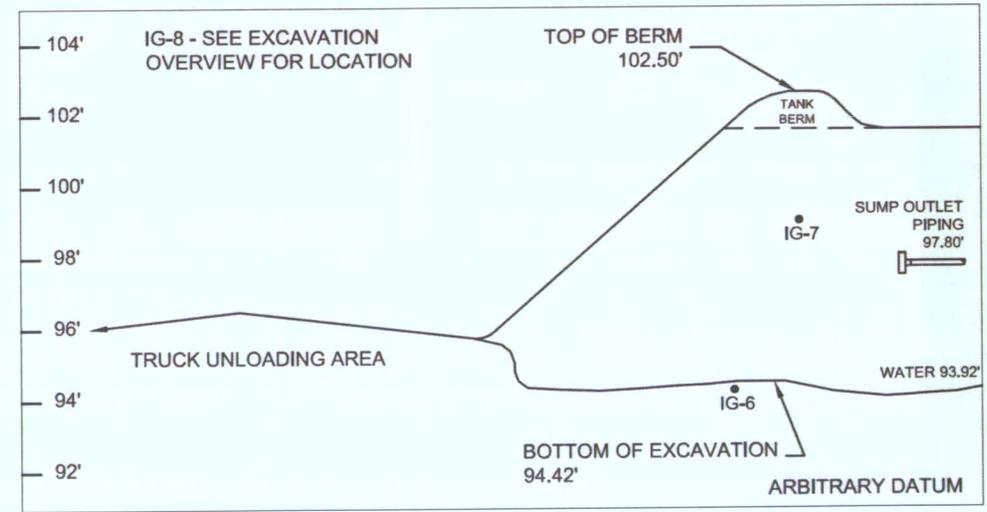


EXCAVATION OVERVIEW AND SAMPLE LOCATIONS



NOTE: MEASUREMENTS ARE APPROXIMATE.

A - A' CROSS SECTION JULY 31, 2009



SCALE: VERTICAL 1" = 2'
HORIZONTAL NONE

B - B' CROSS SECTION SEPTEMBER 17, 2009

SEE FIGURE 3 FOR PREVIOUS SOILS SAMPLING RESULTS.

LEGEND

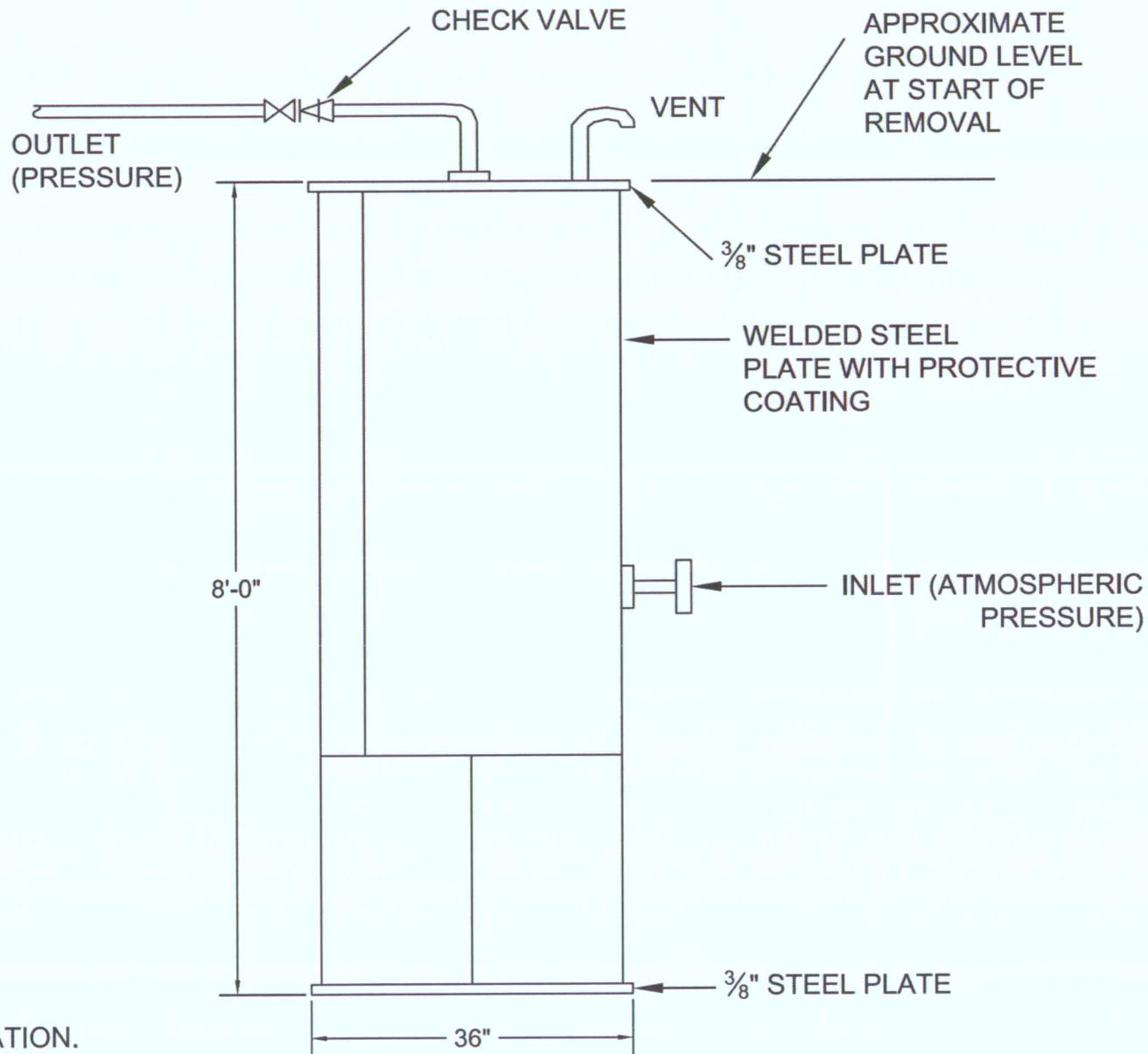
- NOV. 25, 2009 EXCAVATION
- OCT. 12-16, 2009 EXCAVATION
- SEPT. 15-17, 2009 EXCAVATION
- AUG. 25, 2009 EXCAVATION
- JULY 29-31, 2009 EXCAVATION
- FENCELINE
- SOIL SAMPLING LOCATION
- PIPELINE
- PREVIOUS SOIL SAMPLING LOCATION

**SAMPLE LOCATIONS AND EXCAVATION EXTENTS
ILES GROVE STATION
SESE SECTION 15
TOWNSHIP 4 NORTH, RANGE 92 WEST**

ENERGY ENVIRONMENTAL CONSULTING, LLC

350 WEST A STREET, SUITE 203, CASPER, WY 82601 - (307) 234-3395

COMPANY:		ILES GROVE STATION REMEDATION SITE LOCATION MAP MOFFAT COUNTY, COLORADO	
Wold Oil Properties, Inc. 139 West 2nd Street, Suite 200 Casper, Wyoming 82601			
DESIGNED BY	SIZE	JOB NO.	DWG NO.
DRS	B	100-03	FIGURE 4
DATE	SCALE	SHEET	REV
DECEMBER 15, 2009	Not to scale	1 of 1	0



SEE FIGURE 2 FOR LOCATION.
SEE PHOTOGRAPHS #51 - 55 APPENDIX D.

**SUMP DIAGRAM
ILES GROVE STATION
SESE SECTION 15
TOWNSHIP 4 NORTH, RANGE 92 WEST**

ENERGY ENVIRONMENTAL CONSULTING, LLC

350 WEST A STREET, SUITE 203, CASPER, WY 82601 - (307) 234-3395

COMPANY:

Wold Oil Properties, Inc.
139 West 2nd Street, Suite 200
Casper, Wyoming 82601

ILES GROVE STATION
REMEDIAION
SUMP DIAGRAM
MOFFAT COUNTY, COLORADO

DRAWN BY DRS	SIZE A	JOB NO. 100-03	CHG NO. FIGURE 5	REV 0
DATE October 2, 2009	SCALE Not to scale	SHEET 1 of 1		



EXCAVATION OVERVIEW AND SAMPLE LOCATIONS

SEE TABLE 4 FOR SAMPLING RESULTS.

LEGEND

- SAMPLING LOCATION AND IDENTIFICATION
- EXTENT OF EXCAVATION

SAMPLE LOCATIONS AND EXCAVATION EXTENTS
OCTOBER 23, 2009
ILES GROVE STATION
SESE SECTION 15
TOWNSHIP 4 NORTH, RANGE 92 WEST

ENERGY ENVIRONMENTAL CONSULTING, LLC

350 WEST A STREET, SUITE 203, CASPER, WY 82601 - (307) 234-3395

COMPANY: Wold Oil Properties, Inc. 139 West 2nd Street, Suite 200 Casper, Wyoming 82601		ILES GROVE STATION REMEDIAION SAMPLING LOCATIONS OCT. 23, 2009 MOFFAT COUNTY, COLORADO	
DRAWN BY TJJ	SIZE A	JOB NO. 100-03	DWG NO. FIGURE 6
DATE December 12, 2009	SCALE Not to scale	SHEET 1 of 1	

REV
0



EXCAVATION OVERVIEW AND SAMPLE LOCATIONS

SEE TABLE 4 FOR SAMPLING RESULTS.

LEGEND

- SAMPLING LOCATION AND IDENTIFICATION
- EXTENT OF EXCAVATION

SAMPLE LOCATIONS AND EXCAVATION EXTENTS
NOVEMBER 25, 2009
ILES GROVE STATION
SESE SECTION 15
TOWNSHIP 4 NORTH, RANGE 92 WEST

ENERGY ENVIRONMENTAL CONSULTING, LLC

350 WEST A STREET, SUITE 203, CASPER, WY 82601 - (307) 234-3395

COMPANY:

Wold Oil Properties, Inc.
 139 West 2nd Street, Suite 200
 Casper, Wyoming 82601

ILES GROVE STATION
 REMEDIATION
 SAMPLING LOCATIONS NOV. 25, 2009
 MOFFAT COUNTY, COLORADO

DRAWN BY TJJ	SIZE A	JOB NO. 100-03	DWG NO. FIGURE 7	REV 0
DATE December 12, 2009	SCALE Not to scale	SHEET 1 of 1		

APPENDIX A

Spill Report

FORM

19

Rev 6/99

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



FOR OGCC USE ONLY

SPILL/RELEASE REPORT

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

Spill report taken by:

FACILITY ID:

OPERATOR INFORMATION

Name of Operator: <u>Wold Oil Properties, Inc.</u> OGCC Operator No: <u>100116</u>	Phone Numbers
Address: <u>139 West 2nd Street, Suite 200</u>	No: <u>307 265-7252</u>
City: <u>Casper</u> State: <u>WY</u> Zip: <u>82601</u>	Fax: <u>307 265-7336</u>
Contact Person: <u>Kevin P. Meenan, Land Manager</u>	E-Mail: <u>kmeenan@woldoil.com</u>

DESCRIPTION OF SPILL OR RELEASE

Date of Incident: <u>not certain -seepage</u> Facility Name & No.: <u>Iles Station Tank Facility</u>	County: <u>Moffatt</u>
Type of Facility (well, tank battery, flow line, pit): <u>Storage Tank and Loading Facility</u>	QtrQtr: <u>SE/4</u> Section: <u>15</u>
Well Name and Number: <u>NA</u>	Township: <u>4N</u> Range: <u>92W</u>
API Number: <u>NA</u>	Meridian: <u>6th</u>
Specify volume spilled and recovered (in bbls) for the following materials:	
Oil spilled: <u>unknown</u> Oil recov'd: <u>na</u> Water spilled: <u>na</u> Water recov'd: <u>na</u> Other spilled: <u>na</u> Other recov'd: <u>na</u>	
Ground Water impacted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Surface Water impacted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Contained within berm? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Area and vertical extent of spill: <u>to be determined</u> <u>x</u>	
Current land use: <u>Tank Facility</u> Weather conditions: <u>Cold, typical winter conditions</u>	
Soil/geology description: <u>Gravel/shale/sand fill</u>	
IF LESS THAN A MILE, report distance IN FEET to nearest.... Surface water: <u>@2,500 ft</u> wetlands: <u>@2,500 ft</u> buildings: <u>na</u>	
Livestock: <u>na</u> water wells: <u>na</u> Depth to shallowest ground water: <u>unknown</u>	
Cause of spill (e.g., equipment failure, human error, etc.): <u>apparent leak from liquid trap/sump</u> Detailed description of the spill/release incident:	
During due diligence environmental testing for pending sale of facility, underground seepage detected from apparent leak, not visible from the surface, around the liquid trap/sump used for oil testing samples overage. Wold notified of discharge/spill details on 12/19/08.	

CORRECTIVE ACTION

Describe immediate response (how stopped, contained and recovered):	Liquid trap/sump no longer being used. Still determining the extent of discharge contamination.
Describe any emergency pits constructed:	NA
How was the extent of contamination determined:	Apparently due diligence consultant drilled sample holes to establish perimeter and depth. Operator is making arrangements to determine the extent of contamination.
Further remediation activities proposed (attach separate sheet if needed):	Once extent of contamination is determined, then contaminated soil will be removed or other appropriate remediation steps taken.
Describe measures taken to prevent problem from reoccurring:	Liquid trap/sump will be replaced or removed.

OTHER NOTIFICATIONS

List the parties and agencies notified (County, BLM, EPA, DOT, Local Emergency Planning Coordinator or other).

Date	Agency	Contact	Phone	Response

Spill/Release Tracking No: _____

APPENDIX B

Contact Information

General Excavation
Water - Septic
Residential
Commercial
Dump Truck
Dozer - Backhoe

Jim Ayres



ENTERPRISES, INC.

Pasture Reseeding
Custom Agriculture
Reclamation
Brush Hog
Snow Plowing
Road Construction

(970) 824-4854 or (970) 620-1285

2236 CR 30 • Craig, CO 81625
Insured



PLAINS
PIPELINE, L.P.

Frank Archuleta
Measurement Tech 2

1260 S. Ranney (81626)
P.O. Box 1122
Craig, Colorado 81625

Phone: 970-824-4131
Fax: 970-824-9614
Cellular: 970-326-7122
Pipeline Emergency:
866-800-7677
faarchuleta@paalp.com

Matthew Wold

307-262-2695

mattpwold@gmail.com

 **TAYLOR**

Tim Foos
Team Leader

P.O. Box 21446
Cheyenne, Wyoming 82003

Office 307/637-5604 Cell 970/301-2933
Fax 307/637-6904 timf@taylorgasliquids.com



Thomas J. Jaap, P.E.
Casper Operations
Manager

350 West A, Suite 201
Casper, Wyoming 82601

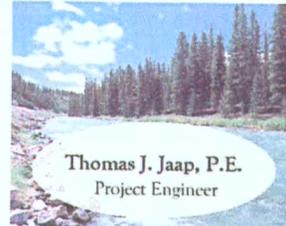
tel 307-234-3395
fax 307-234-3396
cell 307-267-6062
tjaap@ogenvironmental.com

www.ogenvironmental.com

ENERGY ENVIRONMENTAL CONSULTING, LLC

350 West A Street
Suite 203
Casper, WY 82601

Phone: 307-234-3395
Fax: 307-234-3396
Cell: 307-267-6062
tjaap@bresnan.net



NOTE:

Thomas Jaap was employed by O&G Environmental Consulting, LLC. (O&G) when this project began. On September 2, 2009 O&G went out of business. The work was completed by Energy Environmental Consulting, LLC of which Thomas Jaap is a Principal/Project Engineer.



Contact Info

KAWCAK INC.
24 HOUR OILFIELD SERVICE

Kawcak Inc.
P.O. Box 1405 | Craig, CO 81626
24-Hour Office: (970) 824-9350
Fax: (970) 824-6309 Cell: (970) 326-8758
kawcakinc@msn.com

APPENDIX C

PID Calibration Records



Calibrated at Geotech's Colorado service center.

2650 East 40th Avenue

Denver, CO 80205

(800) 833-7958

Fax: (303) 322-7242

Rae 2000 Calibration Certificate

Asset ID 1040
Serial Number 110-009387
Calibration Date Thursday, July 23, 2009

- Cleaned PID and Case
- Visually inspect for damage and missing parts.
- Manual is in case.
- Pid is in plastic bag
- Firmware Test
- Inventory Complete?

Lamp Type

10.6eV

11.7eV

Raw Readings

160	Raw Zero 10A (130-240)	Pass
878	Raw 100ppm 10A	Pass
718	Delta >= 150	Pass

033318	Lamp Serial Number:	
5.3	Battery voltage >=5.1V	Pass
500	Pump Flow >=450mL/min	Pass

Calibration

	Calibration gas	Calibration Value	Actual Reading	Gas Lot #	Variance +/- 2%	
Zero	Nitrogen	0	0		0.00%	Pass
Span	Isobutylene	100	99.8	LTF029MMCM	0.20%	Pass

Geotech Environmental Equipment, Inc. takes pride in ensuring this instrument is tested to function as specified by the manufacturer and was calibrated in accordance to manufacturer specifications. All calibration standards used are NIST traceable. With the provided lot numbers we can provide NIST documents on request. Call us at (800) 833-7958 and we will be glad to help.

Technician: Bryan Feack

Signature:

Rental Order Customer Copy

OrderNum	Customer #	Customer Name
00292050	000000060479	O & G ENVIRONMENTAL CONSULTING, LLC.

ShipDate	RentalID	UnitNumber	Asset Description
7/27/2009	R8200001	1040	Rae MiniRae 2000 10.6eV

Cal Summary: Batt: 5.3V, Pump: 500cc, Cal: 0/99.8ppm, 10.6

7/27/2009	R8600006	1980	ML-1M Magnetic Locator
-----------	----------	------	------------------------

Cal Summary: Cleaned and in proper operation

Rental Order Customer Copy

OrderNum	Customer #	Customer Name
00293424	00000060479	O & G ENVIRONMENTAL CONSULTING, LLC.

ShipDat	RentalID	UnitNumber	Asset Description
8/19/2009	R8200001	954	Rae MiniRae 2000 10.6eV

Cal Summary: Batt: 5.4V, Pump: 475cc, Cal: 0/100ppm, 10.6

Rental Order Customer Copy

OrderNum	Customer #	Customer Name
00294726	00006602691	JAAP, TOM

ShipDate	RentalID	UnitNumber	Asset Description
9/10/2009	R8200001	545	Rae MiniRae 2000 10.6eV

Cal Summary: Batt: 5.2V, Pump: 475cc, Cal: 0/101ppm, 10.6

APPENDIX D

Photographs

July 29 – 31, 2009 (Photographs #1 – 62)

August 25, 2009 (Photographs #63 – 82)

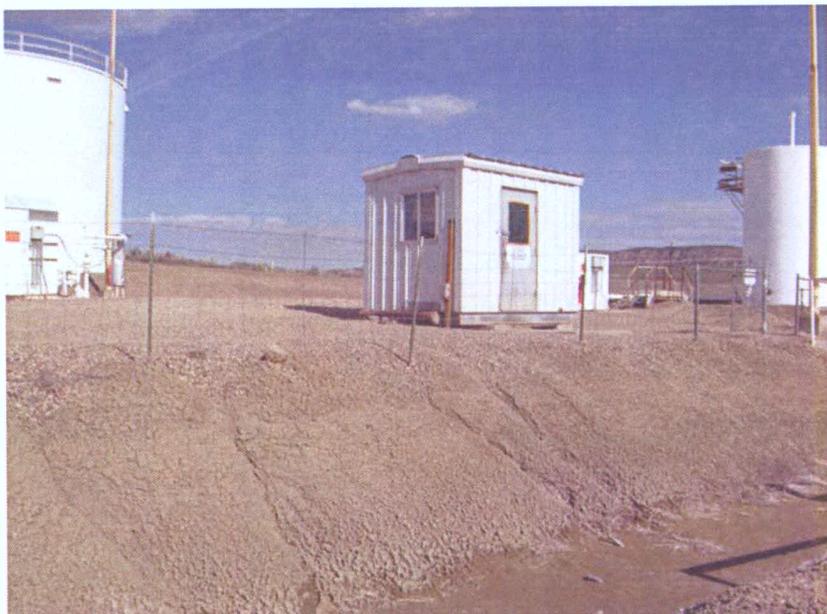
September 11, 2009 (Photographs #83 – 102)

September 15 – 17, 2009 (Photographs #103 – 147)

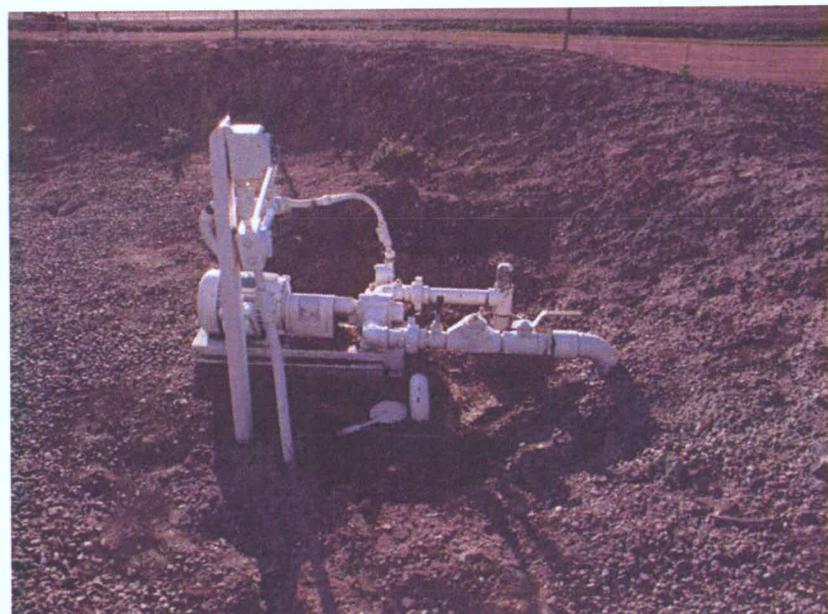
October 23, 2009 (Photograph #148)

November 25, 2009 (Photograph #149)

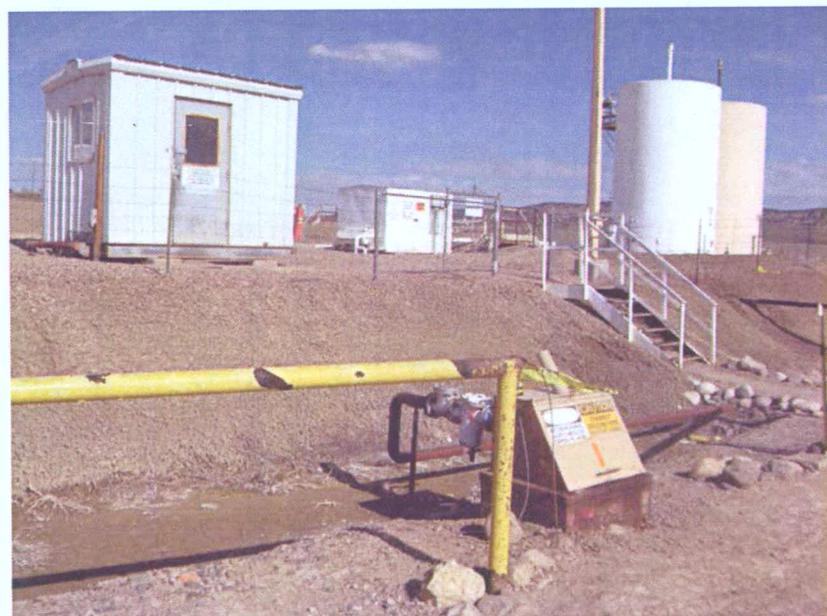
July 29 – 31, 2009
(Photographs #1 – 62)



1. View of facility looking northwest.



3. Sump prior to excavation.



2. Additional view of facility looking northwest with Taylor LACT unit in center and 400 bbl tanks on right.



4. Previous hand excavation next to sump.



5. Sump at start of excavation.



6. Measuring depth of sump.



7. Oil remaining in sump.



8. Stained soils in vicinity of sump.



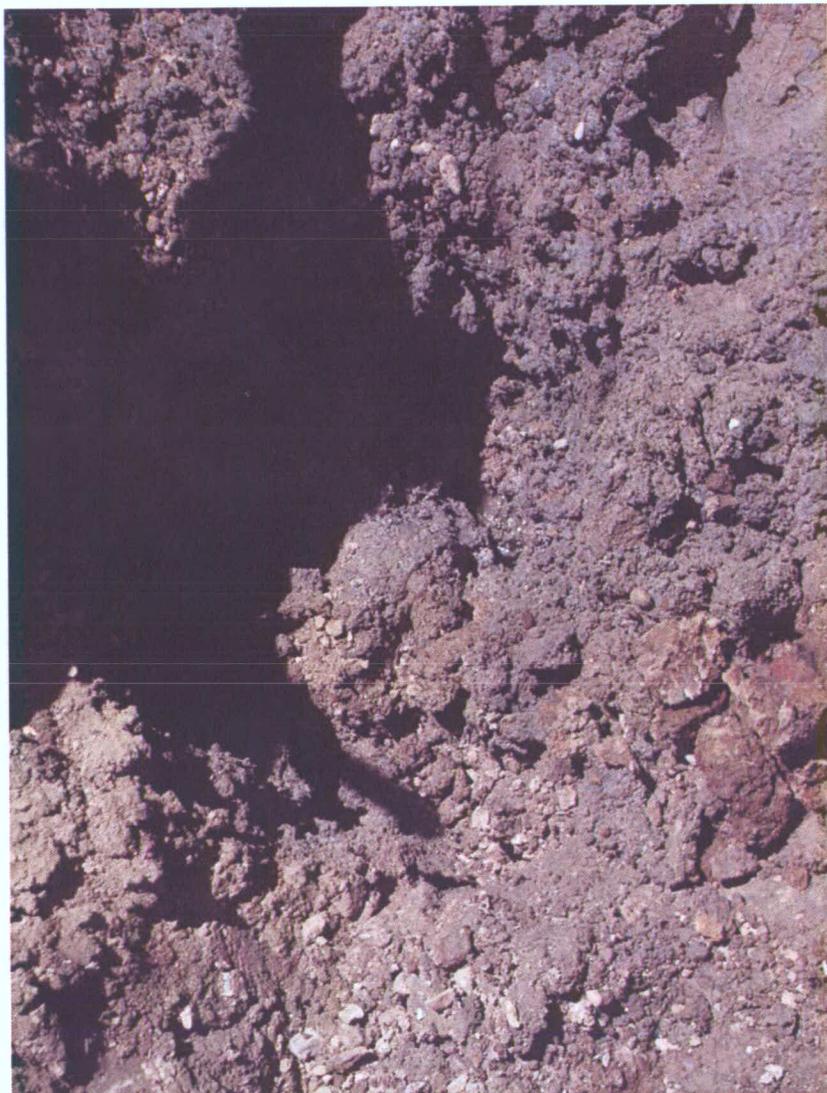
9. Stained soils south of sump.



11. Stained soils around sump and discharge piping.



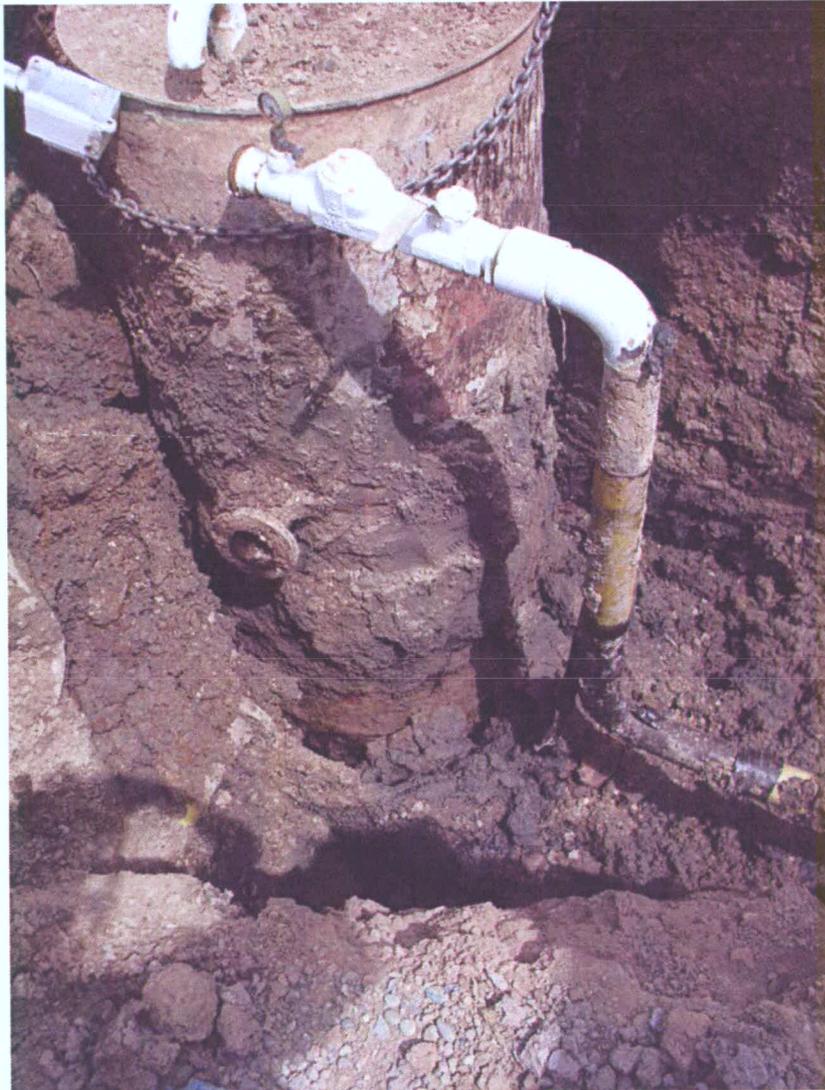
10. Stained soils around sump.



12. Close up of stained soils from around sump.



13. Stained soils approximately 5 feet deep.



14. Sump looking east during removal.



15. Coating from sump.



16. Sump area following sump removal. Contaminated soils in north bank.



17. Sump inlet flange.



18. Sump excavation looking west.



20. Soil staining northwest of sump.



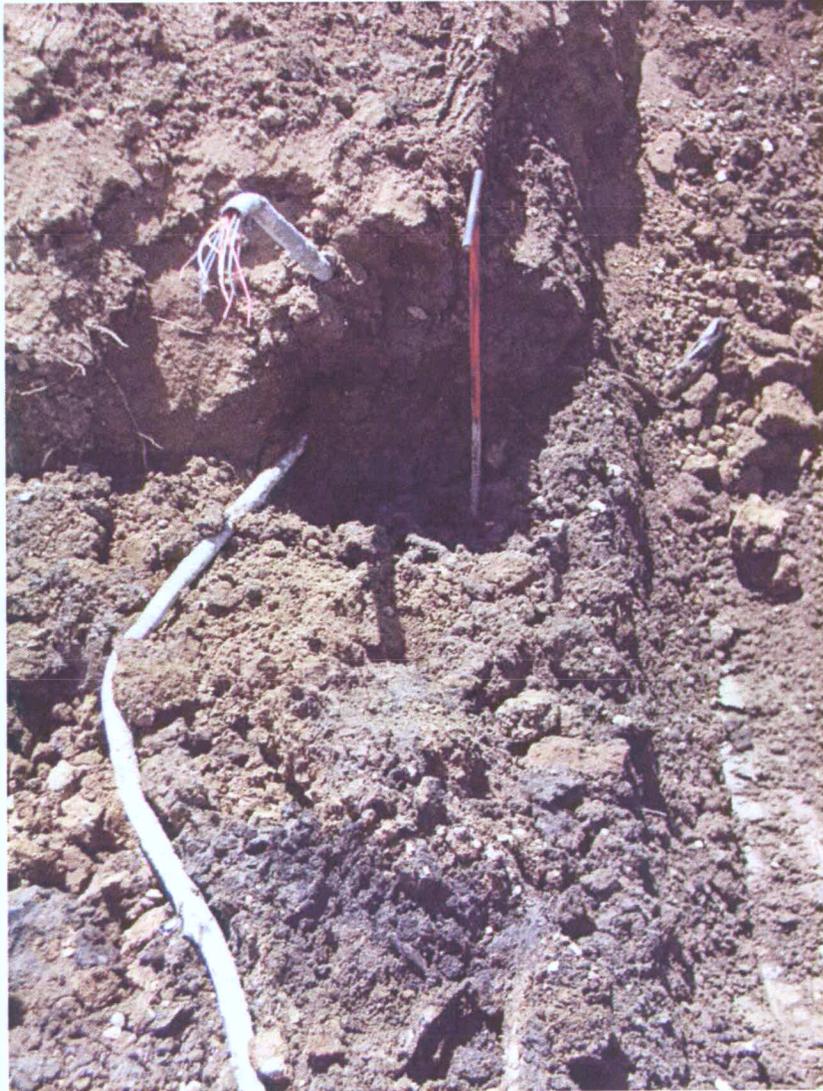
19. Soil staining above sump inlet piping.



21. Soil staining north of Taylor LACT unit.



22. Soil staining north of Taylor LACT unit.



23. Stained soils around conduit.



24. Overall view of excavation.



25. Overall view of excavation continued from Photograph #24.



26. Stained soils below bottom of sump, looking northeast.



27. Stained soils in bank west of sump.



29. Shallow soil staining south of sump.



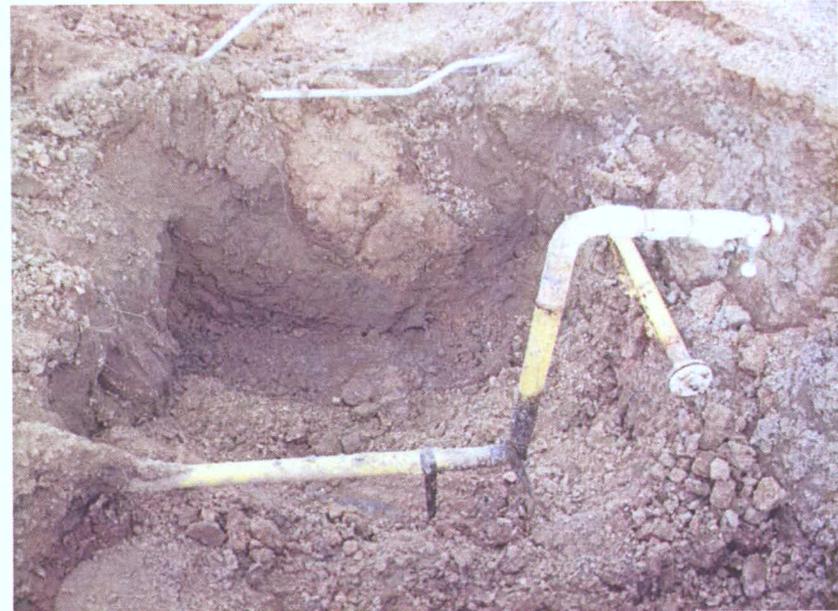
28. Shallow staining south of sump, looking northeast.



30. View of excavation before installation of barrier fence.



31. Soils staining southwest of sump.



32. Soils staining southwest of sump.



33. Soil staining in northeast corner of excavation.



34. Soil staining in north east corner of excavation.



36. IG-1 soil sampling location.



35. Close up of soil staining in northeast corner of excavation (Photograph #34).



37. IG-3 soil sampling location.



38. IG-2 soil sampling location.



39. IG-4 soil sampling location.



40. Area at completion of excavation.



42. View of Excavation looking east.



41. Completed excavation near Taylor LACT Unit.



43. View of Excavation looking east.



44. View of excavation looking south west.



45. View of excavation looking south west.



46. Contaminated soil stockpile liner prior to use.



47. Contaminated soil stockpile looking northwest.



49. Contaminated soil stockpile looking southeast.



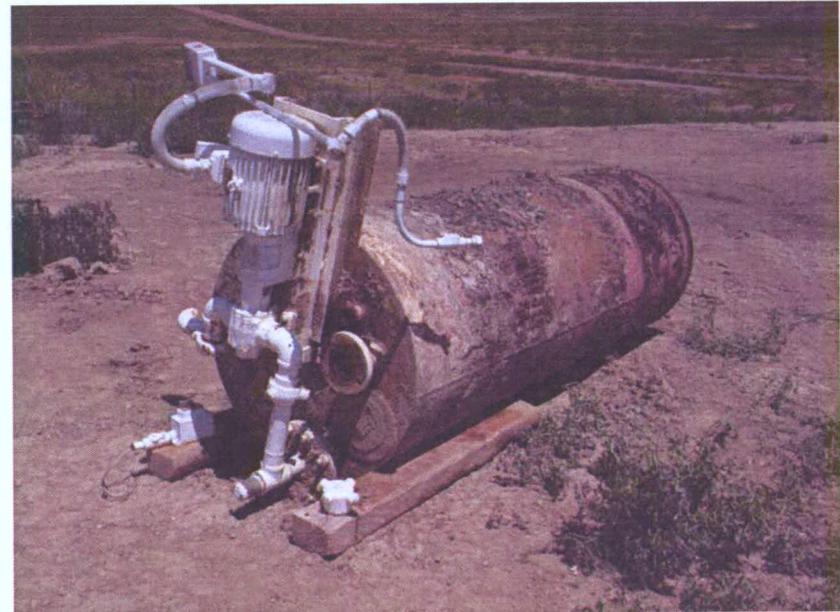
48. Contaminated soil stockpile looking southwest.



50. Contaminated soil stockpile and excavated sump.



51. Excavated sump.



53. Excavated sump.



52. Excavated sump.



54. Excavated sump.



55. Excavated sump.



57. Tanker truck during unloading.



56. Excavation looking southeast.



58. Excavation looking west.



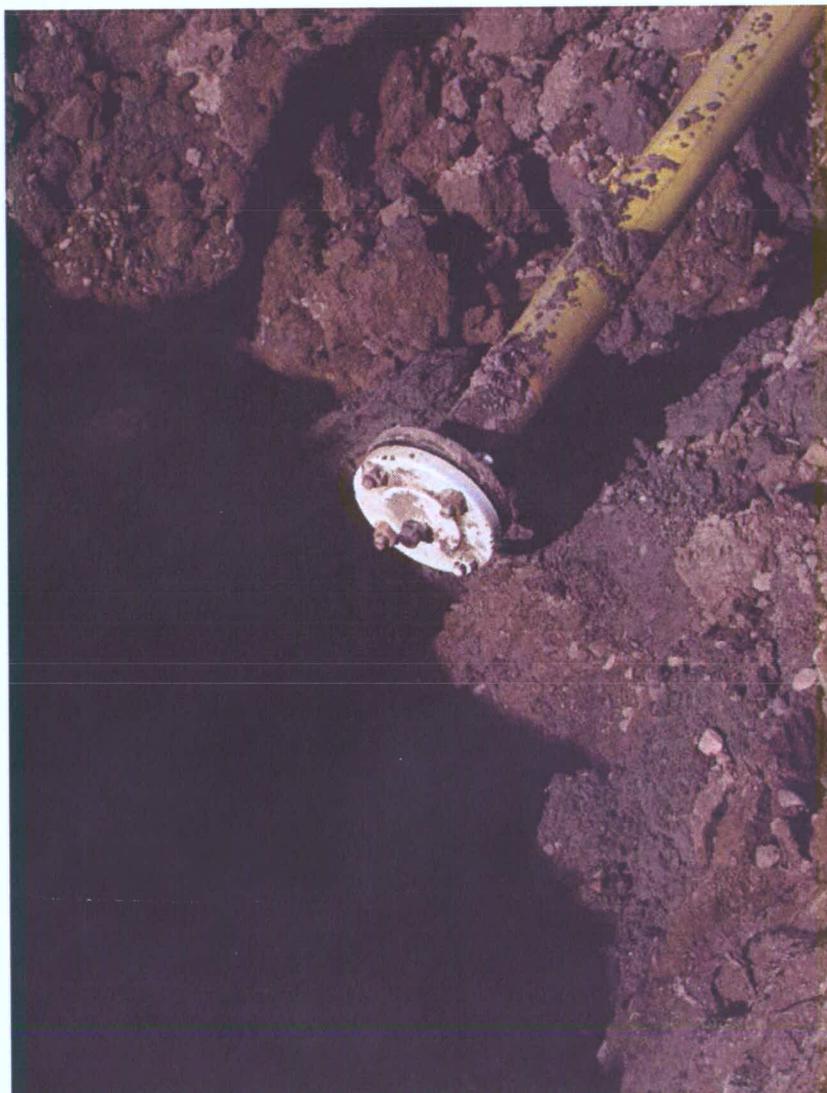
59. Excavation looking northwest.



60. Excavation looking northwest.



61. Capped sump outlet piping.



62. Capped sump inlet piping.

August 25, 2009
(Photographs #63 – 82)



63. Pit condition at start of excavation.



64. Start of excavation on east side of pit.



65. Contaminated soils beneath sump inlet on north side of excavation.



67. Contaminated soils in west bank of deep excavation.



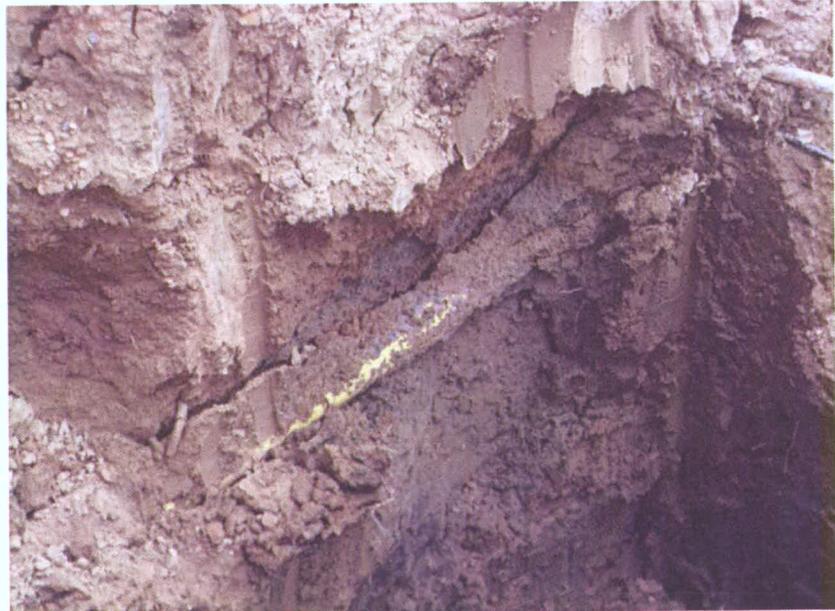
66. Contaminated soils below sump inlet piping.



68. Contaminated soils near sump inlet piping.



69. Contaminated soils in west bank of deep excavation.



71. Contaminated soils around sump inlet piping.



70. Stained soils beneath sump inlet line.



72. Stained soils beneath sump inlet line.



73. Stained soils above sump inlet piping in northwest corner.



75. Soils in northwest corner of excavation.



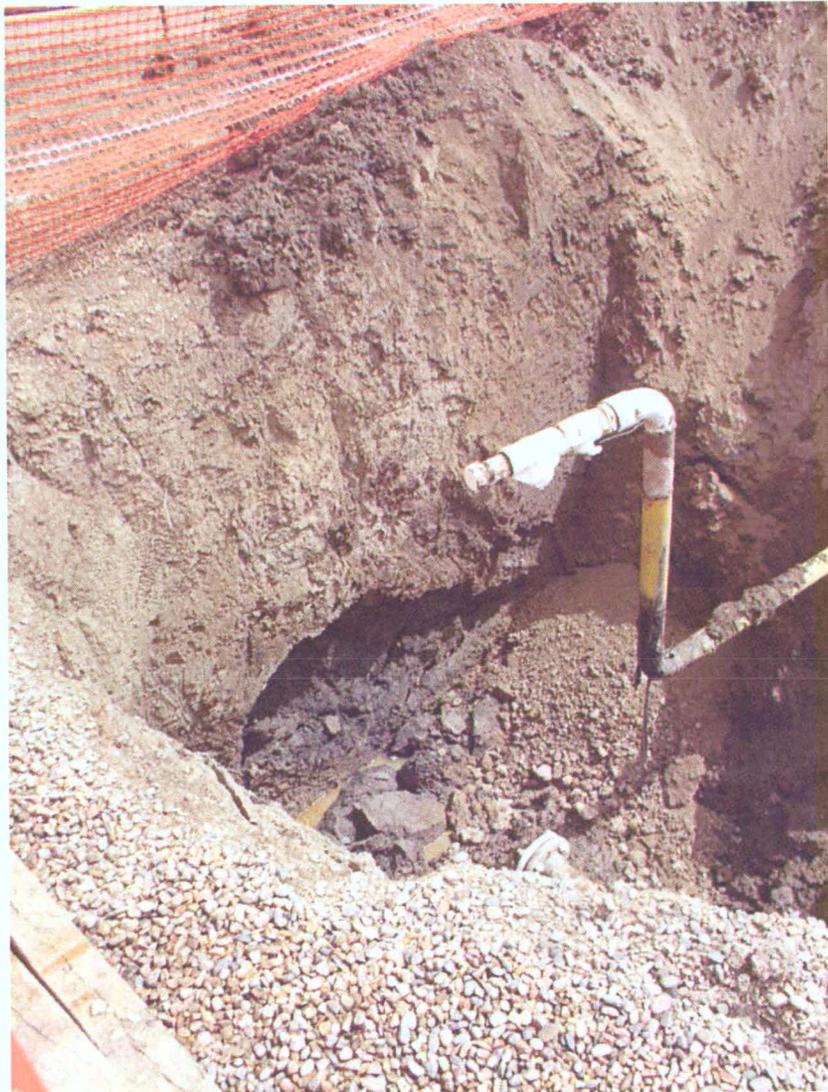
74. Soils in northwest corner of excavation.



76. North side of excavation.



77. East wall of excavation. Sump piping visible in photograph.



78. East wall of excavation.



79. Pit at end of day.



80. Soil stockpile area looking southwest.



81. Soil stockpile area looking southeast.



82. View of excavation looking west from truck loading area.

September 11, 2009
(Photographs #83 – 102)



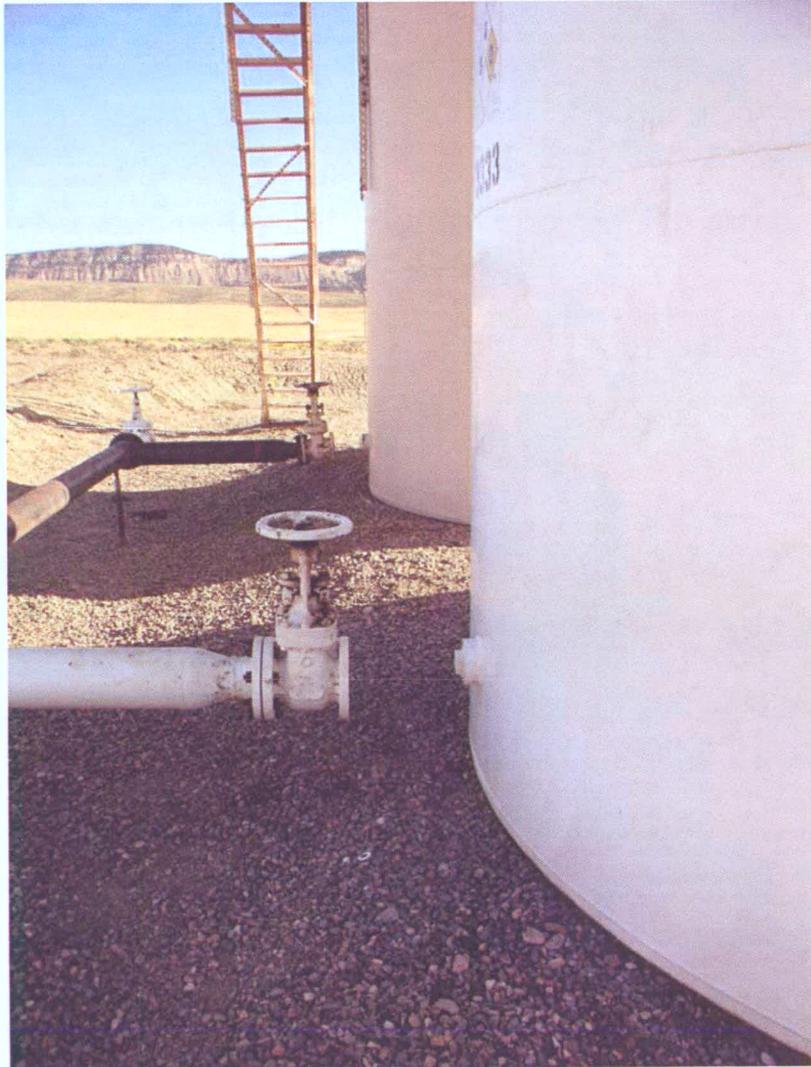
83. Precipitation in excavation.



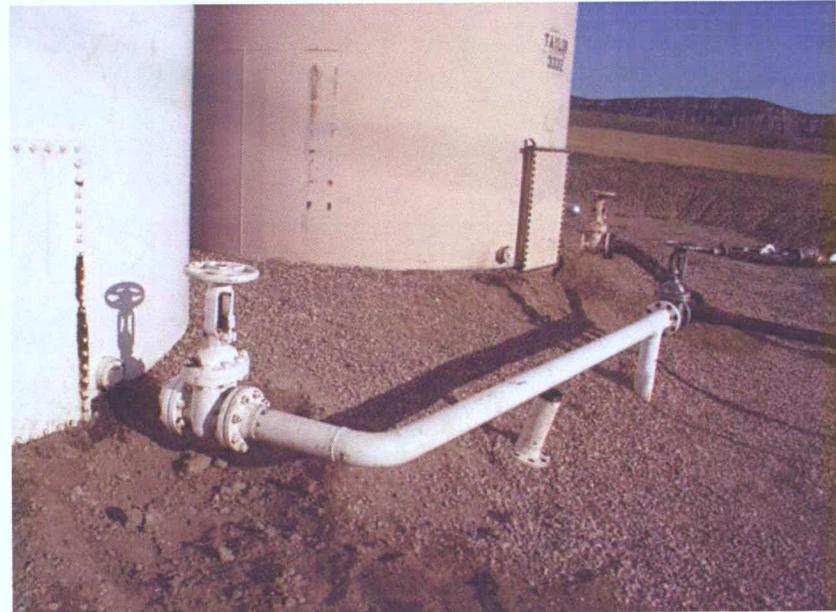
85. Precipitation in excavation.



84. Precipitation in excavation.



86. Piping disconnected from tanks and tanks plugged (west side of tanks).



87. Piping disconnected from tanks and tanks plugged (east side of tanks).



88. Preparing to remove north tank, Tank 3332.



89. Tank 3332 foundation.



91. Tank 3332 foundation (close-up).



90. Tank 3332 foundation.



92. Tank 3332 bottom.



94. Tank 3332 bottom.



93. Tank 3332 bottom (close-up).



95. Tank 3332 soil sample location.



96. Tank 3332 soil sample location.



98. Tank 3333 soil staining at tank man way.



97. Tank 3333 foundation.



99. Tank 3333 foundation (close-up).



100. Tank 3333 bottom.



101. Tank 3333 soil sample location.



102. Tank 3333 soil sample location.

September 15 – 17, 2009
(Photographs #103 – 147)



103. Soils where pipe support on west side of Tank 3333 was removed.



104. Bottom end of pipe support on west side of Tank 3333.



105. Pipe support.



106. Precipitation in excavation at start of work on September 15, 2009



108. Discolored soils below east tank berm looking east.



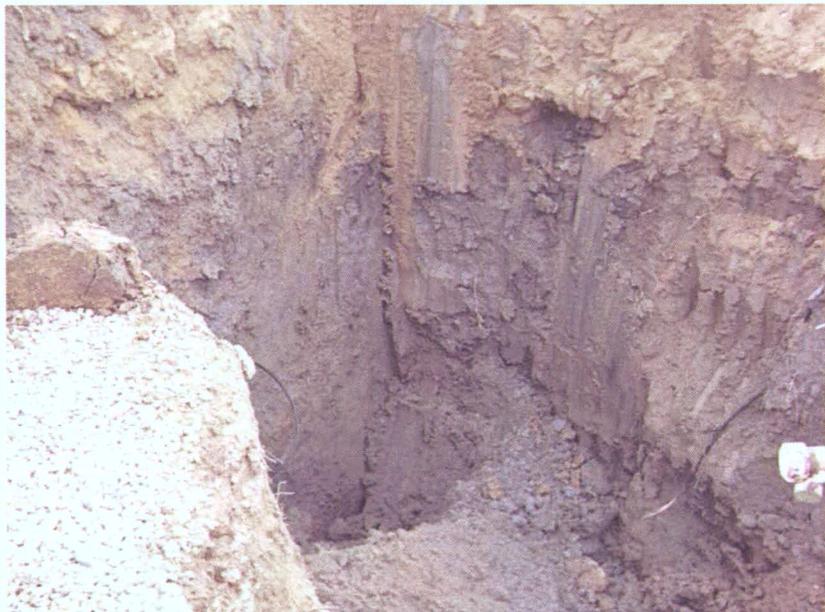
107. Discolored soils in excavation looking east.



109. Discolored soils looking northwest toward former tank location.



110. Shallow discolored soils below east tank berm looking east.



112. Shallow discolored soils below east tank berm looking east.



111. Shallow discolored soils below east tank berm looking southeast.



113. Close-up of shallow discolored soils below east tank berm looking east.



114. Discolored soils below east tank berm looking east.



116. Shallow discolored soils in vicinity of tanks looking northwest.



115. Discolored shallow surface soils inside tank berm at southwest corner.



117. Discolored soils beneath east tank berm looking west from truck unloading area. Taylor LACT unit in background.



118. Discolored soils beneath east tank berm.



119. Close-up of discolored soils in photo #119.



120. Temporary contaminated soil stockpile area.



122. Discolored soils below east tank berm looking southeast.



121. Discolored soils below east tank berm looking southeast.



123. Discolored soils below east tank berm looking southeast.



124. Fourth stockpile.



125. Excavation looking west from truck unloading area south of unloading line.



126. Close-up of discolored soils in excavation in photo #126.



127. Discolored soils below tank berm looking west from truck unloading area.



128. Soil sampling location IG-7, excavation above spoon.



129. Soil sampling location IG-7, excavation above spoon.



130. Excavation below east tank berm looking northeast.



131. Excavation below east berm where free hydrocarbons were encountered.



132. Close-up of backhoe bucket with soils containing free hydrocarbons were encountered.



133. Bank with free hydrocarbons looking northwest.



134. Bank with free hydrocarbons looking northwest.



135. Bank with free hydrocarbons looking northwest.



136. Close-up of bank with free hydrocarbons.



138. Voids in soil on bank.



137. Excavation into bank below east berm near unloading line to tanks (voids near lower center).



139. Crude oil in unloading catch basin.



140. Contaminated soils near west side of truck unloading area.



141. IG-8 soil sampling location.



142. Contaminated soils along west side of truck unloading area.



143. Oily gravels excavated from ditch on west side of truck unloading area.



145. Fourth stockpile area at completion of work on September 17, 2009.



144. Fourth stockpile area at completion of work on September 17, 2009.



146. Excavation looking west at completion of work on September 17, 2009.



147. Excavation looking west at completion of work on September 17, 2009.

October 23, 2009
(Photograph #148)



148. Area during excavation and sampling.

November 25, 2009
(Photograph #149)



149. Area during excavation and sampling.

APPENDIX E

Laboratory Analyses and Chain of Custody Forms

July 31, 2009

September 16, 2009

October 23, 2009

November 25, 2009

Laboratory Analyses & COC
July 31, 2009



ANALYTICAL SUMMARY REPORT

August 14, 2009

O and G Environmental Consulting LLC

11 Inverness Way S
Englewood, CO 80112

Workorder No.: C09080011

Project Name: Iles Grove

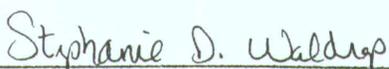
Energy Laboratories, Inc. received the following 5 samples for O and G Environmental Consulting LLC on 8/3/2009 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C09080011-001	IG-1	07/31/09 08:05	08/03/09	Soil	Metals by ICP/ICPMS, Total Metals, CaCl2 Extractable Cations, Saturated Paste Saturated Paste Electrical Conductivity Chromium, Hexavalent Chromium, Trivalent Mercury, Total Ultrasonic Extraction SW8021B VOCs, BTEX Diesel Range Organics Gasoline Range Organics Saturated Paste pH Percent Moisture Digestion, Total Metals CaCl2 Hot Water Soil Extraction CVAA Permanganate Digest DI Water Soil Extract Saturated Paste Sodium Adsorption Ratio in Soil SW8270C SVOCs True Total Barium Volatile Organics, Methanol Extraction
C09080011-002	IG-2	07/31/09 08:15	08/03/09	Soil	Same As Above
C09080011-003	IG-3	07/31/09 08:30	08/03/09	Soil	Same As Above
C09080011-004	IG-4	07/31/09 08:40	08/03/09	Soil	Same As Above
C09080011-005	IG-5	07/31/09 09:10	08/03/09	Soil	Ultrasonic Extraction SW8021B VOCs, BTEX Diesel Range Organics Gasoline Range Organics Volatile Organics, Methanol Extraction

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:


Stephanie D. Waldrop
Reporting Supervisor



LABORATORY ANALYTICAL REPORT

Client: O and G Environmental Consulting LLC
 Project: lles Grove
 Lab ID: C09080011-001
 Client Sample ID: IG-1

Report Date: 08/14/09
 Collection Date: 07/31/09 08:05
 Date Received: 08/03/09
 Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
Conductivity, paste extract	0.68	mmhos/cm		0.01		ASAM10-3	08/05/09 14:09 / jes
pH, sat. paste	8.0	s.u.		0.1		ASAM10-3.2	08/05/09 14:09 / jes
Moisture	16.7	%		0.1		USDA26	08/05/09 09:02 / dcj
Calcium, sat. paste	1.3	meq/L		0.050		SW6010B	08/12/09 00:56 / cp
Magnesium, sat. paste	3.6	meq/L		0.082		SW6010B	08/12/09 00:56 / cp
Nickel	ND	mg/L		0.10		SW6010B	08/12/09 00:56 / cp
Sodium, sat. paste	2.6	meq/L		0.044		SW6010B	08/12/09 00:56 / cp
Sodium Adsorption Ratio (SAR)	1.70	unitless		0.01		Calculation	08/12/09 15:48 / tn
METALS - TOTAL							
Arsenic	6.7	mg/kg-dry		0.5		SW6020	08/05/09 14:30 / sml
Cadmium	ND	mg/kg-dry		0.5		SW6020	08/05/09 14:30 / sml
Chromium	10.8	mg/kg		0.5		SW6020	08/05/09 14:30 / sml
Chromium, Trivalent	10.8	mg/kg		0.5		Calculation	08/14/09 14:36 / sdw
Copper	16.3	mg/kg-dry		0.5		SW6020	08/05/09 14:30 / sml
Lead	18.5	mg/kg-dry		0.5		SW6020	08/05/09 14:30 / sml
Mercury	ND	mg/kg-dry		0.05		SW7471A	08/07/09 11:17 / jp
Selenium	0.8	mg/kg-dry		0.5		SW6020	08/05/09 14:30 / sml
Silver	ND	mg/kg-dry		0.5		SW6020	08/05/09 14:30 / sml
Zinc	77.6	mg/kg-dry		0.5		SW6020	08/05/09 14:30 / sml
TRUE TOTAL BARIUM							
Barium	506	ppm		100		SW6010B	08/11/09 11:24 / eli-cs
METALS - CaCl2 EXTRACTABLE							
Boron	1.6	mg/kg-dry		0.2		SW6020	08/10/09 16:17 / sml
METALS - TOTAL							
Chromium, Hexavalent	ND	mg/kg		0.10		SW7196A	08/10/09 14:23 / jal
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.080	mg/kg		0.050		SW8021B	08/05/09 16:56 / mlf
Ethylbenzene	0.87	mg/kg		0.050		SW8021B	08/05/09 16:56 / mlf
m+p-Xylenes	4.8	mg/kg		0.10		SW8021B	08/05/09 16:56 / mlf
o-Xylene	0.68	mg/kg		0.050		SW8021B	08/05/09 16:56 / mlf
Toluene	ND	mg/kg		0.050		SW8021B	08/05/09 16:56 / mlf
Xylenes, Total	5.5	mg/kg		0.050		SW8021B	08/05/09 16:56 / mlf
Surr: Trifluorotoluene	105	%REC		50-115		SW8021B	08/05/09 16:56 / mlf

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: O and G Environmental Consulting LLC
 Project: Iles Grove
 Lab ID: C09080011-001
 Client Sample ID: IG-1

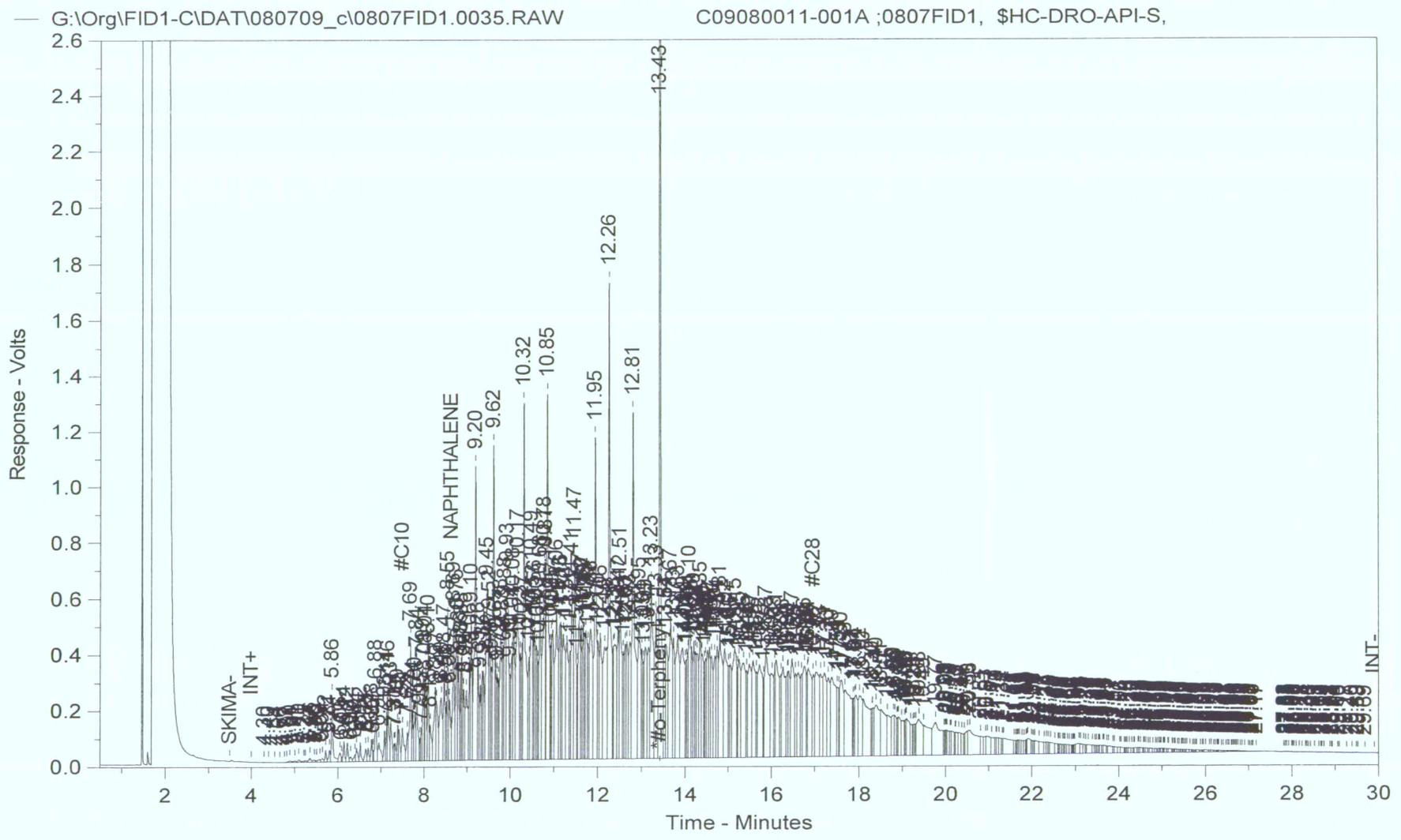
Report Date: 08/14/09
 Collection Date: 07/31/09 08:05
 Date Received: 08/03/09
 Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	579	mg/kg		30		SW8015M as	08/08/09 10:19 / bah
Total Extractable Hydrocarbons	716	mg/kg		30		SW8015M as	08/08/09 10:19 / bah
Surr: o-Terphenyl	94.0	%REC		60-120		SW8015M as	08/08/09 10:19 / bah
Gasoline Range Organics (GRO)	170	mg/kg		8.0		SW8015M as	08/06/09 17:35 / mlf
Surr: Trifluorotoluene	67.0	%REC		50-115		SW8015M as	08/06/09 17:35 / mlf
SYNTHETIC ORGANIC COMPOUNDS							
Acenaphthene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Benzo(a)anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Benzo(a)pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Benzo(b)fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Benzo(k)fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Chrysene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Dibenzo(a,h)anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Fluorene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Indeno(1,2,3-cd)pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Naphthalene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 01:27 / eli-b
Surr: 2,4,6-Tribromophenol	79.0	%REC		65-124		SW8270C	08/07/09 01:27 / eli-b
Surr: 2-Fluorobiphenyl	73.0	%REC		67-102		SW8270C	08/07/09 01:27 / eli-b
Surr: 2-Fluorophenol	64.0	%REC		50-108		SW8270C	08/07/09 01:27 / eli-b
Surr: Nitrobenzene-d5	61.0	%REC	S	62-95		SW8270C	08/07/09 01:27 / eli-b
Surr: Phenol-d5	59.0	%REC		56-102		SW8270C	08/07/09 01:27 / eli-b
Surr: Terphenyl-d14	75.0	%REC		65-121		SW8270C	08/07/09 01:27 / eli-b

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 S - Spike recovery outside of advisory limits.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

Batch ID: 23320





LABORATORY ANALYTICAL REPORT

Client: O and G Environmental Consulting LLC
 Project: Iles Grove
 Lab ID: C09080011-002
 Client Sample ID: IG-2

Report Date: 08/14/09
 Collection Date: 07/31/09 08:15
 Date Received: 08/03/09
 Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
Conductivity, paste extract	0.60	mmhos/cm		0.01		ASAM10-3	08/05/09 14:10 / jes
pH, sat. paste	8.2	s.u.		0.1		ASAM10-3.2	08/05/09 14:10 / jes
Moisture	18.7	%		0.1		USDA26	08/05/09 09:02 / dcj
Calcium, sat. paste	0.97	meq/L		0.050		SW6010B	08/12/09 01:08 / cp
Magnesium, sat. paste	3.4	meq/L		0.082		SW6010B	08/12/09 01:08 / cp
Nickel	ND	mg/L		0.10		SW6010B	08/12/09 01:08 / cp
Sodium, sat. paste	2.2	meq/L		0.044		SW6010B	08/12/09 01:08 / cp
Sodium Adsorption Ratio (SAR)	1.47	unitless		0.01		Calculation	08/12/09 15:48 / tn
METALS - TOTAL							
Arsenic	8.5	mg/kg-dry		0.5		SW6020	08/05/09 14:35 / sml
Cadmium	ND	mg/kg-dry		0.5		SW6020	08/05/09 14:35 / sml
Chromium	12.4	mg/kg		0.5		SW6020	08/05/09 14:35 / sml
Chromium, Trivalent	12.4	mg/kg		0.5		Calculation	08/14/09 14:36 / sdw
Copper	20.7	mg/kg-dry		0.5		SW6020	08/05/09 14:35 / sml
Lead	23.7	mg/kg-dry		0.5		SW6020	08/05/09 14:35 / sml
Mercury	ND	mg/kg-dry		0.05		SW7471A	08/07/09 11:19 / jp
Selenium	1.0	mg/kg-dry		0.5		SW6020	08/05/09 14:35 / sml
Silver	ND	mg/kg-dry		0.5		SW6020	08/05/09 14:35 / sml
Zinc	95.8	mg/kg-dry		0.5		SW6020	08/05/09 14:35 / sml
TRUE TOTAL BARIUM							
Barium	435	ppm		100		SW6010B	08/11/09 11:28 / eli-cs
METALS - CaCl₂ EXTRACTABLE							
Boron	2.3	mg/kg-dry		0.2		SW6020	08/10/09 16:47 / sml
METALS - TOTAL							
Chromium, Hexavalent	ND	mg/kg		0.10		SW7196A	08/10/09 14:24 / jal
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg		0.050		SW8021B	08/05/09 15:10 / mlf
Ethylbenzene	ND	mg/kg		0.050		SW8021B	08/05/09 15:10 / mlf
m+p-Xylenes	ND	mg/kg		0.10		SW8021B	08/05/09 15:10 / mlf
o-Xylene	ND	mg/kg		0.050		SW8021B	08/05/09 15:10 / mlf
Toluene	ND	mg/kg		0.050		SW8021B	08/05/09 15:10 / mlf
Xylenes, Total	ND	mg/kg		0.10		SW8021B	08/05/09 15:10 / mlf
Surr: Trifluorotoluene	86.0	%REC		50-115		SW8021B	08/05/09 15:10 / mlf

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: O and G Environmental Consulting LLC
Project: Iles Grove
Lab ID: C09080011-002
Client Sample ID: IG-2

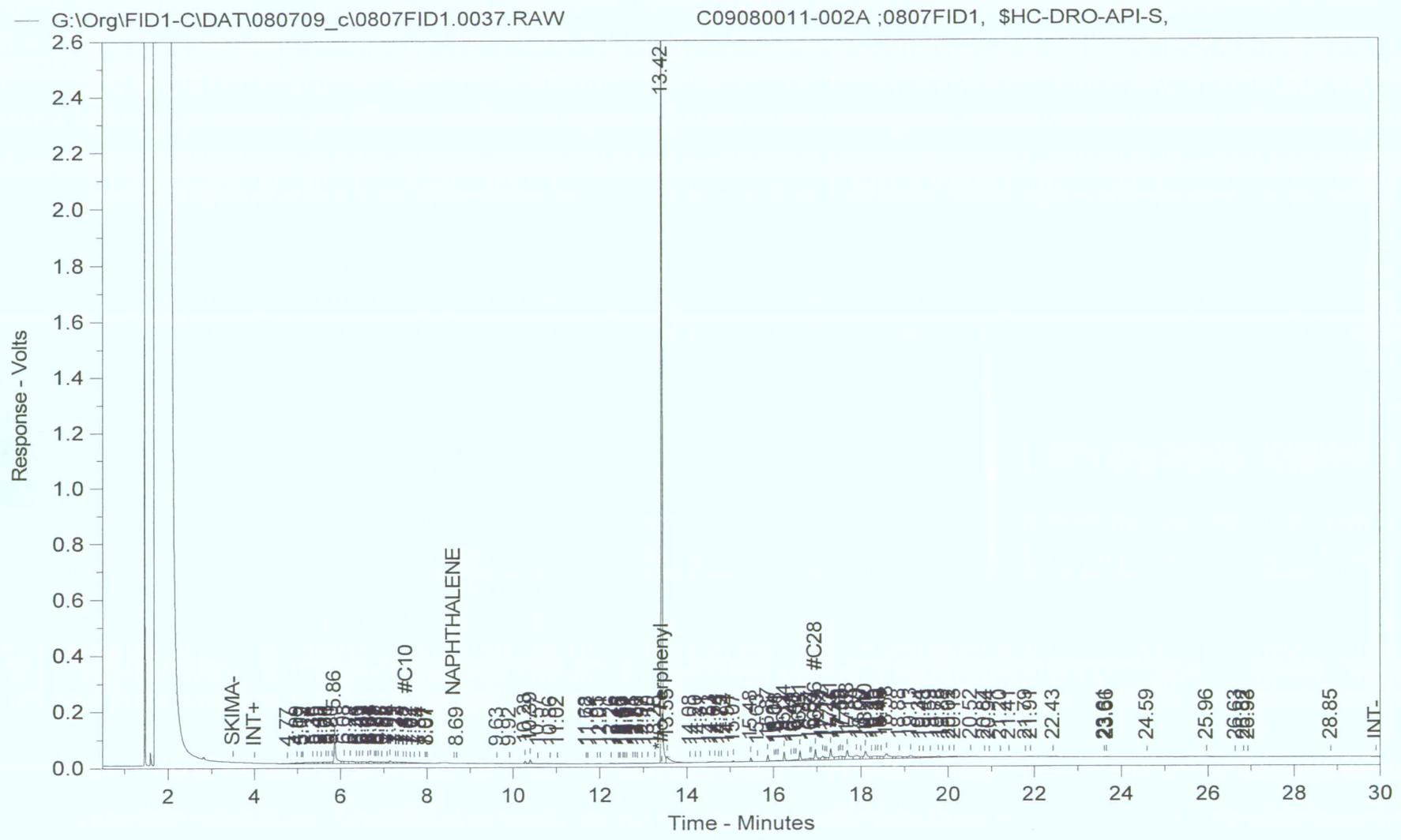
Report Date: 08/14/09
Collection Date: 07/31/09 08:15
Date Received: 08/03/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	ND	mg/kg		29		SW8015M as	08/08/09 11:51 / bah
Total Extractable Hydrocarbons	ND	mg/kg		29		SW8015M as	08/08/09 11:51 / bah
Surr: o-Terphenyl	84.0	%REC		60-120		SW8015M as	08/08/09 11:51 / bah
Gasoline Range Organics (GRO)	ND	mg/kg		4.0		SW8015M as	08/06/09 16:24 / mlf
Surr: Trifluorotoluene	81.0	%REC		50-115		SW8015M as	08/06/09 16:24 / mlf
SYNTHETIC ORGANIC COMPOUNDS							
Acenaphthene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Benzo(a)anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Benzo(a)pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Benzo(b)fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Benzo(k)fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Chrysene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Dibenzo(a,h)anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Fluorene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Indeno(1,2,3-cd)pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Naphthalene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 01:58 / eli-b
Surr: 2,4,6-Tribromophenol	79.0	%REC		65-124		SW8270C	08/07/09 01:58 / eli-b
Surr: 2-Fluorobiphenyl	73.0	%REC		67-102		SW8270C	08/07/09 01:58 / eli-b
Surr: 2-Fluorophenol	78.0	%REC		50-108		SW8270C	08/07/09 01:58 / eli-b
Surr: Nitrobenzene-d5	62.0	%REC		62-95		SW8270C	08/07/09 01:58 / eli-b
Surr: Phenol-d5	64.0	%REC		56-102		SW8270C	08/07/09 01:58 / eli-b
Surr: Terphenyl-d14	74.0	%REC		65-121		SW8270C	08/07/09 01:58 / eli-b

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

Batch ID: 23320





LABORATORY ANALYTICAL REPORT

Client: O and G Environmental Consulting LLC
Project: Iles Grove
Lab ID: C09080011-003
Client Sample ID: IG-3

Report Date: 08/14/09
Collection Date: 07/31/09 08:30
Date Received: 08/03/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
Conductivity, paste extract	1.08	mmhos/cm		0.01		ASAM10-3	08/05/09 14:10 / jes
pH, sat. paste	8.3	s.u.		0.1		ASAM10-3.2	08/05/09 14:10 / jes
Moisture	17.8	%		0.1		USDA26	08/05/09 09:02 / dcj
Calcium, sat. paste	0.78	meq/L		0.050		SW6010B	08/12/09 01:28 / cp
Magnesium, sat. paste	2.9	meq/L		0.082		SW6010B	08/12/09 01:28 / cp
Nickel	ND	mg/L		0.10		SW6010B	08/12/09 01:28 / cp
Sodium, sat. paste	8.4	meq/L		0.044		SW6010B	08/12/09 01:28 / cp
Sodium Adsorption Ratio (SAR)	6.20	unitless		0.01		Calculation	08/12/09 15:48 / tn
METALS - TOTAL							
Arsenic	8.5	mg/kg-dry		0.5		SW6020	08/05/09 15:01 / sml
Cadmium	ND	mg/kg-dry		0.5		SW6020	08/05/09 15:01 / sml
Chromium	12.4	mg/kg		0.5		SW6020	08/05/09 15:01 / sml
Chromium, Trivalent	12.4	mg/kg		0.5		Calculation	08/14/09 14:36 / sdw
Copper	17.6	mg/kg-dry		0.5		SW6020	08/05/09 15:01 / sml
Lead	19.6	mg/kg-dry		0.5		SW6020	08/05/09 15:01 / sml
Mercury	ND	mg/kg-dry		0.05		SW7471A	08/07/09 11:21 / jp
Selenium	0.9	mg/kg-dry		0.5		SW6020	08/05/09 15:01 / sml
Silver	ND	mg/kg-dry		0.5		SW6020	08/05/09 15:01 / sml
Zinc	82.9	mg/kg-dry		0.5		SW6020	08/05/09 15:01 / sml
TRUE TOTAL BARIUM							
Barium	449	ppm		100		SW6010B	08/11/09 11:32 / eli-cs
METALS - CACL2 EXTRACTABLE							
Boron	2.3	mg/kg-dry		0.2		SW6020	08/10/09 16:53 / sml
METALS - TOTAL							
Chromium, Hexavalent	ND	mg/kg		0.10		SW7196A	08/10/09 14:24 / jal
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.70	mg/kg		0.050		SW8021B	08/05/09 15:46 / mlf
Ethylbenzene	1.3	mg/kg		0.050		SW8021B	08/05/09 15:46 / mlf
m+p-Xylenes	5.5	mg/kg		0.10		SW8021B	08/05/09 15:46 / mlf
o-Xylene	1.1	mg/kg		0.050		SW8021B	08/05/09 15:46 / mlf
Toluene	0.10	mg/kg		0.050		SW8021B	08/05/09 15:46 / mlf
Xylenes, Total	6.6	mg/kg		0.050		SW8021B	08/05/09 15:46 / mlf
Surr: Trifluorotoluene	87.0	%REC		50-115		SW8021B	08/05/09 15:46 / mlf

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: O and G Environmental Consulting LLC
 Project: Iles Grove
 Lab ID: C09080011-003
 Client Sample ID: IG-3

Report Date: 08/14/09
 Collection Date: 07/31/09 08:30
 Date Received: 08/03/09
 Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	428	mg/kg		56		SW8015M as	08/08/09 13:23 / bah
Total Extractable Hydrocarbons	543	mg/kg		56		SW8015M as	08/08/09 13:23 / bah
Surr: o-Terphenyl	90.0	%REC		60-120		SW8015M as	08/08/09 13:23 / bah
Gasoline Range Organics (GRO)	300	mg/kg		40		SW8015M as	08/06/09 16:59 / mlf
Surr: Trifluorotoluene	87.0	%REC		50-115		SW8015M as	08/06/09 16:59 / mlf
SYNTHETIC ORGANIC COMPOUNDS							
Acenaphthene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Benzo(a)anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Benzo(a)pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Benzo(b)fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Benzo(k)fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Chrysene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Dibenzo(a,h)anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Fluorene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Indeno(1,2,3-cd)pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Naphthalene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 02:28 / eli-b
Surr: 2,4,6-Tribromophenol	82.0	%REC		65-124		SW8270C	08/07/09 02:28 / eli-b
Surr: 2-Fluorobiphenyl	78.0	%REC		67-102		SW8270C	08/07/09 02:28 / eli-b
Surr: 2-Fluorophenol	81.0	%REC		50-108		SW8270C	08/07/09 02:28 / eli-b
Surr: Nitrobenzene-d5	62.0	%REC		62-95		SW8270C	08/07/09 02:28 / eli-b
Surr: Phenol-d5	66.0	%REC		56-102		SW8270C	08/07/09 02:28 / eli-b
Surr: Terphenyl-d14	76.0	%REC		65-121		SW8270C	08/07/09 02:28 / eli-b

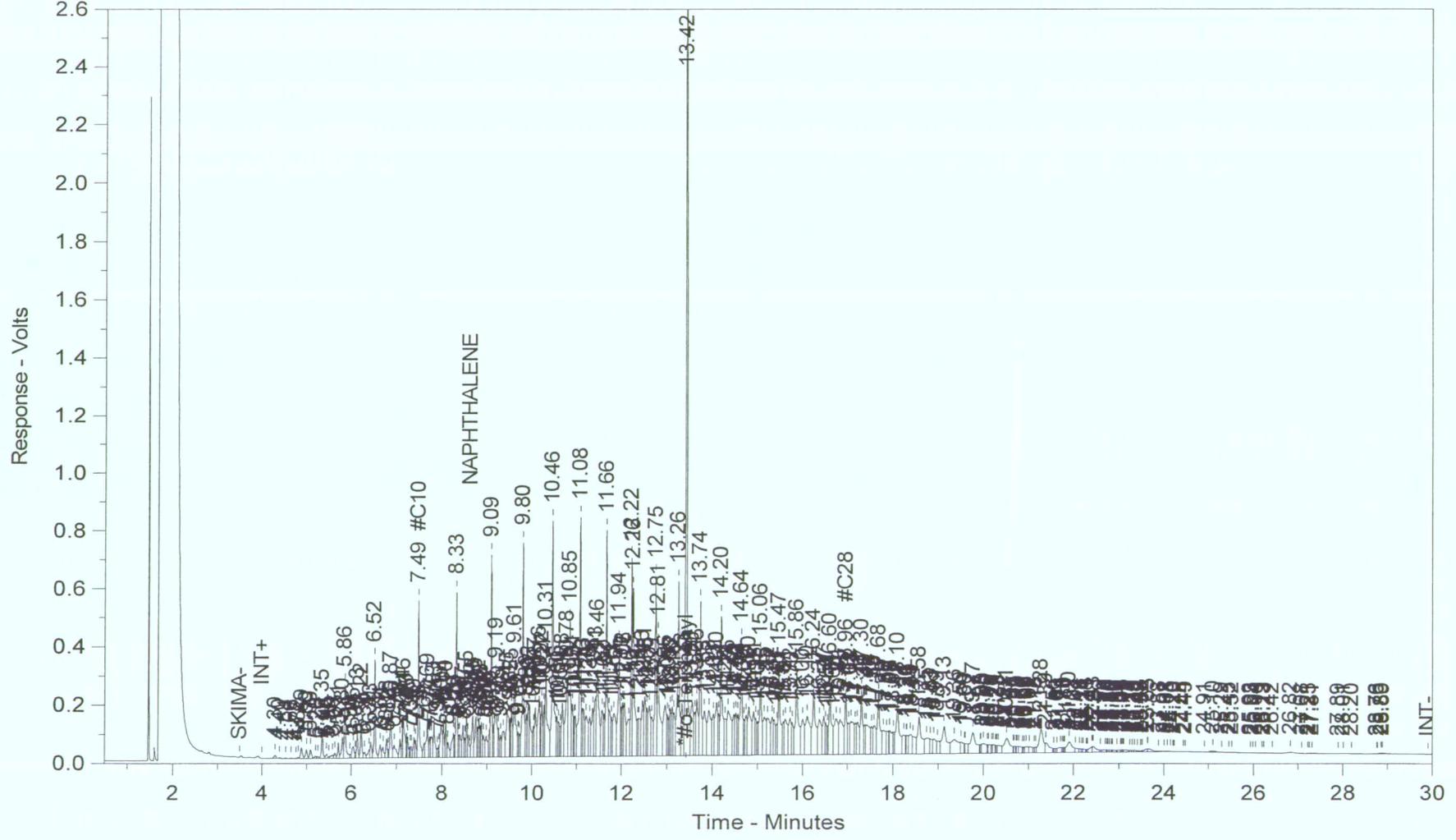
Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

Batch ID: 23320

G:\Org\FID1-C\DAT\080709_c\0807FID1.0039.RAW

C09080011-003A ;0807FID1, \$HC-DRO-API-S,





LABORATORY ANALYTICAL REPORT

Client: O and G Environmental Consulting LLC
 Project: lles Grove
 Lab ID: C09080011-004
 Client Sample ID: IG-4

Report Date: 08/14/09
 Collection Date: 07/31/09 08:40
 Date Received: 08/03/09
 Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
Conductivity, paste extract	0.84	mmhos/cm		0.01		ASAM10-3	08/05/09 14:10 / jes
pH, sat. paste	8.3	s.u.		0.1		ASAM10-3.2	08/05/09 14:10 / jes
Moisture	20.5	%		0.1		USDA26	08/05/09 09:03 / dcj
Calcium, sat. paste	0.94	meq/L		0.050		SW6010B	08/12/09 01:33 / cp
Magnesium, sat. paste	1.9	meq/L		0.082		SW6010B	08/12/09 01:33 / cp
Nickel	ND	mg/L		0.10		SW6010B	08/12/09 01:33 / cp
Sodium, sat. paste	6.1	meq/L		0.044		SW6010B	08/12/09 01:33 / cp
Sodium Adsorption Ratio (SAR)	5.15	unitless		0.01		Calculation	08/12/09 15:48 / tn
METALS - TOTAL							
Arsenic	7.1	mg/kg-dry		0.5		SW6020	08/05/09 15:06 / sml
Cadmium	ND	mg/kg-dry		0.5		SW6020	08/05/09 15:06 / sml
Chromium	11.1	mg/kg		0.5		SW6020	08/05/09 15:06 / sml
Chromium, Trivalent	11.1	mg/kg		0.5		Calculation	08/14/09 14:36 / sdw
Copper	17.0	mg/kg-dry		0.5		SW6020	08/05/09 15:06 / sml
Lead	20.3	mg/kg-dry		0.5		SW6020	08/05/09 15:06 / sml
Mercury	ND	mg/kg-dry		0.05		SW7471A	08/07/09 11:23 / jp
Selenium	0.9	mg/kg-dry		0.5		SW6020	08/05/09 15:06 / sml
Silver	ND	mg/kg-dry		0.5		SW6020	08/05/09 15:06 / sml
Zinc	82.0	mg/kg-dry		0.5		SW6020	08/05/09 15:06 / sml
TRUE TOTAL BARIUM							
Barium	437	ppm		100		SW6010B	08/11/09 11:38 / eli-cs
METALS - CaCl2 EXTRACTABLE							
Boron	2.2	mg/kg-dry		0.2		SW6020	08/10/09 16:58 / sml
METALS - TOTAL							
Chromium, Hexavalent	ND	mg/kg		0.10		SW7196A	08/10/09 14:25 / jal
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.99	mg/kg		0.50		SW8021B	08/10/09 16:16 / mlf
Ethylbenzene	2.6	mg/kg		0.50		SW8021B	08/10/09 16:16 / mlf
m+p-Xylenes	16	mg/kg		1.0		SW8021B	08/10/09 16:16 / mlf
o-Xylene	5.0	mg/kg		0.50		SW8021B	08/10/09 16:16 / mlf
Toluene	1.1	mg/kg		0.50		SW8021B	08/10/09 16:16 / mlf
Xylenes, Total	21	mg/kg		0.50		SW8021B	08/10/09 16:16 / mlf
Surr: Trifluorotoluene	59.0	%REC		50-115		SW8021B	08/10/09 16:16 / mlf

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: O and G Environmental Consulting LLC
 Project: Iles Grove
 Lab ID: C09080011-004
 Client Sample ID: IG-4

Report Date: 08/14/09
 Collection Date: 07/31/09 08:40
 Date Received: 08/03/09
 Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	1100	mg/kg		29		SW8015M as	08/08/09 14:55 / bah
Total Extractable Hydrocarbons	1360	mg/kg		29		SW8015M as	08/08/09 14:55 / bah
Surr: o-Terphenyl	97.0	%REC		60-120		SW8015M as	08/08/09 14:55 / bah
Gasoline Range Organics (GRO)	850	mg/kg		40		SW8015M as	08/06/09 21:42 / mlf
Surr: Trifluorotoluene	83.0	%REC		50-115		SW8015M as	08/06/09 21:42 / mlf
SYNTHETIC ORGANIC COMPOUNDS							
Acenaphthene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Benzo(a)anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Benzo(a)pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Benzo(b)fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Benzo(k)fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Chrysene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Dibenzo(a,h)anthracene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Fluoranthene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Fluorene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Indeno(1,2,3-cd)pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Naphthalene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Pyrene	ND	mg/kg		0.33		SW8270C	08/07/09 02:58 / eli-b
Surr: 2,4,6-Tribromophenol	74.0	%REC		65-124		SW8270C	08/07/09 02:58 / eli-b
Surr: 2-Fluorobiphenyl	74.0	%REC		67-102		SW8270C	08/07/09 02:58 / eli-b
Surr: 2-Fluorophenol	63.0	%REC		50-108		SW8270C	08/07/09 02:58 / eli-b
Surr: Nitrobenzene-d5	63.0	%REC		62-95		SW8270C	08/07/09 02:58 / eli-b
Surr: Phenol-d5	57.0	%REC		56-102		SW8270C	08/07/09 02:58 / eli-b
Surr: Terphenyl-d14	77.0	%REC		65-121		SW8270C	08/07/09 02:58 / eli-b

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: O and G Environmental Consulting LLC
Project: Iles Grove
Lab ID: C09080011-005
Client Sample ID: IG-5

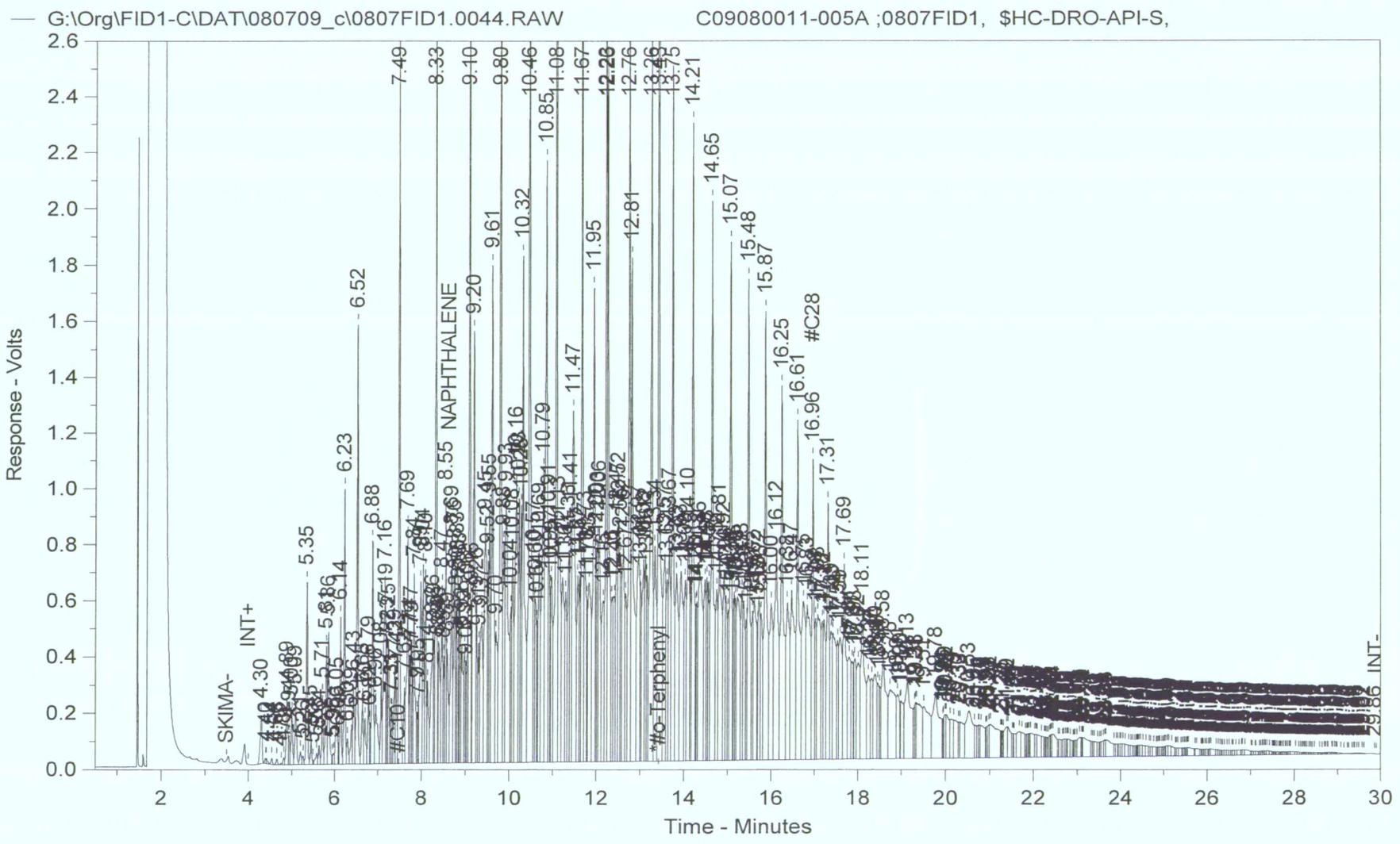
Report Date: 08/14/09
Collection Date: 07/31/09 09:10
Date Received: 08/03/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	3.9	mg/kg		0.50		SW8021B	08/10/09 16:52 / mlf
Ethylbenzene	3.1	mg/kg		0.50		SW8021B	08/10/09 16:52 / mlf
m+p-Xylenes	15	mg/kg		1.0		SW8021B	08/10/09 16:52 / mlf
o-Xylene	6.4	mg/kg		0.50		SW8021B	08/10/09 16:52 / mlf
Toluene	5.7	mg/kg		0.50		SW8021B	08/10/09 16:52 / mlf
Xylenes, Total	22	mg/kg		0.50		SW8021B	08/10/09 16:52 / mlf
Surr: Trifluorotoluene	72.0	%REC		50-115		SW8021B	08/10/09 16:52 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	1970	mg/kg		54		SW8015M as	08/08/09 17:13 / bah
Surr: o-Terphenyl	98.0	%REC		60-120		SW8015M as	08/08/09 17:13 / bah
Gasoline Range Organics (GRO)	1100	mg/kg		40		SW8015M as	08/06/09 22:17 / mlf
Surr: Trifluorotoluene	83.0	%REC		50-115		SW8015M as	08/06/09 22:17 / mlf

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Batch ID: 23320





QA/QC Summary Report

Client: O and G Environmental Consulting LLC

Report Date: 08/14/09

Project: Iles Grove

Work Order: C09080011

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Batch: 23298										
Method: ASAM10-3										
Sample ID: LCS1-2329809080500		Laboratory Control Sample				Run: COND1-C_090805A				08/05/09 14:03
Conductivity, paste extract		3.48	mmhos/cm	0.010	96	70	130			
Sample ID: C09080015-006ADUP		Sample Duplicate				Run: COND1-C_090805A				08/05/09 14:13
Conductivity, paste extract		0.679	mmhos/cm	0.010				<u>36</u>	20	R
Batch: 23298										
Method: ASAM10-3.2										
Sample ID: LCS1-2329809080500		Laboratory Control Sample				Run: COND1-C_090805A				08/05/09 14:03
pH, sat. paste		6.7	s.u.	0.10	95	70	130			
Sample ID: C09080015-006ADUP		Sample Duplicate				Run: COND1-C_090805A				08/05/09 14:22
pH, sat. paste		7.1	s.u.	0.10				1	20	
Batch: 23298										
Method: SW6010B										
Sample ID: MB-23298	<u>3</u>	Method Blank				Run: ICP2-C_090811A				08/12/09 00:44
Calcium		ND	mg/L	0.2						
Magnesium		ND	mg/L	0.2						
Sodium		ND	mg/L	0.2						
Sample ID: LCS1-23298	<u>3</u>	Laboratory Control Sample				Run: ICP2-C_090811A				08/12/09 00:48
Calcium		589	mg/L	1.0	104	70	130			
Magnesium		148	mg/L	1.0	97	70	130			
Sodium		140	mg/L	1.0	98	70	130			
Sample ID: C09080011-001AMS2	<u>3</u>	Sample Matrix Spike				Run: ICP2-C_090811A				08/12/09 01:00
Calcium		133	mg/L	1.0	105	75	125			
Magnesium		151	mg/L	1.0	106	75	125			
Sodium		173	mg/L	1.0	110	75	125			
Sample ID: C09080011-001AMSD	<u>3</u>	Sample Matrix Spike Duplicate				Run: ICP2-C_090811A				08/12/09 01:04
Calcium		133	mg/L	1.0	105	75	125	0.2	20	
Magnesium		150	mg/L	1.0	104	75	125	1.1	20	
Sodium		170	mg/L	1.0	107	75	125	1.5	20	

Qualifiers:

RL - Analyte reporting limit.
 R - RPD exceeds advisory limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Client: O and G Environmental Consulting LLC

Report Date: 08/14/09

Project: Iles Grove

Work Order: C09080011

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020 Batch: 23292										
Sample ID: MB-23292	8	Method Blank					Run: ICPMS4-C_090805A		08/05/09 14:00	
Arsenic		0.1	mg/kg	0.0004						
Cadmium		0.002	mg/kg	0.0001						
Chromium		0.1	mg/kg	0.002						
Copper		0.2	mg/kg	0.0007						
Lead		0.008	mg/kg	0.0001						
Selenium		0.02	mg/kg	0.0001						
Silver		ND	mg/kg	0.02						
Zinc		0.5	mg/kg	0.003						
Sample ID: LCS3-23292 08/05/09 14:05										
8	Laboratory Control Sample					Run: ICPMS4-C_090805A				
Arsenic		190	mg/kg	0.50	99	89.2	117			
Cadmium		58	mg/kg	0.50	93	77.9	128			
Chromium		120	mg/kg	0.50	99	90	116			
Copper		91	mg/kg	0.50	103	87.7	119			
Lead		130	mg/kg	0.50	94	80.4	125			
Selenium		120	mg/kg	0.50	97	83.1	124			
Silver		73	mg/kg	0.50	97	69.3	136			
Zinc		190	mg/kg	0.50	101	86.4	118			
Sample ID: C09080011-004AMS3 08/05/09 15:11										
8	Sample Matrix Spike					Run: ICPMS4-C_090805A				
Arsenic		38	mg/kg-dry	0.50	105	75	125			
Cadmium		17	mg/kg-dry	0.50	115	75	125			
Chromium		48	mg/kg-dry	0.50	114	75	125			
Copper		52	mg/kg-dry	0.50	118	75	125			
Lead		57	mg/kg-dry	0.50	124	75	125			
Selenium		32	mg/kg-dry	0.50	104	75	125			
Silver		18	mg/kg-dry	0.50	119	75	125			
Zinc		120	mg/kg-dry	0.50	113	75	125			
Sample ID: C09080011-004AMSD 08/05/09 15:16										
8	Sample Matrix Spike Duplicate					Run: ICPMS4-C_090805A				
Arsenic		38	mg/kg-dry	0.50	100	75	125	0.4	20	
Cadmium		17	mg/kg-dry	0.50	106	75	125	3.6	20	
Chromium		47	mg/kg-dry	0.50	108	75	125	0.8	20	
Copper		51	mg/kg-dry	0.50	108	75	125	2.8	20	
Lead		55	mg/kg-dry	0.50	113	75	125	3.2	20	
Selenium		33	mg/kg-dry	0.50	102	75	125	2.8	20	
Silver		17	mg/kg-dry	0.50	109	75	125	3.5	20	
Zinc		120	mg/kg-dry	0.50	108	75	125	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Client: O and G Environmental Consulting LLC

Report Date: 08/14/09

Project: Iles Grove

Work Order: C09080011

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 23331
Sample ID: MB-23331										08/10/09 15:10
Boron		Method Blank								
Boron		ND	mg/kg-dry	0.0009						
Sample ID: LCS1-23331										08/10/09 15:15
Boron		Laboratory Control Sample								
Boron		0.69	mg/kg-dry	0.20	93	70	130			
Sample ID: C09080011-004AMS4										08/10/09 17:08
Boron		Sample Matrix Spike								
Boron		3.6	mg/kg-dry	0.20		70	130			A
Sample ID: C09080011-004AMSD										08/10/09 17:13
Boron		Sample Matrix Spike Duplicate								
Boron		3.6	mg/kg-dry	0.20		70	130	0.4	20	A
Method: SW7471A										Batch: 23290
Sample ID: LCS3-23290										08/07/09 10:57
Mercury		Laboratory Control Sample								
Mercury		5.3	mg/kg	0.050	97	67.5	168			
Sample ID: MB-23290										08/07/09 11:06
Mercury		Method Blank								
Mercury		ND	mg/kg	0.003						
Sample ID: C09080011-004AMS										08/07/09 11:25
Mercury		Sample Matrix Spike								
Mercury		0.53	mg/kg-dry	0.050	102	80	120			
Sample ID: C09080011-004AMSD										08/07/09 11:27
Mercury		Sample Matrix Spike Duplicate								
Mercury		0.53	mg/kg-dry	0.050	105	80	120	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.



QA/QC Summary Report

Client: O and G Environmental Consulting LLC

Report Date: 08/14/09

Project: Iles Grove

Work Order: C09080011

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW7196A									Batch: 23346
Sample ID: LCS-2	Laboratory Control Sample								Run: HACH DR3000_090810A 08/10/09 14:22
Chromium, Hexavalent	0.0976	mg/L	0.010	98	90	110			
Sample ID: MB-23346	Method Blank								Run: HACH DR3000_090810A 08/10/09 14:23
Chromium, Hexavalent	0.02	mg/L	0.003						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Client: O and G Environmental Consulting LLC

Report Date: 08/14/09

Project: Iles Grove

Work Order: C09080011

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8015M as D Batch: 23320										
Sample ID: MB-23320	3	Method Blank								
										Run: FID1-C_090807A 08/08/09 05:44
Diesel Range Organics (DRO)		ND	mg/kg	10						
Total Extractable Hydrocarbons		ND	mg/kg	10						
Surr: o-Terphenyl				0.020	92	60	120			
Sample ID: LCS-23320	3	Laboratory Control Sample								
										Run: FID1-C_090807A 08/08/09 08:02
Diesel Range Organics (DRO)		62.1	mg/kg	10	93	62	103			
Total Extractable Hydrocarbons		70.6	mg/kg	10	94	64	106			
Surr: o-Terphenyl				0.020	95	69	111			
Sample ID: LCSD-23320	3	Laboratory Control Sample Duplicate								
										Run: FID1-C_090807A 08/08/09 08:48
Diesel Range Organics (DRO)		59.9	mg/kg	10	90	62	103	3.7	20	
Total Extractable Hydrocarbons		63.4	mg/kg	10	83	64	106	11	20	
Surr: o-Terphenyl				0.020	91	69	111			
Sample ID: C09080011-005AMS	3	Sample Matrix Spike								
										Run: FID1-C_090807A 08/08/09 20:16
Diesel Range Organics (DRO)		1810	mg/kg	58	<u>-40</u>	60	140			S
Total Extractable Hydrocarbons		2110	mg/kg	58	<u>-101</u>	60	140			S
Surr: o-Terphenyl				0.12	102	60	120			
- Spike exceeds acceptance limit. LCS is acceptable.										
Sample ID: C09080011-005AMSD	3	Sample Matrix Spike Duplicate								
										Run: FID1-C_090807A 08/08/09 21:48
Diesel Range Organics (DRO)		1430	mg/kg	55	<u>-147</u>	60	140	23	20	SR
Total Extractable Hydrocarbons		1750	mg/kg	55	<u>-205</u>	60	140	19	20	S
Surr: o-Terphenyl				0.11	91	60	120			
- Spike exceeds acceptance limit. LCS is acceptable.										
Method: SW8015M as G Batch: 23281										
Sample ID: MB-23281	2	Method Blank								
										Run: PIDFID1-C_090807A 08/06/09 14:38
Gasoline Range Organics (GRO)		ND	mg/kg	4.0						
Surr: Trifluorotoluene				0.40	82	50	115			
Sample ID: LCSG-23281	2	Laboratory Control Sample								
										Run: PIDFID1-C_090807A 08/06/09 15:14
Gasoline Range Organics (GRO)		15	mg/kg	4.0	75	70	116			
Surr: Trifluorotoluene				0.40	79	55	115			
Sample ID: C09080011-005AMSG	2	Sample Matrix Spike								
										Run: PIDFID1-C_090807A 08/06/09 22:53
Gasoline Range Organics (GRO)		670	mg/kg	40	<u>-2030</u>	70	130			S
Surr: Trifluorotoluene				4.0	84	50	115			
Sample ID: C09080011-005AMSD	2	Sample Matrix Spike Duplicate								
										Run: PIDFID1-C_090807A 08/06/09 23:28
Gasoline Range Organics (GRO)		770	mg/kg	40	<u>-1540</u>	70	130	14	30	S
Surr: Trifluorotoluene				4.0	84	50	115	0	20	

Qualifiers:

RL - Analyte reporting limit.

R - RPD exceeds advisory limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Client: O and G Environmental Consulting LLC
Project: Iles Grove

Report Date: 08/14/09
Work Order: C09080011

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8021B Batch: 23281										
Sample ID: C09080011-001AMSB Z Sample Matrix Spike Run: PIDFID1-C_090805A 08/05/09 17:31										
Benzene		1.0	mg/kg	0.050	85	70	130			
Ethylbenzene		1.6	mg/kg	0.050	71	70	130			
m+p-Xylenes		5.1	mg/kg	0.100	<u>12</u>	70	130			S
o-Xylene		1.4	mg/kg	0.050	<u>64</u>	70	130			S
Toluene		1.1	mg/kg	0.050	106	70	130			
Xylenes, Total		6.5	mg/kg	0.050	<u>29</u>	70	130			S
Surr: Trifluorotoluene				0.050	76	50	115			
Sample ID: C09080011-001AMSD Z Sample Matrix Spike Duplicate Run: PIDFID1-C_090805A 08/05/09 18:06										
Benzene		1.3	mg/kg	0.050	113	70	130	<u>24</u>	20	R
Ethylbenzene		1.9	mg/kg	0.050	102	70	130	18	20	
m+p-Xylenes		5.8	mg/kg	0.100	<u>49</u>	70	130	14	20	S
o-Xylene		1.7	mg/kg	0.050	92	70	130	18	20	
Toluene		1.3	mg/kg	0.050	<u>135</u>	70	130	<u>23</u>	20	SR
Xylenes, Total		7.5	mg/kg	0.050	<u>64</u>	70	130	15	20	S
Surr: Trifluorotoluene				0.050	96	50	115	0	10	
Sample ID: LCSB-23281 Z Laboratory Control Sample Run: PIDFID1-C_090805A 08/05/09 22:12										
Benzene		0.97	mg/kg	0.050	97	70	130			
Ethylbenzene		0.98	mg/kg	0.050	98	70	130			
m+p-Xylenes		1.9	mg/kg	0.10	95	70	130			
o-Xylene		1.0	mg/kg	0.050	102	70	130			
Toluene		0.97	mg/kg	0.050	97	70	130			
Xylenes, Total		2.9	mg/kg	0.050	98	70	130			
Surr: Trifluorotoluene				0.050	74	70	130			
Sample ID: MB-23281 Z Method Blank Run: PIDFID1-C_090805A 08/05/09 23:22										
Benzene		ND	mg/kg	0.050						
Ethylbenzene		ND	mg/kg	0.050						
m+p-Xylenes		ND	mg/kg	0.10						
o-Xylene		ND	mg/kg	0.050						
Toluene		ND	mg/kg	0.050						
Xylenes, Total		ND	mg/kg	0.050						
Surr: Trifluorotoluene				0.050	74	50	115			
Sample ID: C09080011-001AMSB Z Sample Matrix Spike Run: PIDFID1-C_090805B 08/05/09 17:31										
Benzene		1.1	mg/kg	0.050	89	60	140			
Surr: Trifluorotoluene				0.050	76	50	115			
Sample ID: C09080011-001AMSD Z Sample Matrix Spike Duplicate Run: PIDFID1-C_090805B 08/05/09 18:06										
Benzene		1.4	mg/kg	0.050	121	60	140	<u>26</u>	20	R
Surr: Trifluorotoluene				0.050	96	50	115	0	10	
Sample ID: LCSB-23281 Z Laboratory Control Sample Run: PIDFID1-C_090805B 08/05/09 22:12										
Benzene		0.97	mg/kg	0.050	97	70	130			

Qualifiers:

RL - Analyte reporting limit.
 R - RPD exceeds advisory limit.

ND - Not detected at the reporting limit.
 S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Client: O and G Environmental Consulting LLC
Project: Iles Grove

Report Date: 08/14/09
Work Order: C09080011

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8021B										Batch: 23281
Sample ID: LCSB-23281										2 Laboratory Control Sample
Surr: Trifluorotoluene										Run: PIDFID1-C_090805B
				0.050	74	70	115			08/05/09 22:12
Sample ID: MB-23281										2 Method Blank
Benzene										Run: PIDFID1-C_090805B
		ND	mg/kg	0.050						08/05/09 23:22
Surr: Trifluorotoluene										
Sample ID: MB-23281										7 Method Blank
Benzene										Run: PIDFID1-C_090810A
		ND	mg/kg	0.050						08/10/09 15:06
Ethylbenzene										
		ND	mg/kg	0.050						
m+p-Xylenes										
		ND	mg/kg	0.10						
o-Xylene										
		ND	mg/kg	0.050						
Toluene										
		ND	mg/kg	0.050						
Xylenes, Total										
		ND	mg/kg	0.050						
Surr: Trifluorotoluene										
Sample ID: LCSB-23281										7 Laboratory Control Sample
Benzene										Run: PIDFID1-C_090810A
		1.1	mg/kg	0.050	108	70	130			08/10/09 15:41
Ethylbenzene										
		1.1	mg/kg	0.050	105	70	130			
m+p-Xylenes										
		2.1	mg/kg	0.10	105	70	130			
o-Xylene										
		1.1	mg/kg	0.050	105	70	130			
Toluene										
		1.1	mg/kg	0.050	105	70	130			
Xylenes, Total										
		3.2	mg/kg	0.050	105	70	130			
Surr: Trifluorotoluene										
				0.050	86	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Client: O and G Environmental Consulting LLC

Report Date: 08/14/09

Project: Iles Grove

Work Order: C09080011

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C Batch: B_40533										
Sample ID: MB-40533 19 Method Blank Run: SUB-B134144 08/10/09 16:58										
Acenaphthene		ND	mg/kg							
Anthracene		ND	mg/kg							
Benzo(a)anthracene		ND	mg/kg							
Benzo(a)pyrene		ND	mg/kg							
Benzo(b)fluoranthene		ND	mg/kg							
Benzo(k)fluoranthene		ND	mg/kg							
Chrysene		ND	mg/kg							
Dibenzo(a,h)anthracene		ND	mg/kg							
Fluoranthene		ND	mg/kg							
Fluorene		ND	mg/kg							
Indeno(1,2,3-cd)pyrene		ND	mg/kg							
Naphthalene		ND	mg/kg							
Pyrene		ND	mg/kg							
Surr: 2,4,6-Tribromophenol					85	65	124			
Surr: 2-Fluorobiphenyl					76	67	102			
Surr: 2-Fluorophenol					73	50	108			
Surr: Nitrobenzene-d5					65	62	95			
Surr: Phenol-d5					62	56	102			
Surr: Terphenyl-d14					95	65	121			
Sample ID: B09080171-003AMS 8 Sample Matrix Spike Run: SUB-B134144 08/10/09 18:29										
Acenaphthene		2.7	mg/kg-dry	0.40	68	68	95	0	19	
Pyrene		3.0	mg/kg-dry	0.40	76	70	106	0	36	
Surr: 2,4,6-Tribromophenol				0.40	92	65	124			
Surr: 2-Fluorobiphenyl				0.40	77	67	102			
Surr: 2-Fluorophenol				0.40	75	50	108			
Surr: Nitrobenzene-d5				0.40	69	62	95			
Surr: Phenol-d5				0.40	66	56	102			
Surr: Terphenyl-d14				0.40	84	65	121			
Sample ID: B09080171-003AMSD 8 Sample Matrix Spike Duplicate Run: SUB-B134144 08/10/09 19:00										
Acenaphthene		2.7	mg/kg-dry	0.40	69	68	95	1.2	19	
Pyrene		3.3	mg/kg-dry	0.40	83	70	106	8.3	36	
Surr: 2,4,6-Tribromophenol				0.40	95	65	124			
Surr: 2-Fluorobiphenyl				0.40	76	67	102			
Surr: 2-Fluorophenol				0.40	70	50	108			
Surr: Nitrobenzene-d5				0.40	66	62	95			
Surr: Phenol-d5				0.40	67	56	102			
Surr: Terphenyl-d14				0.40	89	65	121			
Sample ID: LCS-40533 19 Laboratory Control Sample Run: SUB-B134144 08/10/09 17:29										
Acenaphthene		2.3	mg/kg	0.33	69	68	95			
Anthracene		2.4	mg/kg	0.33	71	67	109			
Benzo(a)anthracene		2.6	mg/kg	0.33	78	66	115			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Client: O and G Environmental Consulting LLC

Report Date: 08/14/09

Project: Iles Grove

Work Order: C09080011

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: B_40533
Sample ID: LCS-40533	19	Laboratory Control Sample					Run: SUB-B134144			08/10/09 17:29
Benzo(a)pyrene		2.1	mg/kg	0.33	64	60	115			
Benzo(b)fluoranthene		2.8	mg/kg	0.33	83	57	123			
Benzo(k)fluoranthene		2.8	mg/kg	0.33	85	57	110			
Chrysene		2.2	mg/kg	0.33	66	63	107			
Dibenzo(a,h)anthracene		2.5	mg/kg	0.33	76	65	110			
Fluoranthene		2.7	mg/kg	0.33	80	79	110			
Fluorene		2.4	mg/kg	0.33	71	69	98			
Indeno(1,2,3-cd)pyrene		2.5	mg/kg	0.33	76	57	126			
Naphthalene		2.2	mg/kg	0.33	66	56	100			
Pyrene		2.4	mg/kg	0.33	71	70	106			
Surr: 2,4,6-Tribromophenol				0.33	97	65	124			
Surr: 2-Fluorobiphenyl				0.33	80	67	102			
Surr: 2-Fluorophenol				0.33	70	50	108			
Surr: Nitrobenzene-d5				0.33	67	62	95			
Surr: Phenol-d5				0.33	65	56	102			
Surr: Terphenyl-d14				0.33	80	65	121			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

PLEASE PRINT- Provide as much information as possible.

Company Name: <i>O&G Environmental Consulting</i>	Project Name, PWS, Permit, Etc. <i>Iles Grove</i>	Sample Origin State: <i>Colorado</i>	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address: <i>350 WEST A STREET, SUITE 201 CASPER, WY 82601</i>	Contact Name: <i>THOMAS JAAP</i>	Phone/Fax: <i>307-234-3395</i>	Email: <i>tomj@ogenv.com</i>
Invoice Address: <i>SAME AS MAILING</i>	Invoice Contact & Phone: <i>SAME AS ABOVE</i>	Purchase Order: <i>398.02</i>	Sampler: (Please Print) <i>THOMAS JAAP</i>
Special Report/Formats – ELI must be notified prior to sample submittal for the following:	Quote/Bottle Order:		

DW A2LA
 GSA EDD/EDT (Electronic Data)
 POTW/WWTP **Format:** _____
 State: _____ LEVEL IV
 Other: _____ NELAC

Number of Containers Sample Type: <input type="checkbox"/> A W <input type="checkbox"/> S <input type="checkbox"/> V <input type="checkbox"/> B <input type="checkbox"/> O <input type="checkbox"/> Air <input type="checkbox"/> Water <input type="checkbox"/> Soils/Solids <input type="checkbox"/> Vegetation <input type="checkbox"/> Bioassay <input type="checkbox"/> Other	ANALYSIS REQUESTED										R U S H	Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page Comments:	Shipped by: <i>[Signature]</i>
	SEE ATTACHED	Normal Turnaround (TAT)											
												Receipt Temp: <i>8</i> °C	On Ice: Yes <input type="checkbox"/> No <input type="checkbox"/>
												Custody Seal Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Bottles/Coolers B C
												Intact Y N	Signature Match Y N

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	BTEX EPA 8020	TPH-GRO 8015M	TPH-DRO 8015M	TPH-O&G 8015M								
<i>1 IG-1</i>	<i>7/31/09</i>	<i>805</i>	<i>Soils</i>											X	X
<i>2 IG-2</i>	<i>"</i>	<i>815</i>	<i>"</i>											X	X
<i>3 IG-3</i>	<i>"</i>	<i>830</i>	<i>"</i>											X	X
<i>4 IG-4</i>	<i>"</i>	<i>840</i>	<i>"</i>											X	X
<i>5 IG-5</i>	<i>"</i>	<i>910</i>		X	X	X	X							X	
6															
7															
8															
9															
10															

LABORATORY USE ONLY

Custody Record MUST be Signed	Relinquished by (print): <i>THOMAS JAAP</i>	Date/Time: <i>8/3/09 9:25</i>	Signature: <i>Thomas J. Jaap</i>	Received by (print):	Date/Time:	Signature:
	Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
	Sample Disposal:	Return to Client:	Lab Disposal:	Received by Laboratory:	Date/Time: <i>8-3-09 9:25</i>	Signature: <i>[Signature]</i>

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

Sample # IG-1 through IG-4

Table
910-1

CONCENTRATION LEVELS ¹

Contaminant of Concern	Concentrations
Organic Compounds in Soil	
TPH (total volatile and extractable petroleum hydrocarbons)	500 mg/kg
Benzene	0.17 mg/kg ²
Toluene	85 mg/kg ²
Ethylbenzene	100 mg/kg ²
Xylenes (total)	175 mg/kg ²
Acenaphthene	1,000 mg/kg ²
Anthracene	1,000 mg/kg ²
Benzo(A)anthracene	0.22 mg/kg ²
Benzo(B)fluoranthene	0.22 mg/kg ²
Benzo(K)fluoranthene	2.2 mg/kg ²
Benzo(A)pyrene	0.022 mg/kg ²
Chrysene	22 mg/kg ²
Dibenzo(A,H)anthracene	0.022 mg/kg ²
Fluoranthene	1,000 mg/kg ²
Fluorene	1,000 mg/kg ²

Sample # IG-1 through IG-4

Indeno(1,2,3,C,D)pyrene	0.22 mg/kg ²
Napthalene	23 mg/kg ²
Pyrene	1,000 mg/kg ²
Inorganics in Soils	.
Electrical Conductivity (EC)	< 4 mmhos/cm or 2x background
Sodium Adsorption Ratio (SAR)	< 12 ⁵
pH	6-9
Metals in Soils	.
Arsenic	0.39 mg/kg ²
Barium (LDNR True Total Barium)	15,000 mg/kg ²
Boron (Hot Water Soluble)	2 mg/l ³
Cadmium	70 mg/kg ^{3,6}
Chromium (III)	120,000 mg/kg ²
Chromium (VI)	23 mg/kg ^{2,6}
Copper	3,100 mg/kg ²
Lead (inorganic)	400 mg/kg ²
Mercury	23 mg/kg ²
Nickel (soluble salts)	1,600 mg/kg ^{2,6}
Selenium	390 mg/kg ^{2,6}

Energy Laboratories Inc

Workorder Receipt Checklist



O and G Environmental Consulting LLC

C09080011

Login completed by: Kimberly Humiston

Date and Time Received: 8/3/2009 9:25 AM

Reviewed by:

Received by: klh

Reviewed Date:

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature:	8°C On Ice		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

Contact and Corrective Action Comments:

None



CLIENT: O and G Environmental Consulting LLC

Date: 14-Aug-09

Project: Iles Grove

CASE NARRATIVE

Sample Delivery Group: C09080011

BRANCH LABORATORY SUBCONTRACT ANALYSIS

Tests Associated with Analyst identified as ELI-B were subcontracted to Energy Laboratories Billings Branch, EPA Number MT00005.

Tests Associated with Analyst identified as ELI-CS were subcontracted to Energy Laboratories College Station Branch, EPA Number TX01520.

ORIGINAL SAMPLE SUBMITTAL(S)

All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)

Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS

Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS

The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES

All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS USING EPA 505

Data for Atrazine and Simazine are reported from EPA 525.2, not from EPA 505. Data reported by ELI using EPA method 505 reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS

Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS

eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT
eli-r - Energy Laboratories, Inc. - Rapid City, SD
eli-t - Energy Laboratories, Inc. - College Station, TX

CERTIFICATIONS:

USEPA: WY00002, Radiochemical WY00937; FL-DOH NELAC: E87641, Radiochemical E871017; California: 02118CA; Oregon: WY200001; Utah: 3072350515; Virginia: 00057; Washington: C1903

ISO 17025 DISCLAIMER:

The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER, WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

Laboratory Analyses & COC
September 16, 2009



ANALYTICAL SUMMARY REPORT

October 01, 2009

Thomas Jaap
350 W A St
Casper, WY 82601

Workorder No.: C09090702

Project Name: Iles Grove

Energy Laboratories, Inc. received the following 3 samples for Thomas Jaap on 9/18/2009 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C09090702-001	IG-6	09/16/09 14:25	09/18/09	Soil	Ultrasonic Extraction Diesel Range Organics Gasoline Range Organics SW8021B VOCs, BTEX Volatile Organics, Methanol Extraction
C09090702-002	IG-7	09/16/09 15:35	09/18/09	Soil	Same As Above
C09090702-003	IG-8	09/17/09 12:50	09/18/09	Soil	Same As Above

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:


Donny Juarez
Soils Supervisor



LABORATORY ANALYTICAL REPORT

Client: Thomas Jaap
Project: Iles Grove
Lab ID: C09090702-001
Client Sample ID: IG-6

Report Date: 10/01/09
Collection Date: 09/16/09 14:25
Date Received: 09/18/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg		0.050		SW8021B	09/21/09 23:19 / mlf
Ethylbenzene	ND	mg/kg		0.050		SW8021B	09/21/09 23:19 / mlf
m+p-Xylenes	ND	mg/kg		0.10		SW8021B	09/21/09 23:19 / mlf
o-Xylene	ND	mg/kg		0.050		SW8021B	09/21/09 23:19 / mlf
Toluene	ND	mg/kg		0.050		SW8021B	09/21/09 23:19 / mlf
Surr: Trifluorotoluene	89.0	%REC		50-115		SW8021B	09/21/09 23:19 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	ND	mg/kg		9.8		SW8015B	09/30/09 16:02 / ph
Total Extractable Hydrocarbons	ND	mg/kg		9.8		SW8015B	09/30/09 16:02 / ph
Surr: o-Terphenyl	89.0	%REC		50-150		SW8015B	09/30/09 16:02 / ph
Gasoline Range Organics (GRO)	ND	mg/kg		2.0		SW8015B	09/18/09 19:45 / mlf
Surr: Trifluorotoluene	117	%REC	S	50-115		SW8015B	09/18/09 19:45 / mlf

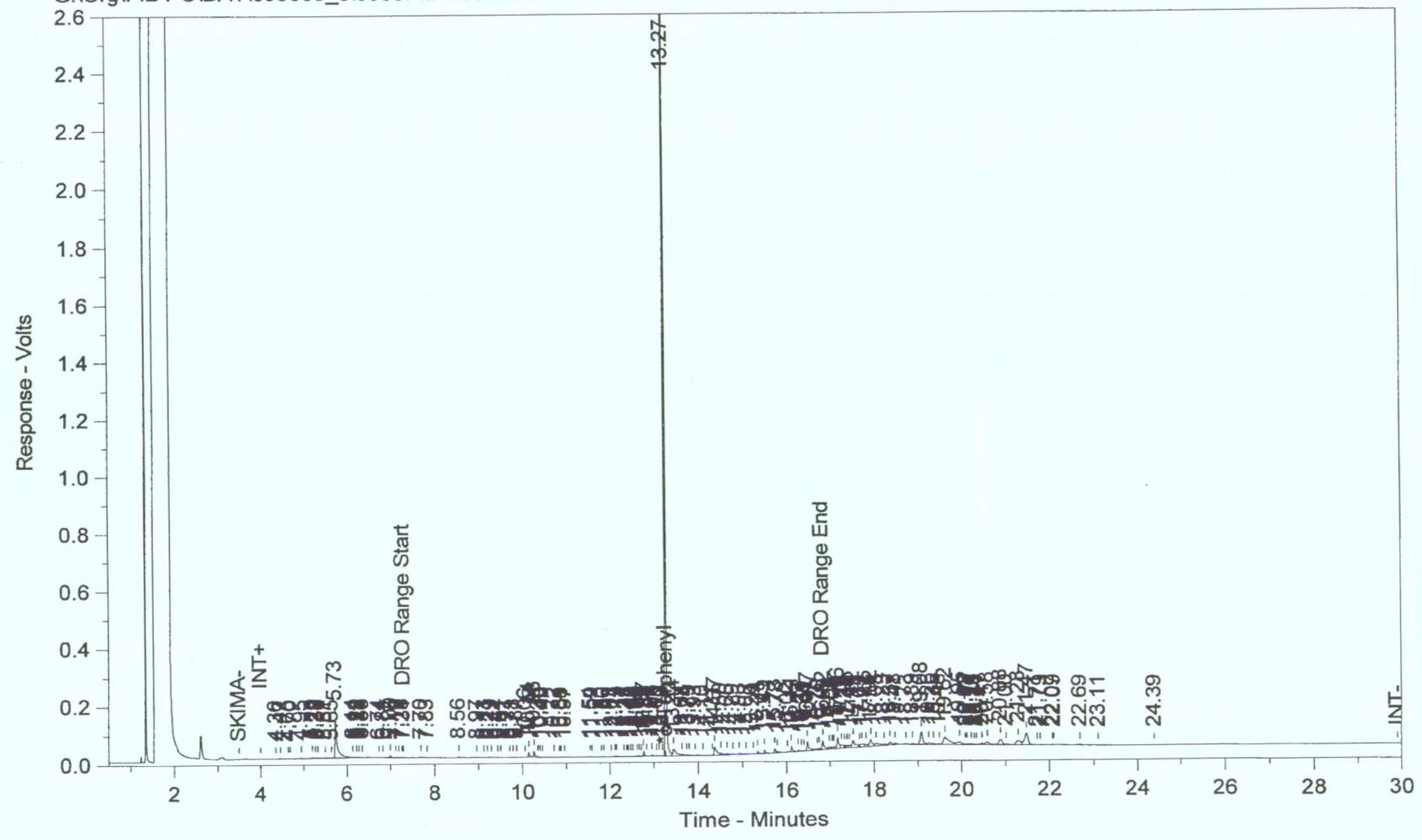
Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
S - Spike recovery outside of advisory limits.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Batch ID: 23863

G:\Org\FID1-C\DAT\093009_c\0930FID1.0009.RAW

C09090702-001B ;0930FID1, \$HC-8015-DRO-S,





LABORATORY ANALYTICAL REPORT

Client: Thomas Jaap
Project: Iles Grove
Lab ID: C09090702-002
Client Sample ID: IG-7

Report Date: 10/01/09
Collection Date: 09/16/09 15:35
Date Received: 09/18/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg		0.10		SW8021B	09/21/09 23:57 / mlf
Ethylbenzene	ND	mg/kg		0.10		SW8021B	09/21/09 23:57 / mlf
m+p-Xylenes	0.90	mg/kg		0.20		SW8021B	09/21/09 23:57 / mlf
o-Xylene	0.17	mg/kg		0.10		SW8021B	09/21/09 23:57 / mlf
Toluene	ND	mg/kg		0.10		SW8021B	09/21/09 23:57 / mlf
Surr: Trifluorotoluene	96.0	%REC		50-115		SW8021B	09/21/09 23:57 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	496	mg/kg		9.9		SW8015B	09/30/09 16:48 / ph
Total Extractable Hydrocarbons	612	mg/kg		9.9		SW8015B	09/30/09 16:48 / ph
Surr: o-Terphenyl	96.0	%REC		50-150		SW8015B	09/30/09 16:48 / ph
Gasoline Range Organics (GRO)	122	mg/kg		4.0		SW8015B	09/21/09 23:57 / mlf
Surr: Trifluorotoluene	95.0	%REC		50-115		SW8015B	09/21/09 23:57 / mlf

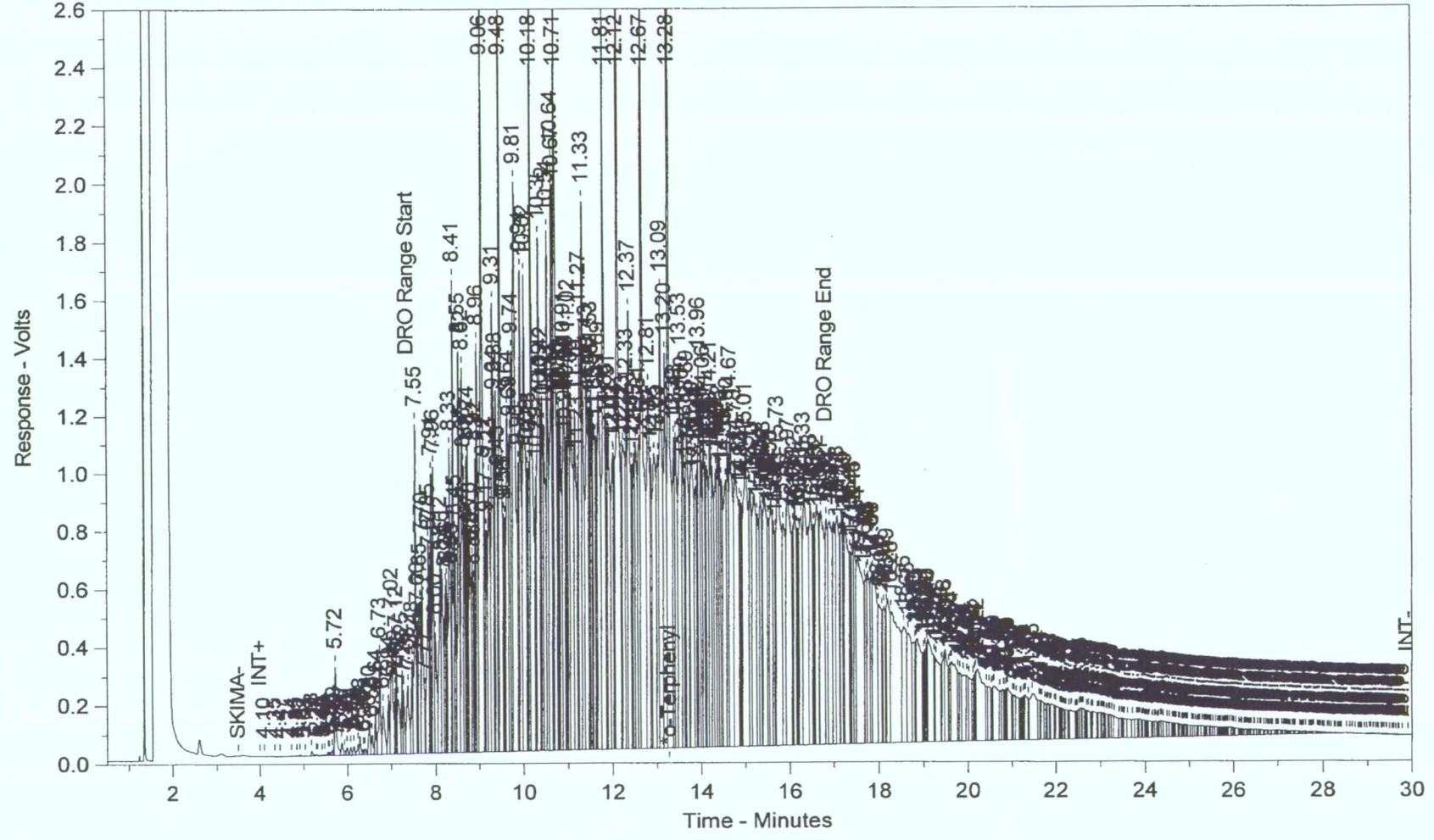
Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Batch ID: 23863

G:\Org\FID1-C\DAT\093009_c\0930FID1.0010.RAW

C09090702-002B ;0930FID1, \$HC-8015-DRO-S,





LABORATORY ANALYTICAL REPORT

Client: Thomas Jaap
Project: Iles Grove
Lab ID: C09090702-003
Client Sample ID: IG-8

Report Date: 10/01/09
Collection Date: 09/17/09 12:50
Date Received: 09/18/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	3.5	mg/kg		0.10		SW8021B	09/22/09 00:33 / mlf
Ethylbenzene	0.80	mg/kg		0.10		SW8021B	09/22/09 00:33 / mlf
m+p-Xylenes	2.9	mg/kg		0.20		SW8021B	09/22/09 00:33 / mlf
o-Xylene	1.1	mg/kg		0.10		SW8021B	09/22/09 00:33 / mlf
Toluene	ND	mg/kg		0.10		SW8021B	09/22/09 00:33 / mlf
Surr: Trifluorotoluene	86.0	%REC		50-115		SW8021B	09/22/09 00:33 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	31	mg/kg		9.8		SW8015B	09/30/09 17:34 / ph
Total Extractable Hydrocarbons	57	mg/kg		9.8		SW8015B	09/30/09 17:34 / ph
Surr: o-Terphenyl	84.0	%REC		50-150		SW8015B	09/30/09 17:34 / ph
Gasoline Range Organics (GRO)	509	mg/kg		20		SW8015B	09/22/09 18:06 / mlf
Surr: Trifluorotoluene	85.0	%REC		50-115		SW8015B	09/22/09 18:06 / mlf

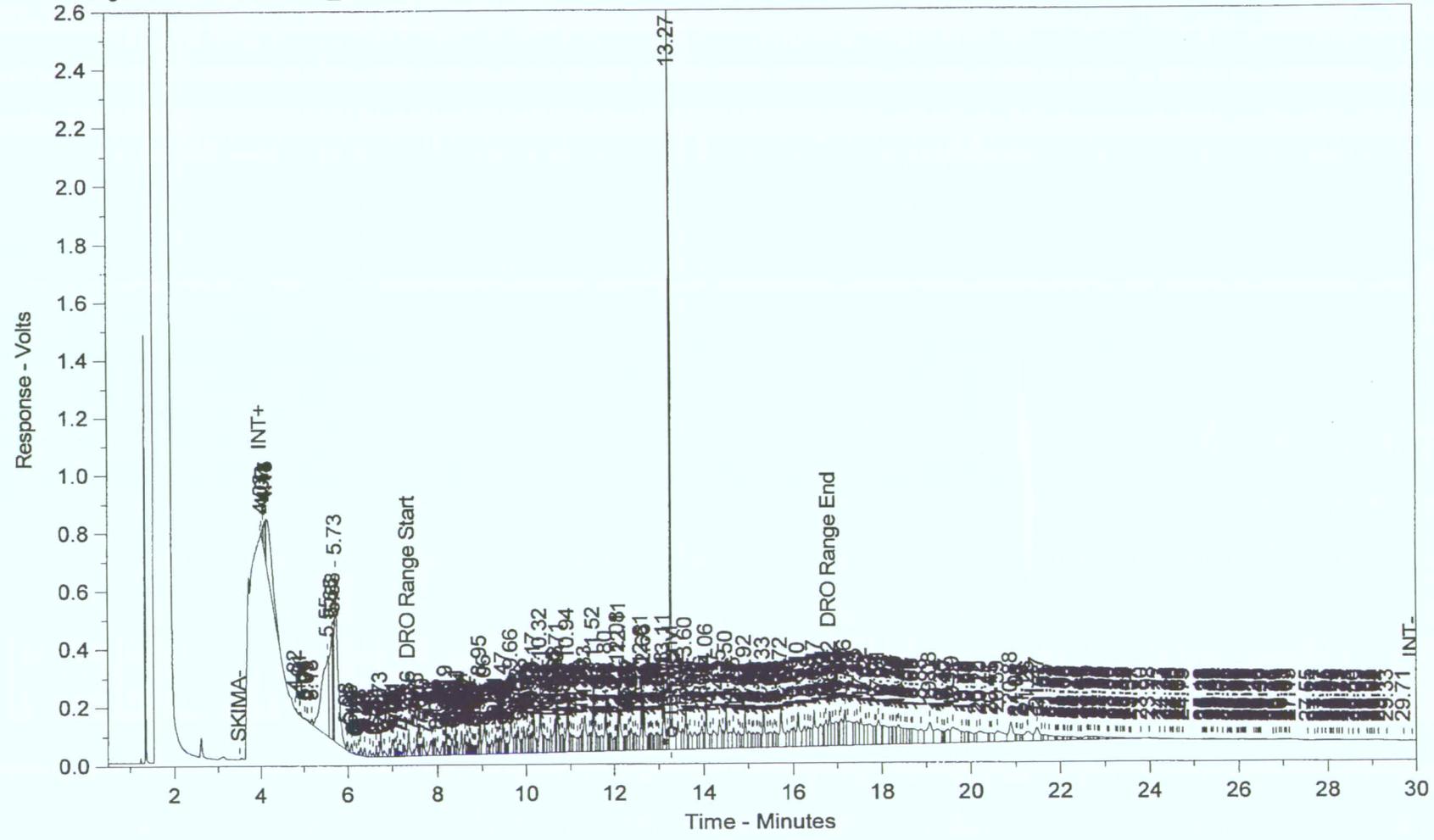
Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Batch ID: 23863

G:\Org\FID1-C\DAT\093009_c\0930FID1.0011.RAW

C09090702-003B ;0930FID1, \$HC-8015-DRO-S,





QA/QC Summary Report

Client: Thomas Jaap
Project: Iles Grove

Report Date: 10/01/09
Work Order: C09090702

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8015B										Batch: 23783
Sample ID: MB-23783	2	Method Blank								
Gasoline Range Organics (GRO)		ND	mg/kg	2.0						
Surr: Trifluorotoluene				0.40	111	70	130			
Run: PIDFID1-C_090918A										09/18/09 18:00
Sample ID: LCSG-23783	2	Laboratory Control Sample								
Gasoline Range Organics (GRO)		22.7	mg/kg	2.0	111	70	130			
Surr: Trifluorotoluene				0.40	120	70	130			
Run: PIDFID1-C_090918A										09/18/09 18:35
Sample ID: LCSDG-23783	2	Laboratory Control Sample Duplicate								
Gasoline Range Organics (GRO)		21.3	mg/kg	2.0	104	70	130			
Surr: Trifluorotoluene				0.40	113	70	130			
Run: PIDFID1-C_090918A										09/18/09 19:10
Sample ID: C09090702-001AMSG	2	Sample Matrix Spike								
Gasoline Range Organics (GRO)		24.7	mg/kg	2.0	116	70	130			
Surr: Trifluorotoluene				0.40	121	70	130			
Run: PIDFID1-C_090918A										09/18/09 20:20
Sample ID: C09090702-001AMSD	2	Sample Matrix Spike Duplicate								
Gasoline Range Organics (GRO)		22.2	mg/kg	2.0	103	70	130	11	20	
Surr: Trifluorotoluene				0.40	109	70	130			
Run: PIDFID1-C_090918A										09/18/09 20:56
Method: SW8015B										Batch: 23863
Sample ID: MB-23863	3	Method Blank								
Diesel Range Organics (DRO)		ND	mg/kg	10						
Total Extractable Hydrocarbons		ND	mg/kg	10						
Surr: o-Terphenyl				0.020	101	50	150			
Run: FID1-C_090930A										09/30/09 12:13
Sample ID: LCS-23863	3	Laboratory Control Sample								
Diesel Range Organics (DRO)		64.7	mg/kg	10	97	60	140			
Total Extractable Hydrocarbons		67.7	mg/kg	10	101	60	140			
Surr: o-Terphenyl				0.020	101	50	150			
Run: FID1-C_090930A										09/30/09 12:59
Sample ID: LCSD-23863	3	Laboratory Control Sample Duplicate								
Diesel Range Organics (DRO)		61.2	mg/kg	10	92	60	140	5.4	20	
Total Extractable Hydrocarbons		64.2	mg/kg	10	96	60	140	5.3	20	
Surr: o-Terphenyl				0.020	96	50	150			
Run: FID1-C_090930A										09/30/09 13:45
Sample ID: C09090773-001AMS	3	Sample Matrix Spike								
Diesel Range Organics (DRO)		873	mg/kg	9.8	-24	60	140			S
Total Extractable Hydrocarbons		899	mg/kg	9.8	-20	60	140			S
Surr: o-Terphenyl				0.020	93	50	150			
Run: FID1-C_090930A										09/30/09 19:06
Sample ID: C09090773-001AMSD	3	Sample Matrix Spike Duplicate								
Diesel Range Organics (DRO)		1010	mg/kg	9.8	182	60	140	14	20	S
Total Extractable Hydrocarbons		1040	mg/kg	9.8	189	60	140	14	20	S
Surr: o-Terphenyl				0.020	98	50	150			
Run: FID1-C_090930A										09/30/09 19:52

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Client: Thomas Jaap

Project: Iles Grove

Report Date: 10/01/09

Work Order: C09090702

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8021B Batch: 23783										
Sample ID: MB-23783	6	Method Blank		Run: PIDELCD1-C_090921B			09/21/09 21:30			
Benzene		ND	mg/kg	0.050						
Ethylbenzene		ND	mg/kg	0.050						
m+p-Xylenes		ND	mg/kg	0.10						
o-Xylene		ND	mg/kg	0.050						
Toluene		ND	mg/kg	0.050						
Surr: Trifluorotoluene				0.050	91	50	115			
Sample ID: LCSB-23783	6	Laboratory Control Sample		Run: PIDELCD1-C_090921B			09/21/09 22:07			
Benzene		1.2	mg/kg	0.050	115	70	130			
Ethylbenzene		1.1	mg/kg	0.050	111	70	130			
m+p-Xylenes		2.3	mg/kg	0.10	113	70	130			
o-Xylene		1.1	mg/kg	0.050	112	70	130			
Toluene		1.1	mg/kg	0.050	113	70	130			
Surr: Trifluorotoluene				0.050	99	70	130			
Sample ID: LCSDB-23783	6	Laboratory Control Sample Duplicate		Run: PIDELCD1-C_090921B			09/21/09 22:42			
Benzene		1.2	mg/kg	0.050	117	70	130	1.3	20	
Ethylbenzene		1.1	mg/kg	0.050	113	70	130	1.2	20	
m+p-Xylenes		2.3	mg/kg	0.10	114	70	130	1.2	20	
o-Xylene		1.1	mg/kg	0.050	114	70	130	1.3	20	
Toluene		1.2	mg/kg	0.050	114	70	130	0.9	20	
Surr: Trifluorotoluene				0.050	99	70	130	0	10	
Sample ID: C09090702-003AMSB	6	Sample Matrix Spike		Run: PIDELCD1-C_090921B			09/22/09 01:11			
Benzene		5.6	mg/kg	0.10	<u>210</u>	70	130			S
Ethylbenzene		2.4	mg/kg	0.10	<u>161</u>	70	130			S
m+p-Xylenes		6.6	mg/kg	0.20	<u>185</u>	70	130			S
o-Xylene		2.2	mg/kg	0.10	<u>110</u>	70	130			
Toluene		1.5	mg/kg	0.10	<u>145</u>	70	130			S
Surr: Trifluorotoluene				0.10	<u>86</u>	50	115			
Sample ID: C09090702-003AMSD	6	Sample Matrix Spike Duplicate		Run: PIDELCD1-C_090921B			09/22/09 01:47			
Benzene		4.7	mg/kg	0.100	127	70	130	16	20	
Ethylbenzene		2.1	mg/kg	0.100	127	70	130	15	20	
m+p-Xylenes		5.2	mg/kg	0.20	115	70	130	<u>24</u>	20	R
o-Xylene		2.3	mg/kg	0.100	122	70	130	5.4	20	
Toluene		1.3	mg/kg	0.100	128	70	130	12	20	
Surr: Trifluorotoluene				0.100	84	50	115	0	10	

Qualifiers:

RL - Analyte reporting limit.
 R - RPD exceeds advisory limit.

ND - Not detected at the reporting limit.
 S - Spike recovery outside of advisory limits.



Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: THOMAS JAAP	Project Name, PWS, Permit, Etc. ILES GROVE	Sample Origin State: COLORADO	EPA/State Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Report Mail Address: 350 WEST A STREET CASPER WY 82601	Contact Name: THOMAS JAAP	Phone/Fax: 307-267-6062	Email: tjaap@bresnan.net
Invoice Address: SAME AS MAILING	Invoice Contact & Phone: SAME AS ABOVE	Purchase Order:	Quote/Bottle Order:

Special Report/Formats: <input type="checkbox"/> DW <input type="checkbox"/> POTWWWT <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____	<input type="checkbox"/> EDD/EDT (Electronic Data) Format: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC	Number of Containers Sample Type: A W S V B O D W Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water	ANALYSIS REQUESTED										SEE ATTACHED Standard Turnaround (TAT)	R U S H	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page Comments:	Shipped by: HAW.																																																																																																																																																																										
			<table border="1"> <thead> <tr> <th>SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)</th> <th>Collection Date</th> <th>Collection Time</th> <th>MATRIX</th> <th>TPH-GRO</th> <th>TPH-DRO</th> <th>TPH-OEG</th> <th>BTEX</th> <th>EPA</th> <th>BOZO</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1 IG-6</td> <td>9-16-09</td> <td>1425</td> <td>Soil</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2 IG-7</td> <td>9-16-09</td> <td>1535</td> <td>"</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3 IG-8</td> <td>9-17-09</td> <td>1250</td> <td>"</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> </tr> <tr> <td>5</td> <td></td> </tr> <tr> <td>6</td> <td></td> </tr> <tr> <td>7</td> <td></td> </tr> <tr> <td>8</td> <td></td> </tr> <tr> <td>9</td> <td></td> </tr> <tr> <td>10</td> <td></td> </tr> </tbody> </table>													SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	TPH-GRO	TPH-DRO	TPH-OEG	BTEX	EPA	BOZO							1 IG-6	9-16-09	1425	Soil	X	X	X	X									2 IG-7	9-16-09	1535	"	X	X	X	X									3 IG-8	9-17-09	1250	"	X	X	X	X									4																5																6																7																8																9																10										
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	TPH-GRO	TPH-DRO	TPH-OEG	BTEX	EPA	BOZO																																																																																																																																																																																	
1 IG-6	9-16-09	1425	Soil	X	X	X	X																																																																																																																																																																																			
2 IG-7	9-16-09	1535	"	X	X	X	X																																																																																																																																																																																			
3 IG-8	9-17-09	1250	"	X	X	X	X																																																																																																																																																																																			
4																																																																																																																																																																																										
5																																																																																																																																																																																										
6																																																																																																																																																																																										
7																																																																																																																																																																																										
8																																																																																																																																																																																										
9																																																																																																																																																																																										
10																																																																																																																																																																																										

Custody Record MUST be Signed	Relinquished by (print): THOMAS JAAP	Date/Time: 9-18-09 10:03	Signature: <i>Thomas J. Jaap</i>	Received by (print):	Date/Time:	Signature:
	Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
	Sample Disposal: Return to Client: _____	Lab Disposal: _____	Received by Laboratory: CA MCDIK.	Date/Time: 9/18/09 10:03	Signature:	

LABORATORY USE ONLY

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

Energy Laboratories Inc

Workorder Receipt Checklist



C09090702

Thomas Japp

Login completed by: Edith McPike

Date and Time Received: 9/18/2009 10:03 AM

Reviewed by:

Received by: em

Reviewed Date:

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature:	4°C On Ice		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

Contact and Corrective Action Comments:

None



CLIENT: Thomas Jaap
Project: Iles Grove
Sample Delivery Group: C09090702

Date: 01-Oct-09

CASE NARRATIVE

ORIGINAL SAMPLE SUBMITTAL(S)

All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)

Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS

Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS

The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES

All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS

Data for PCBs, Atrazine and Simazine are reported from EPA 525.2. PCB data reported by ELI reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS

Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS

eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT
eli-r - Energy Laboratories, Inc. - Rapid City, SD
eli-t - Energy Laboratories, Inc. - College Station, TX

CERTIFICATIONS:

USEPA: WY00002, Radiochemical WY00937; FL-DOH NELAC: E87641, Radiochemical E871017; California: 02118CA; Oregon: WY200001; Utah: 3072350515; Virginia: 00057; Washington: C1903

ISO 17025 DISCLAIMER:

The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER, WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

THIS IS THE FINAL PAGE OF THE LABORATORY ANALYTICAL REPORT

Laboratory Analyses & COC
October 23, 2009



ANALYTICAL SUMMARY REPORT

November 15, 2009

Thomas Jaap
 350 W A St
 Casper, WY 82601

Workorder No.: C09100970

Project Name: Iles Grove Station

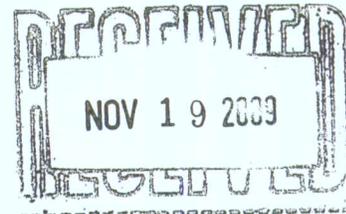
Energy Laboratories, Inc. received the following 6 samples for Thomas Jaap on 10/26/2009 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C09100970-001	N3'	10/23/09 09:30	10/26/09	Soil	Ultrasonic Extraction Diesel Range Organics Gasoline Range Organics SW8021B VOCs, BTEX Volatile Organics, Methanol Extraction
C09100970-002	N 7' 6"	10/23/09 09:30	10/26/09	Soil	Same As Above
C09100970-003	NE Top 3'	10/23/09 09:30	10/26/09	Soil	Same As Above
C09100970-004	NE 7' 6"	10/23/09 09:30	10/26/09	Soil	Same As Above
C09100970-005	NW 3' 6"	10/23/09 09:30	10/26/09	Soil	Same As Above
C09100970-006	NW 7' 6"	10/23/09 09:30	10/26/09	Soil	Same As Above

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By: Stephanie D. Waldrop
Stephanie D. Waldrop
Reporting Supervisor





LABORATORY ANALYTICAL REPORT

Client: Thomas Jaap
Project: Iles Grove Station
Lab ID: C09100970-001
Client Sample ID: N3'

Revised Date: 11/15/09
Report Date: 11/06/09
Collection Date: 10/23/09 09:30
Date Received: 10/26/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.40	mg/kg		0.10		SW8021B	10/30/09 00:07 / mlf
Ethylbenzene	0.23	mg/kg		0.10		SW8021B	10/30/09 00:07 / mlf
m+p-Xylenes	0.57	mg/kg		0.20		SW8021B	10/30/09 00:07 / mlf
o-Xylene	ND	mg/kg		0.10		SW8021B	10/30/09 00:07 / mlf
Toluene	ND	mg/kg		0.10		SW8021B	10/30/09 00:07 / mlf
Surr: Trifluorotoluene	78.0	%REC		50-115		SW8021B	10/30/09 00:07 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	82	mg/kg		9.9		SW8015B	11/05/09 05:57 / bah
Total Extractable Hydrocarbons	104	mg/kg		9.9		SW8015B	11/05/09 05:57 / bah
Surr: o-Terphenyl	93.0	%REC		50-150		SW8015B	11/05/09 05:57 / bah
Gasoline Range Organics (GRO)	27	mg/kg		4.0		SW8015B	10/30/09 00:07 / mlf
Surr: Trifluorotoluene	77.0	%REC		50-115		SW8015B	10/30/09 00:07 / mlf

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Revised Date: 11/15/09

Report Date: 11/06/09

Collection Date: 10/23/09 09:30

Date Received: 10/26/09

Matrix: Soil

Client: Thomas Jaap
 Project: Iles Grove Station
 Lab ID: C09100970-002
 Client Sample ID: N 7' 6"

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	1.3	mg/kg		0.50		SW8021B	10/30/09 02:29 / mlf
Ethylbenzene	1.1	mg/kg		0.50		SW8021B	10/30/09 02:29 / mlf
m+p-Xylenes	3.0	mg/kg		1.0		SW8021B	10/30/09 02:29 / mlf
o-Xylene	0.64	mg/kg		0.50		SW8021B	10/30/09 02:29 / mlf
Toluene	ND	mg/kg		0.50		SW8021B	10/30/09 02:29 / mlf
Surr: Trifluorotoluene	77.0	%REC		50-115		SW8021B	10/30/09 02:29 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	296	mg/kg		9.8		SW8015B	11/05/09 06:43 / bah
Total Extractable Hydrocarbons	393	mg/kg		9.8		SW8015B	11/05/09 06:43 / bah
Surr: o-Terphenyl	88.0	%REC		50-150		SW8015B	11/05/09 06:43 / bah
Gasoline Range Organics (GRO)	236	mg/kg		20		SW8015B	10/28/09 20:26 / mlf
Surr: Trifluorotoluene	90.0	%REC		50-115		SW8015B	10/28/09 20:26 / mlf

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Thomas Jaap
Project: Iles Grove Station
Lab ID: C09100970-003
Client Sample ID: NE Top 3'

Revised Date: 11/15/09
Report Date: 11/06/09
Collection Date: 10/23/09 09:30
Date Received: 10/26/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	2.0	mg/kg		0.50		SW8021B	10/30/09 03:04 / mlf
Ethylbenzene	0.65	mg/kg		0.50		SW8021B	10/30/09 03:04 / mlf
m+p-Xylenes	5.1	mg/kg		1.0		SW8021B	10/30/09 03:04 / mlf
o-Xylene	1.1	mg/kg		0.50		SW8021B	10/30/09 03:04 / mlf
Toluene	0.59	mg/kg		0.50		SW8021B	10/30/09 03:04 / mlf
Surr: Trifluorotoluene	94.0	%REC		50-115		SW8021B	10/30/09 03:04 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	156	mg/kg		9.9		SW8015B	11/05/09 09:01 / bah
Total Extractable Hydrocarbons	221	mg/kg		9.9		SW8015B	11/05/09 09:01 / bah
Surr: o-Terphenyl	73.0	%REC		50-150		SW8015B	11/05/09 09:01 / bah
Gasoline Range Organics (GRO)	291	mg/kg		20		SW8015B	10/28/09 21:03 / mlf
Surr: Trifluorotoluene	103	%REC		50-115		SW8015B	10/28/09 21:03 / mlf

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Thomas Jaap
 Project: Iles Grove Station
 Lab ID: C09100970-004
 Client Sample ID: NE 7' 6"

Revised Date: 11/15/09
 Report Date: 11/06/09
 Collection Date: 10/23/09 09:30
 Date Received: 10/26/09
 Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	3.7	mg/kg		0.50		SW8021B	10/30/09 04:15 / mlf
Ethylbenzene	2.6	mg/kg		0.50		SW8021B	10/30/09 04:15 / mlf
m+p-Xylenes	8.4	mg/kg		1.0		SW8021B	10/30/09 04:15 / mlf
o-Xylene	2.2	mg/kg		0.50		SW8021B	10/30/09 04:15 / mlf
Toluene	ND	mg/kg		0.50		SW8021B	10/30/09 04:15 / mlf
Surr: Trifluorotoluene	80.0	%REC		50-115		SW8021B	10/30/09 04:15 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	437	mg/kg		9.9		SW8015B	11/05/09 09:47 / bah
Total Extractable Hydrocarbons	590	mg/kg		9.9		SW8015B	11/05/09 09:47 / bah
Surr: o-Terphenyl	95.0	%REC		50-150		SW8015B	11/05/09 09:47 / bah
Gasoline Range Organics (GRO)	640	mg/kg		20		SW8015B	10/29/09 00:41 / mlf
Surr: Trifluorotoluene	91.0	%REC		50-115		SW8015B	10/29/09 00:41 / mlf

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Thomas Jaap
Project: Iles Grove Station
Lab ID: C09100970-005
Client Sample ID: NW 3' 6"

Revised Date: 11/15/09
Report Date: 11/06/09
Collection Date: 10/23/09 09:30
Date Received: 10/26/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.13	mg/kg		0.10		SW8021B	10/30/09 03:40 / mlf
Ethylbenzene	0.19	mg/kg		0.10		SW8021B	10/30/09 03:40 / mlf
m+p-Xylenes	0.40	mg/kg		0.20		SW8021B	10/30/09 03:40 / mlf
o-Xylene	0.14	mg/kg		0.10		SW8021B	10/30/09 03:40 / mlf
Toluene	ND	mg/kg		0.10		SW8021B	10/30/09 03:40 / mlf
Surr: Trifluorotoluene	81.0	%REC		50-115		SW8021B	10/30/09 03:40 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	443	mg/kg		9.8		SW8015B	11/05/09 10:33 / bah
Total Extractable Hydrocarbons	565	mg/kg		9.8		SW8015B	11/05/09 10:33 / bah
Surr: o-Terphenyl	79.0	%REC		50-150		SW8015B	11/05/09 10:33 / bah
Gasoline Range Organics (GRO)	30	mg/kg		4.0		SW8015B	10/30/09 03:40 / mlf
Surr: Trifluorotoluene	80.0	%REC		50-115		SW8015B	10/30/09 03:40 / mlf

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Thomas Jaap
 Project: Iles Grove Station
 Lab ID: C09100970-006
 Client Sample ID: NW 7' 6"

Revised Date: 11/15/09
 Report Date: 11/06/09
 Collection Date: 10/23/09 09:30
 Date Received: 10/26/09
 Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.15	mg/kg		0.10		SW8021B	10/29/09 18:48 / mlf
Ethylbenzene	0.19	mg/kg		0.10		SW8021B	10/29/09 18:48 / mlf
m+p-Xylenes	0.49	mg/kg		0.20		SW8021B	10/29/09 18:48 / mlf
o-Xylene	0.15	mg/kg		0.10		SW8021B	10/29/09 18:48 / mlf
Toluene	ND	mg/kg		0.10		SW8021B	10/29/09 18:48 / mlf
Surr: Trifluorotoluene	88.0	%REC		50-115		SW8021B	10/29/09 18:48 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	153	mg/kg		9.9		SW8015B	11/05/09 11:19 / bah
Total Extractable Hydrocarbons	194	mg/kg		9.9		SW8015B	11/05/09 11:19 / bah
Surr: o-Terphenyl	87.0	%REC		50-150		SW8015B	11/05/09 11:19 / bah
Gasoline Range Organics (GRO)	19	mg/kg		4.0		SW8015B	10/29/09 18:48 / mlf
Surr: Trifluorotoluene	85.0	%REC		50-115		SW8015B	10/29/09 18:48 / mlf

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



QA/QC Summary Report

Revised Date: 11/15/09

Report Date: 11/06/09

Work Order: C09100970

Client: Thomas Jaap
 Project: Iles Grove Station

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8015B Batch: 24232									
Sample ID: MB-24232	Method Blank			Run: FID1-C_091104A			11/04/09 23:50		
Diesel Range Organics (DRO)	ND	mg/kg	10						
Total Extractable Hydrocarbons	ND	mg/kg	10						
Surr: o-Terphenyl			0.020	95	50	150			
Sample ID: LCS-24232 11/05/09 00:36									
Laboratory Control Sample Run: FID1-C_091104A									
Diesel Range Organics (DRO)	59.8	mg/kg	10	90	60	140			
Total Extractable Hydrocarbons	63.8	mg/kg	10	96	60	140			
Surr: o-Terphenyl			0.020	93	50	150			
Sample ID: LCSD-24232 11/05/09 01:22									
Laboratory Control Sample Duplicate Run: FID1-C_091104A									
Diesel Range Organics (DRO)	63.2	mg/kg	10	95	60	140	5.5	20	
Total Extractable Hydrocarbons	67.4	mg/kg	10	101	60	140	5.5	20	
Surr: o-Terphenyl			0.020	96	50	150			
Sample ID: C09100976-010AMS 11/06/09 02:23									
Sample Matrix Spike Run: FID1-C_091104A									
Diesel Range Organics (DRO)	271	mg/kg	9.9	221	60	140			S
Total Extractable Hydrocarbons	285	mg/kg	9.9	220	60	140			S
Surr: o-Terphenyl			0.020	94	50	150			
- Spike exceeds acceptance limit. LCS is acceptable.									
Sample ID: C09100976-010AMSD 11/06/09 03:09									
Sample Matrix Spike Duplicate Run: FID1-C_091104A									
Diesel Range Organics (DRO)	101	mg/kg	9.7	-36	60	140	91	20	SR
Total Extractable Hydrocarbons	108	mg/kg	9.7	-49	60	140	90	20	SR
Surr: o-Terphenyl			0.019	85	50	150			
- Spike exceeds acceptance limit. LCS is acceptable.									

Qualifiers:

RL - Analyte reporting limit.
 R - RPD exceeds advisory limit.

ND - Not detected at the reporting limit.
 S - Spike recovery outside of advisory limits.



CLIENT: Thomas Jaap
Project: Iles Grove Station
Sample Delivery Group: C09100970

Date: 15-Nov-09

CASE NARRATIVE

REVISED/SUPPLEMENTAL REPORT

The attached analytical report has been revised from a previously submitted report due to the request by Thomas Japp on November 12, 2009 for the addition of Total Extractable Hydrocarbons on all samples. The data presented here is from that additional analysis.

ORIGINAL SAMPLE SUBMITTAL(S)

All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)

Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS

Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS

The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES

All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS

Data for PCBs, Atrazine and Simazine are reported from EPA 525.2. PCB data reported by ELI reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS

Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS

eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT
eli-r - Energy Laboratories, Inc. - Rapid City, SD
eli-t - Energy Laboratories, Inc. - College Station, TX

CERTIFICATIONS:

USEPA: WY00002, Radiochemical WY00937; FL-DOH NELAC: E87641, Radiochemical E871017; California: 02118CA; Oregon: WY200001; Utah: 3072350515; Virginia: 00057; Washington: C1903

ISO 17025 DISCLAIMER:

The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER, WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

THIS IS THE FINAL PAGE OF THE LABORATORY ANALYTICAL REPORT

Laboratory Analyses & COC
November 25, 2009



ANALYTICAL SUMMARY REPORT

December 08, 2009

Energy Environmental Consulting LLC
350 W A St Ste 203
Casper, WY 82601

Workorder No.: C09110886

Project Name: Iles Grove Station

Energy Laboratories, Inc. received the following 5 samples for Energy Environmental Consulting LLC on 11/30/2009 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C09110886-001	Random Hole #1 East of Pipe Marker	11/25/09 09:00	11/30/09	Soil	Ultrasonic Extraction Diesel Range Organics Gasoline Range Organics SW8021B VOCs, BTEX Volatile Organics, Methanol Extraction
C09110886-002	Random Hole #2 NW of Pipe Marker	11/25/09 09:10	11/30/09	Soil	Same As Above
C09110886-003	New Ditch NW Corner 4'	11/25/09 09:15	11/30/09	Soil	Same As Above
C09110886-004	New Ditch North-Middle 4'	11/25/09 09:20	11/30/09	Soil	Same As Above
C09110886-005	New Ditch NE Corner 4'	11/25/09 09:30	11/30/09	Soil	Same As Above

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:


Denny Juarez
Soils Supervisor



LABORATORY ANALYTICAL REPORT

Client: Energy Environmental Consulting LLC
Project: Iles Grove Station
Lab ID: C09110886-001
Client Sample ID: Random Hole #1 East of Pipe Marker

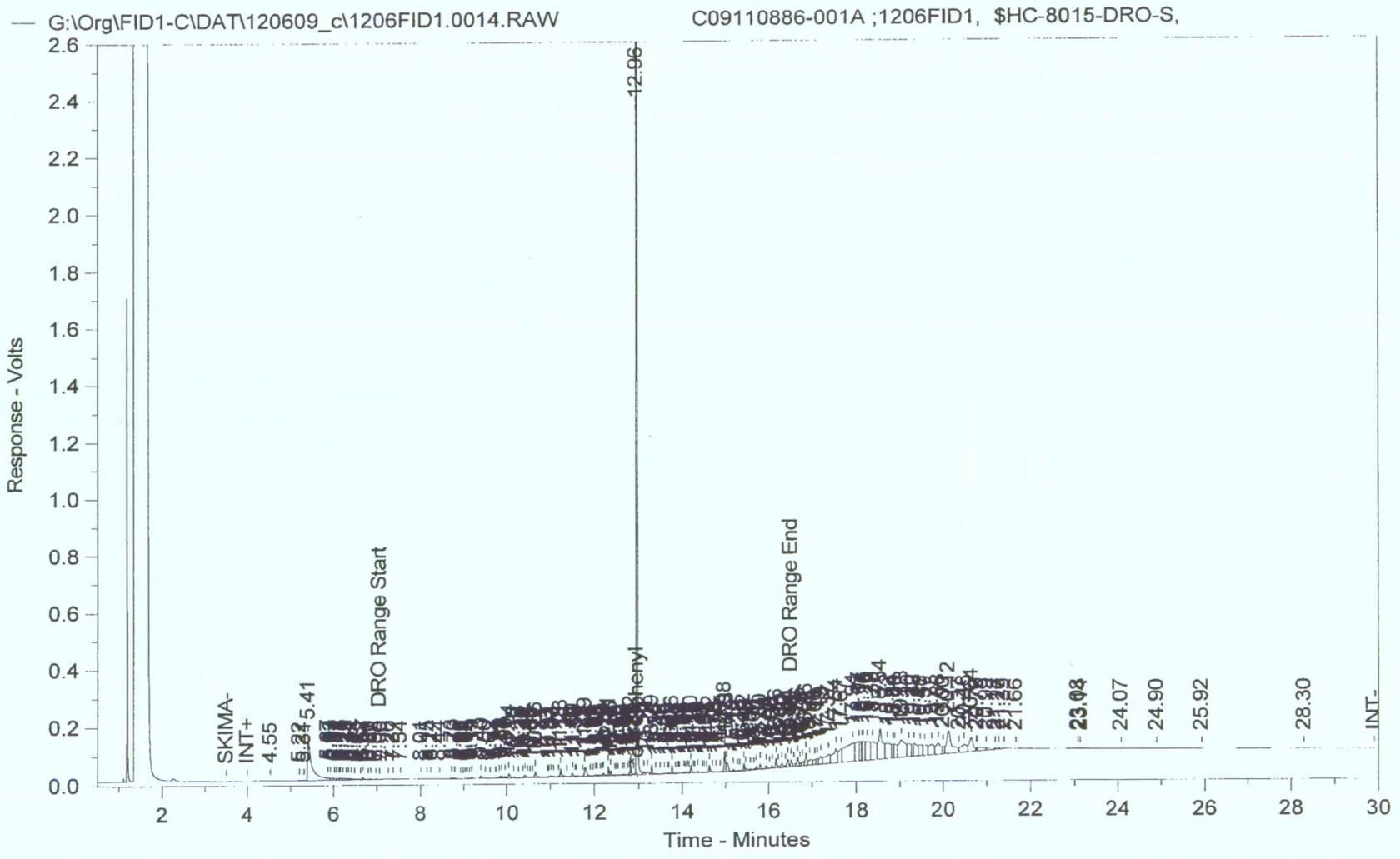
Report Date: 12/08/09
Collection Date: 11/25/09 09:00
Date Received: 11/30/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg		0.050		SW8021B	12/02/09 19:18 / mlf
Ethylbenzene	ND	mg/kg		0.050		SW8021B	12/02/09 19:18 / mlf
m+p-Xylenes	ND	mg/kg		0.10		SW8021B	12/02/09 19:18 / mlf
o-Xylene	ND	mg/kg		0.050		SW8021B	12/02/09 19:18 / mlf
Toluene	ND	mg/kg		0.050		SW8021B	12/02/09 19:18 / mlf
Surr: Trifluorotoluene	71.0	%REC		50-115		SW8021B	12/02/09 19:18 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	ND	mg/kg		9.9		SW8015B	12/06/09 21:22 / bah
Total Extractable Hydrocarbons	12	mg/kg		9.9		SW8015B	12/06/09 21:22 / bah
Surr: o-Terphenyl	91.0	%REC		50-150		SW8015B	12/06/09 21:22 / bah
Gasoline Range Organics (GRO)	ND	mg/kg		2.0		SW8015B	12/02/09 19:18 / mlf
Surr: Trifluorotoluene	66.0	%REC		50-115		SW8015B	12/02/09 19:18 / mlf

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Batch ID: 24570





LABORATORY ANALYTICAL REPORT

Client: Energy Environmental Consulting LLC
Project: Iles Grove Station
Lab ID: C09110886-002
Client Sample ID: Random Hole #2 NW of Pipe Marker

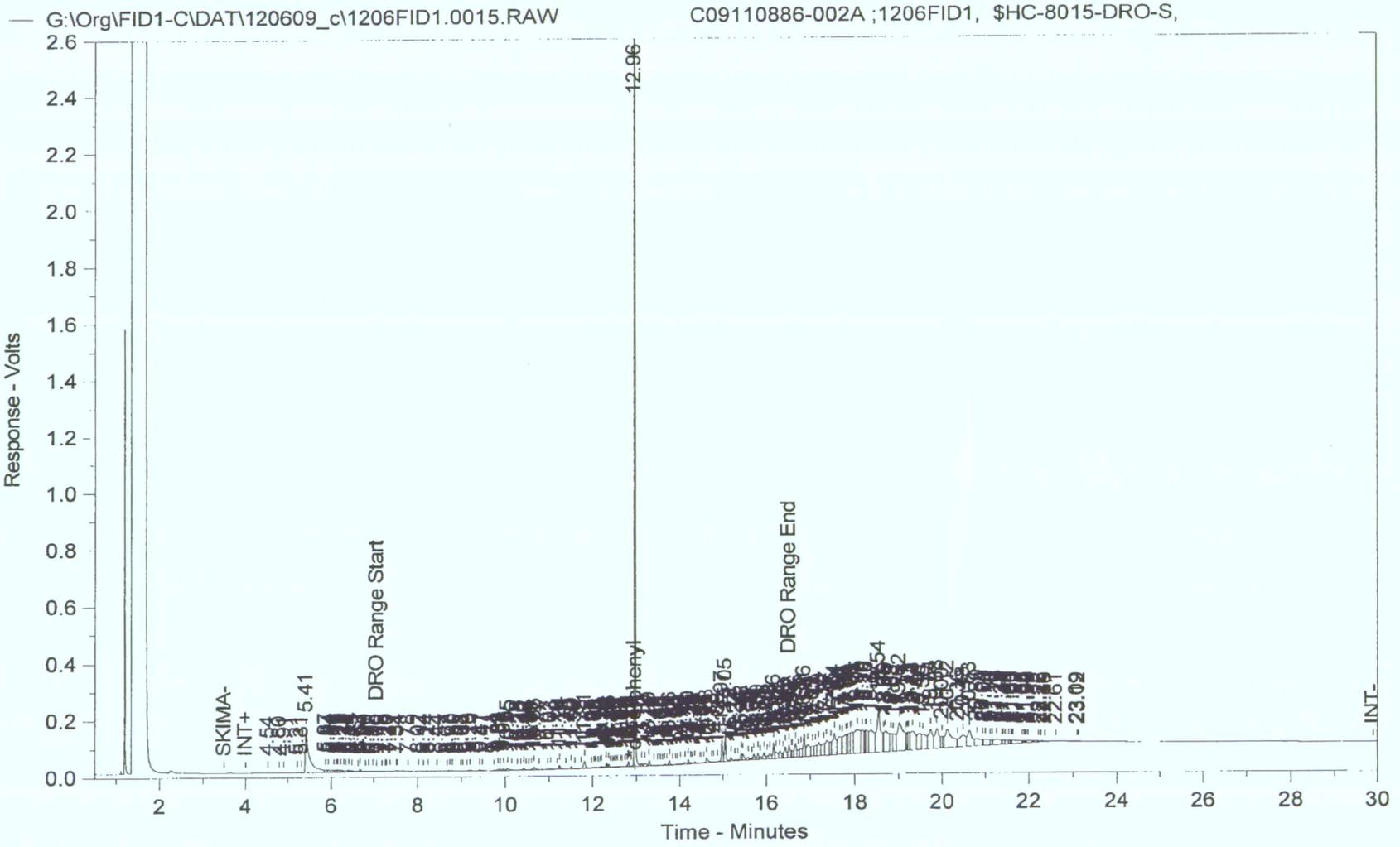
Report Date: 12/08/09
Collection Date: 11/25/09 09:10
Date Received: 11/30/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg		0.050		SW8021B	12/02/09 18:41 / mlf
Ethylbenzene	ND	mg/kg		0.050		SW8021B	12/02/09 18:41 / mlf
m+p-Xylenes	ND	mg/kg		0.10		SW8021B	12/02/09 18:41 / mlf
o-Xylene	ND	mg/kg		0.050		SW8021B	12/02/09 18:41 / mlf
Toluene	ND	mg/kg		0.050		SW8021B	12/02/09 18:41 / mlf
Surr: Trifluorotoluene	95.0	%REC		50-115		SW8021B	12/02/09 18:41 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	ND	mg/kg		9.7		SW8015B	12/06/09 22:08 / bah
Total Extractable Hydrocarbons	18	mg/kg		9.7		SW8015B	12/06/09 22:08 / bah
Surr: o-Terphenyl	86.0	%REC		50-150		SW8015B	12/06/09 22:08 / bah
Gasoline Range Organics (GRO)	ND	mg/kg		2.0		SW8015B	12/02/09 18:41 / mlf
Surr: Trifluorotoluene	89.0	%REC		50-115		SW8015B	12/02/09 18:41 / mlf

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Batch ID: 24570





LABORATORY ANALYTICAL REPORT

Client: Energy Environmental Consulting LLC
Project: Iles Grove Station
Lab ID: C09110886-003
Client Sample ID: New Ditch NW Corner 4'

Report Date: 12/08/09
Collection Date: 11/25/09 09:15
Date Received: 11/30/09
Matrix: Soil

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.04	mg/kg	0.17 J	0.10		SW8021B	12/02/09 02:41 / mlf
Ethylbenzene	ND	mg/kg		0.10		SW8021B	12/02/09 02:41 / mlf
m+p-Xylenes	ND	mg/kg		0.20		SW8021B	12/02/09 02:41 / mlf
o-Xylene	0.05	mg/kg	175 J	0.10		SW8021B	12/02/09 02:41 / mlf
Toluene	ND	mg/kg		0.10		SW8021B	12/02/09 02:41 / mlf
Surr: Trifluorotoluene	86.0	%REC		50-115		SW8021B	12/02/09 02:41 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	72	mg/kg		9.7		SW8015B	12/06/09 23:40 / bah
Total Extractable Hydrocarbons	138	mg/kg		9.7		SW8015B	12/06/09 23:40 / bah
Surr: o-Terphenyl	100	%REC		50-150		SW8015B	12/06/09 23:40 / bah
Gasoline Range Organics (GRO)	13	mg/kg		4.0		SW8015B	12/02/09 02:41 / mlf
Surr: Trifluorotoluene	80.0	%REC		50-115		SW8015B	12/02/09 02:41 / mlf

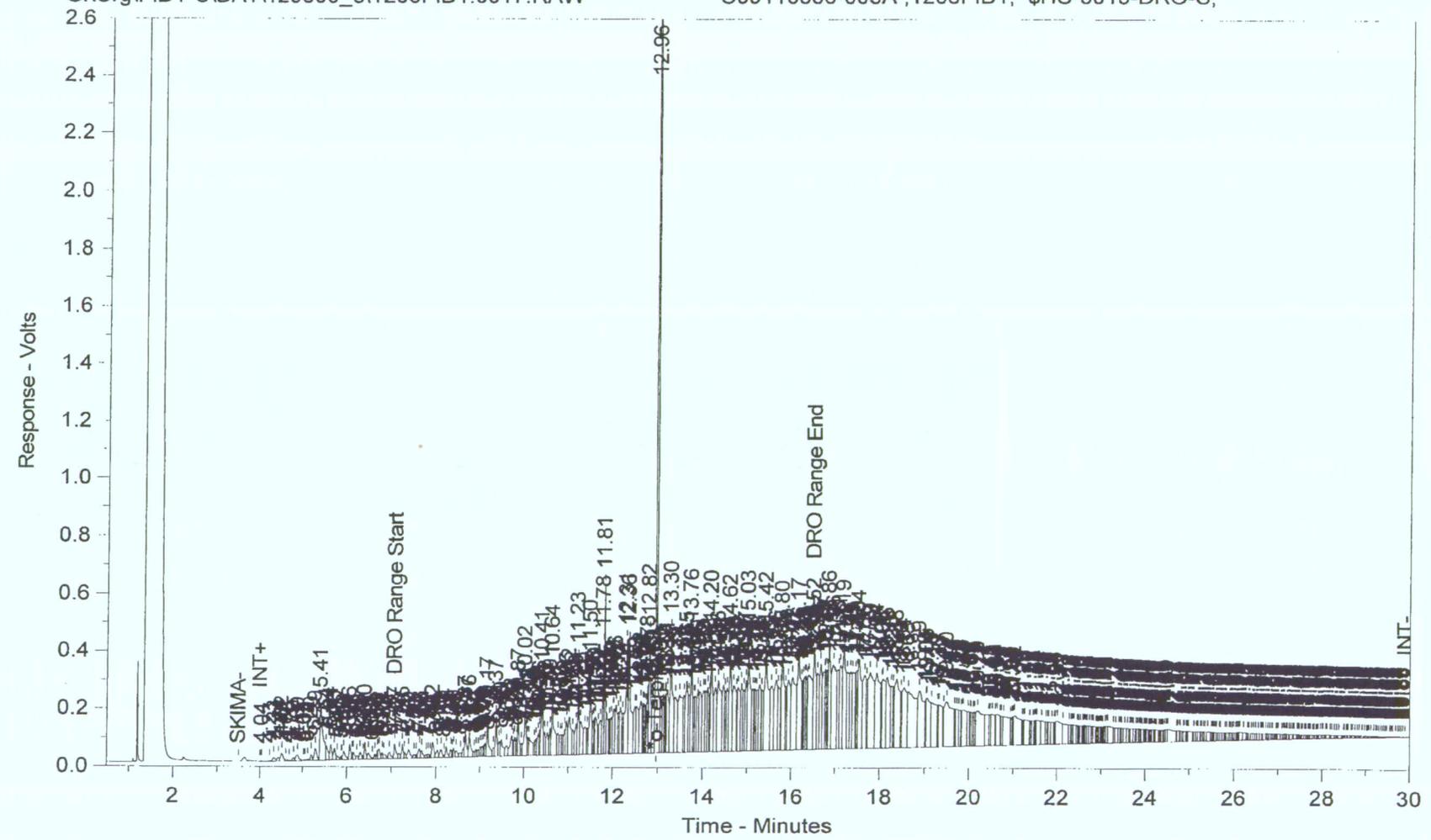
Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
J - Estimated value. The analyte was present but less than the reporting limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Batch ID: 24570

G:\Org\FID1-C\DAT\120609_c\1206FID1.0017.RAW

C09110886-003A ;1206FID1, \$HC-8015-DRO-S,





LABORATORY ANALYTICAL REPORT

Client: Energy Environmental Consulting LLC
Project: Iles Grove Station
Lab ID: C09110886-004
Client Sample ID: New Ditch North-Middle 4'

Report Date: 12/08/09
Collection Date: 11/25/09 09:20
Date Received: 11/30/09
Matrix: Soil

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg		0.10		SW8021B	12/02/09 03:16 / mlf
Ethylbenzene	ND	mg/kg		0.10		SW8021B	12/02/09 03:16 / mlf
m+p-Xylenes	ND	mg/kg		0.20		SW8021B	12/02/09 03:16 / mlf
o-Xylene	ND	mg/kg		0.10		SW8021B	12/02/09 03:16 / mlf
Toluene	ND	mg/kg		0.10		SW8021B	12/02/09 03:16 / mlf
Surr: Trifluorotoluene	97.0	%REC		50-115		SW8021B	12/02/09 03:16 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	ND	mg/kg		9.7		SW8015B	12/07/09 01:57 / bah
Total Extractable Hydrocarbons	13	mg/kg		9.7		SW8015B	12/07/09 01:57 / bah
Surr: o-Terphenyl	95.0	%REC		50-150		SW8015B	12/07/09 01:57 / bah
Gasoline Range Organics (GRO)	ND	mg/kg		4.0		SW8015B	12/02/09 03:16 / mlf
Surr: Trifluorotoluene	91.0	%REC		50-115		SW8015B	12/02/09 03:16 / mlf

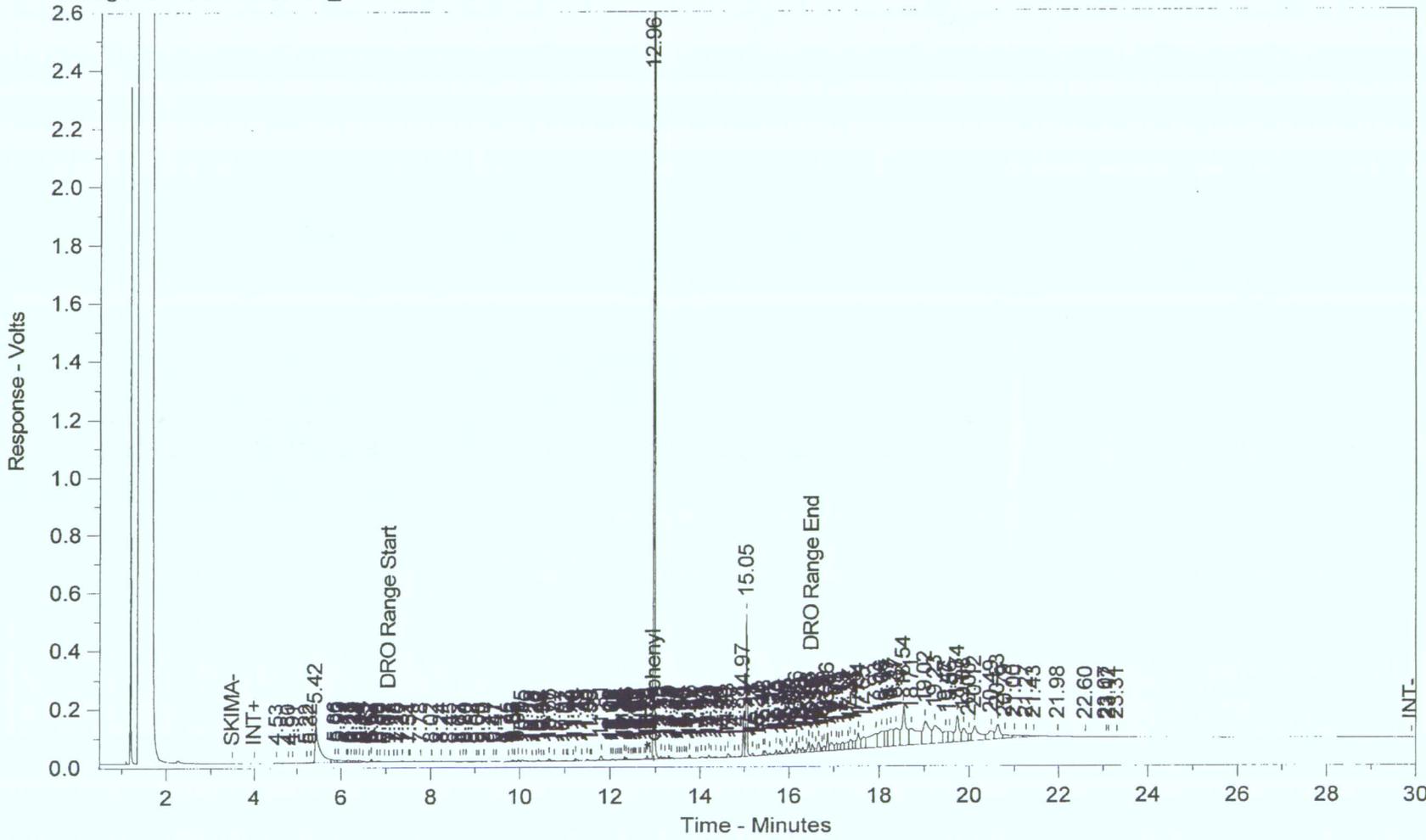
Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Batch ID: 24570

G:\Org\FID1-C\DAT\120609_c\1206FID1.0020.RAW

C09110886-004A ;1206FID1, \$HC-8015-DRO-S,





LABORATORY ANALYTICAL REPORT

Client: Energy Environmental Consulting LLC
Project: Iles Grove Station
Lab ID: C09110886-005
Client Sample ID: New Ditch NE Corner 4'

Report Date: 12/08/09
Collection Date: 11/25/09 09:30
Date Received: 11/30/09
Matrix: Soil

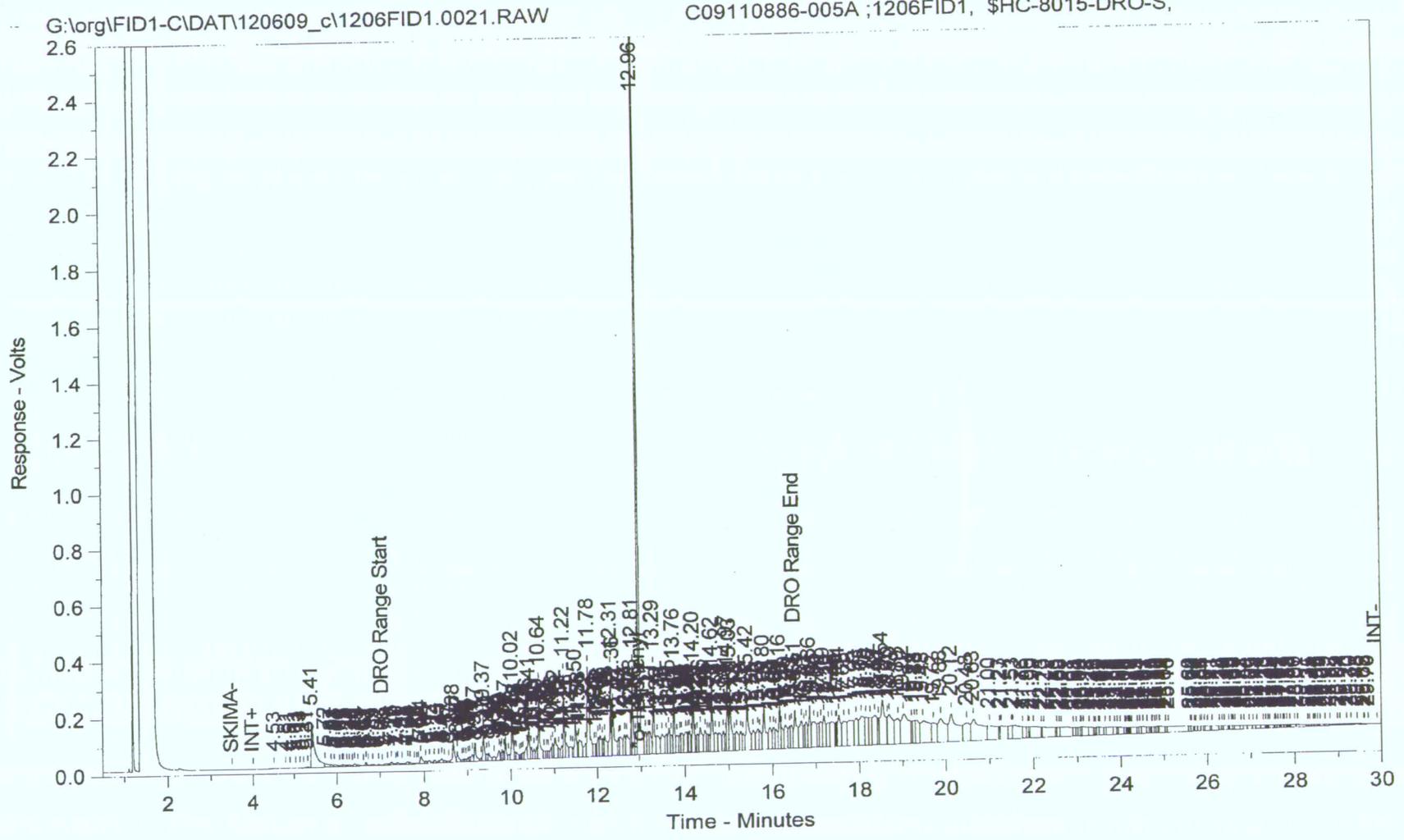
Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg		0.10		SW8021B	12/02/09 03:52 / mlf
Ethylbenzene	ND	mg/kg		0.10		SW8021B	12/02/09 03:52 / mlf
m+p-Xylenes	ND	mg/kg		0.20		SW8021B	12/02/09 03:52 / mlf
o-Xylene	ND	mg/kg		0.10		SW8021B	12/02/09 03:52 / mlf
Toluene	ND	mg/kg		0.10		SW8021B	12/02/09 03:52 / mlf
Surr: Trifluorotoluene	91.0	%REC		50-115		SW8021B	12/02/09 03:52 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	28	mg/kg		9.7		SW8015B	12/07/09 02:43 / bah
Total Extractable Hydrocarbons	59	mg/kg		9.7		SW8015B	12/07/09 02:43 / bah
Surr: o-Terphenyl	91.0	%REC		50-150		SW8015B	12/07/09 02:43 / bah
Gasoline Range Organics (GRO)	ND	mg/kg		4.0		SW8015B	12/02/09 03:52 / mlf
Surr: Trifluorotoluene	85.0	%REC		50-115		SW8015B	12/02/09 03:52 / mlf

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Batch ID: 24570

C09110886-005A ;1206FID1, \$HC-8015-DRO-S,





QA/QC Summary Report

Client: Energy Environmental Consulting LLC
 Project: Iles Grove Station

Report Date: 12/07/09
 Work Order: C09110886

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8015B									Batch: 24570
Sample ID: MB-24570 Method Blank									Run: FID1-C_091206A 12/06/09 16:46
Diesel Range Organics (DRO)	ND	mg/kg	10						
Total Extractable Hydrocarbons	ND	mg/kg	10						
Surr: o-Terphenyl			0.020	99	50	150			
Sample ID: LCS-24570 Laboratory Control Sample									Run: FID1-C_091206A 12/06/09 17:32
Diesel Range Organics (DRO)	61.0	mg/kg	10	91	60	140			
Total Extractable Hydrocarbons	70.2	mg/kg	10	105	60	140			
Surr: o-Terphenyl			0.020	96	50	150			
Sample ID: LCSD-24570 Laboratory Control Sample Duplicate									Run: FID1-C_091206A 12/06/09 18:18
Diesel Range Organics (DRO)	62.2	mg/kg	10	93	60	140	2	20	
Total Extractable Hydrocarbons	70.7	mg/kg	10	106	60	140	0.7	20	
Surr: o-Terphenyl			0.020	97	50	150			
Sample ID: C09110886-005AMS Sample Matrix Spike									Run: FID1-C_091206A 12/07/09 03:29
Diesel Range Organics (DRO)	74.0	mg/kg	9.8	71	60	140			
Total Extractable Hydrocarbons	90.1	mg/kg	9.8	48	60	140			S
Surr: o-Terphenyl			0.020	83	50	150			
- Spike exceeds acceptance limit. LCS is acceptable.									
Sample ID: C09110886-005AMSD Sample Matrix Spike Duplicate									Run: FID1-C_091206A 12/07/09 04:15
Diesel Range Organics (DRO)	86.1	mg/kg	9.9	89	60	140	15	20	
Total Extractable Hydrocarbons	95.2	mg/kg	9.9	55	60	140	5.5	20	S
Surr: o-Terphenyl			0.020	94	50	150			
- Spike exceeds acceptance limit. LCS is acceptable.									

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Client: Energy Environmental Consulting LLC
Project: Iles Grove Station

Report Date: 12/07/09
Work Order: C09110886

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Batch: 24549									
Method: SW8015B									
Run: PIDELCD1-C_091201A									
12/01/09 16:29									
Sample ID: MB-24549	Method Blank								
Gasoline Range Organics (GRO)	ND	mg/kg	2.0						
Total Purgeable Hydrocarbons	ND	mg/kg	2.0						
Surr: Trifluorotoluene			0.40	97	70	130			
Run: PIDELCD1-C_091201A									
12/01/09 20:04									
Sample ID: LCSG-24549	Laboratory Control Sample								
Total Purgeable Hydrocarbons	18.0	mg/kg	2.0	90	70	130			
Surr: Trifluorotoluene			0.40	99	70	130			
Run: PIDELCD1-C_091201A									
12/01/09 20:40									
Sample ID: LCSDG-24549	Laboratory Control Sample Duplicate								
Total Purgeable Hydrocarbons	18.0	mg/kg	2.0	90	70	130	0	20	
Surr: Trifluorotoluene			0.40	98	70	130			
Run: PIDELCD1-C_091202A									
12/02/09 19:53									
Sample ID: C09110886-001AMSG	Sample Matrix Spike								
Total Purgeable Hydrocarbons	16.1	mg/kg	2.0	68	70	130			S
Surr: Trifluorotoluene			0.40	74	50	115			
Run: PIDELCD1-C_091202A									
12/02/09 20:30									
Sample ID: C09110886-001AMSDG	Sample Matrix Spike Duplicate								
Total Purgeable Hydrocarbons	15.3	mg/kg	2.0	64	70	130	5.1	20	S
Surr: Trifluorotoluene			0.40	69	50	115			

Qualifiers:

RL - Analyte reporting limit.

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Client: Energy Environmental Consulting LLC
 Project: Iles Grove Station

Report Date: 12/07/09
 Work Order: C09110886

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Batch: 24549										
Method: SW8021B									Run: PIDELCD1-C_091201B	12/01/09 16:29
Sample ID: MB-24549	Method Blank									
Benzene	ND	mg/kg		0.050						
Ethylbenzene	ND	mg/kg		0.050						
m+p-Xylenes	ND	mg/kg		0.10						
o-Xylene	ND	mg/kg		0.050						
Toluene	ND	mg/kg		0.050						
Surr: Trifluorotoluene				0.050	103	70	130			
12/01/09 17:40										
Sample ID: LCSB-24549	Laboratory Control Sample								Run: PIDELCD1-C_091201B	12/01/09 17:40
Benzene	1.1	mg/kg		0.050	111	70	130			
Ethylbenzene	1.1	mg/kg		0.050	107	70	130			
m+p-Xylenes	2.1	mg/kg		0.10	107	70	130			
o-Xylene	1.1	mg/kg		0.050	107	70	130			
Toluene	1.1	mg/kg		0.050	109	70	130			
Surr: Trifluorotoluene				0.050	102	70	130			
12/01/09 18:16										
Sample ID: LCSDB-24549	Laboratory Control Sample Duplicate								Run: PIDELCD1-C_091201B	12/01/09 18:16
Benzene	1.0	mg/kg		0.050	102	70	130	8.2	20	
Ethylbenzene	0.97	mg/kg		0.050	97	70	130	9.1	20	
m+p-Xylenes	2.0	mg/kg		0.10	98	70	130	9	20	
o-Xylene	0.98	mg/kg		0.050	98	70	130	9.3	20	
Toluene	0.99	mg/kg		0.050	99	70	130	9.7	20	
Surr: Trifluorotoluene				0.050	99	70	130	0	10	
12/02/09 04:28										
Sample ID: C09110886-005AMSB	Sample Matrix Spike								Run: PIDELCD1-C_091201B	12/02/09 04:28
Benzene	0.86	mg/kg		0.100	86	70	130			
Ethylbenzene	0.83	mg/kg		0.100	83	70	130			
m+p-Xylenes	1.7	mg/kg		0.20	84	70	130			
o-Xylene	0.83	mg/kg		0.100	83	70	130			
Toluene	0.84	mg/kg		0.100	84	70	130			
Surr: Trifluorotoluene				0.100	85	50	115			
12/02/09 05:04										
Sample ID: C09110886-005AMSDB	Sample Matrix Spike Duplicate								Run: PIDELCD1-C_091201B	12/02/09 05:04
Benzene	0.99	mg/kg		0.100	99	70	130	14	20	
Ethylbenzene	0.95	mg/kg		0.100	95	70	130	14	20	
m+p-Xylenes	1.9	mg/kg		0.20	96	70	130	14	20	
o-Xylene	0.96	mg/kg		0.100	96	70	130	14	20	
Toluene	0.97	mg/kg		0.100	97	70	130	14	20	
Surr: Trifluorotoluene				0.100	95	50	115	0	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Chain of Custody and Analytical Request Record

PLEASE PRINT- Provide as much information as possible.

Company Name: ENERGY ENVIRONMENTAL CONSULTING	Project Name, PWS, Permit, Etc. LES GROVE STATION	Sample Origin State: COLORADO	EPA/State Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Report Mail Address: 350 WEST A STREET, SUITE 203 CASPER, WY 82601	Contact Name: THOMAS JAAP	Phone/Fax: 807/234-3395 307/234-3396 (fax)	Email: tjaap@bresnan.net
Invoice Address: SAME AS MAIL	Invoice Contact & Phone: THOMAS JAAP 307/234-3395 307/234-3396 (fax)	Purchase Order: —	Quote/Bottle Order: —

Special Report/Formats – ELI must be notified prior to sample submittal for the following:

- | | |
|---------------------------------------|--|
| <input type="checkbox"/> DW | <input type="checkbox"/> A2LA |
| <input type="checkbox"/> GSA | <input type="checkbox"/> EDD/EDT (Electronic Data) |
| <input type="checkbox"/> POTW/MWTP | Format: _____ |
| <input type="checkbox"/> State: _____ | <input type="checkbox"/> LEVEL IV |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> NELAC |

Number of Containers Sample Type: A W S V B O Air Water Soils/Solids Vegetation Bioassay Other	ANALYSIS REQUESTED				SEE ATTACHED	Normal Turnaround (TAT)
	TPH GRO	BOISM	TPH DRO	BOISM		
			TEH			
			BTEX EPA 8020			

RUSH

Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page

Shipped by: **Hand**

Cooler ID(s): **client**

Receipt Temp: **7** °C

On Ice: Yes No

Custody Seal Y N

Bottles/Coolers B C

Intact Y N

Signature Match Y N

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	TPH GRO	BOISM	TPH DRO	BOISM	TEH	BTEX EPA 8020	RUSH
1 RANDOM HOLE #1 East of pipe marker	11/25/09	900	1-Soil	X	X	X	X			X
2 RANDOM HOLE #2 NW of pipe marker	"	910	"	X	X	X	X			X
3 NEW DITCH NW corner 4'	"	915	"	X	X	X	X			X
4 NEW DITCH North-Middle 4'	"	920	"	X	X	X	X			X
5 NEW DITCH NE corner 4'	"	930	"	X	X	X	X			X
6										
7										
8										
9										
10										

LABORATORY USE ONLY

Custody Record MUST be Signed	Relinquished by (print): Matthew P. Wold	Date/Time: 11-26-09 1:00pm	Signature: <i>[Signature]</i>	Received by (print): Thomas Jaap	Date/Time: 11-26-09 1:30pm	Signature: <i>[Signature]</i>
	Relinquished by (print): THOMAS JAAP	Date/Time: 11-30-09 8:50	Signature: <i>[Signature]</i>	Received by Laboratory:	Date/Time: 11-30-09 8:50 AM	Signature: H. A. [Signature]
	Sample Disposal:	Return to Client:	Lab Disposal:			

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

Energy Laboratories Inc Workorder Receipt Checklist



C09110886

Energy Environmental Consulting LLC

Login completed by: Halley Ackerman

Date and Time Received: 11/30/2009 8:50 AM

Reviewed by:

Received by: ha

Reviewed Date:

Carrier name: Hand Del

- | | | | |
|---|---|-----------------------------|--|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Container/Temp Blank temperature: | 7°C On Ice | | |
| Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No VOA vials submitted <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |

Contact and Corrective Action Comments:

None



CLIENT: Energy Environmental Consulting LLC
Project: Iles Grove Station
Sample Delivery Group: C09110886

Date: 08-Dec-09

CASE NARRATIVE

ORIGINAL SAMPLE SUBMITTAL(S)

All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)

Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS

Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS

The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES

All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS

Data for PCBs, Atrazine and Simazine are reported from EPA 525.2. PCB data reported by ELI reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS

Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS

eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT
eli-r - Energy Laboratories, Inc. - Rapid City, SD
eli-t - Energy Laboratories, Inc. - College Station, TX

CERTIFICATIONS:

USEPA: WY00002, Radiochemical WY00937; FL-DOH NELAC: E87641, Radiochemical E871017; California: 02118CA; Oregon: WY200001; Utah: 3072350515; Virginia: 00057; Washington: C1903

ISO 17025 DISCLAIMER:

The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER, WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

THIS IS THE FINAL PAGE OF THE LABORATORY ANALYTICAL REPORT

APPENDIX F

Moffat County Regional Landfill Correspondence

THOMAS J. JAAP

DIANA R. SOJOURNER



September 4, 2009

Moffat County Landfill
822 East First Street
P.O. Box 667
Craig, CO 81626

Attention: Bill Mack, Landfill Manager

Re: Petroleum Contaminated Soils Disposal

Dear Mr. Mack:

Attached for your review is a Moffat County Landfill – Waste Characterization Form. The petroleum contaminated soils were generated from a sump removal at Iles Grove Station, approximately 15 miles south of Craig. The soil analyses covers approximately 60% of the soils excavated. The remaining 40% were not sampled; however, they are from a less contaminated area and were mixed with clean soils that sloughed into the excavation. Therefore, the analyzed soils should represent the most contaminated soils.

There are currently approximately 200 cubic yards of petroleum contaminated soils stock piled at the location. Please review the attached form and laboratory analyses and advise whether you can accept the soils in the Moffat County Landfill.

If you have any questions regarding the form or laboratory analyses, please contact me at 307-267-6062 or at tjaap@bresnan.net.

Sincerely,

Thomas J. Jaap, P.E.
Project Manager

Attachments

cc: Mr. Peter Wold, Wold Oil Properties, Inc.
Mr. Kevin Meenan, Wold Oil Properties, Inc.

Moffat County Landfill - Waste Characterization Form

Please provide the following information that will allow Moffat County to lawfully and safely accept your waste for delivery at the landfill. Fill out the form completely and honestly. You as the "Generator" provide data and information concerning the waste so that the County can make a hazardous waste determination. As the Generator, you are responsible for its waste from cradle to grave. All related analysis must be attached to this form and if a change of characteristics are suspected in the waste prior to disposal, the waste must be re-tested.

1. Generator Information

Your Name: Thomas Jaap Company Name: Wold Oil Properties, Inc.

Mailing Address: 139 West 2nd Street, Suite 200 Phone: 307-265-7252
Casper, WY 82601 307-234-3395 Tom Jaap

2. Waste Information

Common name of waste: Petroleum Contaminated Soil

Location or place of origin: Iles Grove Station Address: 15 miles south of
Craig, CO. Method of waste generation: Spills, Equipment leaks

Physical Characteristics of Waste: Color: Brown-Gray

Odor: None Mild Strong Describe: Hydrocarbon

Physical State: Solid Sludge Liquid Other

Anticipated volume: 200 c.y. Method of delivery: Dump Truck Frequency of delivery: 1-2 days
8-12 cu.yd.

3. Waste Sampling and Testing

Total Volume of material 120 cubic yards Number of samples collected: 1

Date of sampling: 7/31/2009 Type of sample: grab composite

Describe Sampling Plan See attached.

Name of Analytical Laboratory: Energy Laboratories, Inc.

NELAP Certified? Yes No Analytical data from the laboratory is attached: yes no

If no, explanation: _____

4. Certification I hereby certify that I am the Generator, or I am authorized by the Generator to provide the information submitted in this form including any attached documents and to enter into this Agreement on the Generator's behalf. The characterization included laboratory analysis performed in accordance with the County guidelines on a representative sample of the waste. All required information concerning the waste, including the results of all laboratory analyses has been provided in this form and the attached documents. I further hereby certify that such information is complete and accurate and that all known or suspected hazardous constituents, characteristics or safety hazards associated with the waste have been disclosed herein. I understand that the waste may be subject to random sampling, that any waste that is non-conforming will be returned to me, and that the County will not be responsible for expenses related to transportation, storage and handling of the non-conforming waste.

Print Name: Thomas J. Jaap Signature: Thomas J. Jaap

Date: 9/1/2009

Iles Grove Station Sampling Plan

IG-5 – A composite sample was collected from eight locations in the contaminated soil storage pile. Samples were randomly collected from the top and side of the pile. At each sample location a pit or hole approximately 12 – 18 inches deep was dug with a shovel. Then two (2) spoonfuls of soil were removed from the side and bottom of the pit and placed into a 3 quart mixing bowl. The soils were mixed with the spoon between each location. After all of the samples were collected the sample was mixed again and placed into the laboratory provided sample containers. Approximately 2 quarts of soil were collected for the composite sample. The spoon was wiped clean of residual soils between each sampling location. No photographs were taken of the contaminated soil stock pile sampling locations.

Samples were placed on ice in a cooler provided by the laboratory and hand delivered to ELI in Casper on Monday morning. Samples were refrigerated from the time they were collected until they were delivered to the laboratory. No custody seals were used since the soil samples were in the sampler's possession the entire time.



LABORATORY ANALYTICAL REPORT

Client: O and G Environmental Consulting LLC
Project: Iles Grove
Lab ID: C09080011-005
Client Sample ID: IG-5 Composite - soil stockpile

Report Date: 08/14/09
Collection Date: 07/31/09 09:10
Date Received: 08/03/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	3.9	mg/kg		0.50		SW8021B	08/10/09 16:52 / mlf
Ethylbenzene	3.1	mg/kg		0.50		SW8021B	08/10/09 16:52 / mlf
m+p-Xylenes	15	mg/kg		1.0		SW8021B	08/10/09 16:52 / mlf
o-Xylene	6.4	mg/kg		0.50		SW8021B	08/10/09 16:52 / mlf
Toluene	5.7	mg/kg		0.50		SW8021B	08/10/09 16:52 / mlf
Xylenes, Total	22	mg/kg		0.50		SW8021B	08/10/09 16:52 / mlf
Surr: Trifluorotoluene	72.0	%REC		50-115		SW8021B	08/10/09 16:52 / mlf
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	1970	mg/kg		54		SW8015M as	08/08/09 17:13 / bah
Surr: o-Terphenyl	98.0	%REC		60-120		SW8015M as	08/08/09 17:13 / bah
Gasoline Range Organics (GRO)	1100	mg/kg		40		SW8015M as	08/06/09 22:17 / mlf
Surr: Trifluorotoluene	83.0	%REC		50-115		SW8015M as	08/06/09 22:17 / mlf

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Folder: **SentMail**

Read Message

Reply | Reply To All | Forward | Delete | Save Address | Printable View | Previous | Next
Report Spam

Sender: "THOMAS JAAP" <tjaap@bresnan.net>
Subject: Additional laboratory analyses
Date: Thu, 24 Sep 2009 14:15:52 -0600
To: gwebber@nwccusa.com
Cc: mattwold@gmail.com

E-mail Source

Mr. Webber

Attached is a report for the additional analyses you requested to accompany the previously submitted analyses for soils derived from the Iles Grove Tank Battery. Also attached is the laboratory certification you requested. If you have any questions please contact me at the following:

Office: 307-234-3395
Cell: 307-267-6062
Email: tjaap@bresnan.net

Please let me know as soon as possible if the soils can be disposed in the Moffat County Landfill. Thank you.

Thomas Jaap



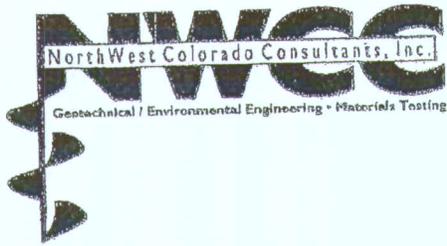
File: 832009_95_E87641_073009_Updated_Certification.pdf (1738Kbytes)



File: C09090876.pdf (230Kbytes)

Reply | Reply To All | Forward | Delete | Save Address | Printable View | Previous | Next

Move message to:



September 24, 2009

Ms. Linda DeRose
Moffat County Road Department
PO Box 667
Craig, CO 81626

NWCC Project Number: 02-5212

Subject: Waste Characterization and Disposal
Acceptance, Iles Grove Station

Dear Ms. DeRose:

In accordance with your September 8, 2009 request and September 24, 2009 receipt of additional analytical data, NWCC, Inc. (NWCC) reviewed a Thomas Jaap correspondence, analytical data, and waste characterization form provided by Mr. Jaap to Moffat County Road Department (MCRD). Based upon our understanding, the provided information is associated with residual petroleum contaminated soil located at the Iles Grove Station facility approximately 15 miles south of Craig, Colorado. Contaminated soil proposed for disposal at Moffat County Regional Landfill (MCRL) appears to be limited to approximately 200 cubic yards. Based upon MCRL permit requirements and Industrial, Special, and Universal Waste Plan (ISUWP), contaminated material must be characterized prior to acceptance for disposal at the landfill.

Based upon provided analytical reports, the collected samples were submitted to Energy Laboratories, Inc. (ELI) of Casper, Wyoming. A Laboratory Accreditation Program certified analytical laboratory must be used to provide analytical services. Based upon our understanding ELI is a National Environmental Laboratory Accreditation Program (NELAP) certified laboratory. Analyses associated with the ISUWP that were conducted include the following.

- Resource Conservation and Recovery Act (RCRA) 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) using U.S. Environmental Protection Agency (EPA) Methods 6020/7471A (MCRL Appendix A: Industrial, Special, and Universal Waste Plan [ISUWP] Test Suite Number 1).
- Benzene, toluene, ethylbenzene, and xylene (BTEX) using U.S. Environmental Protection Agency (EPA) Method 8021B (ISUWP Test Suite Number 2).

(970) 879-7888 • Fax (970) 879-7891
2580 Copper Ridge Drive • Steamboat Springs, CO 80487

Waste Characterization and Disposal
Acceptance, Iles Grove Station

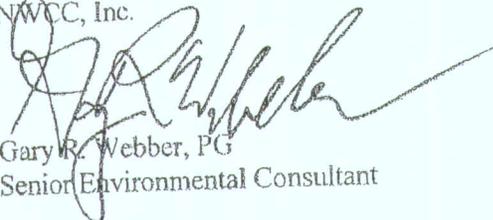
September 24, 2009

Page 2 of 2

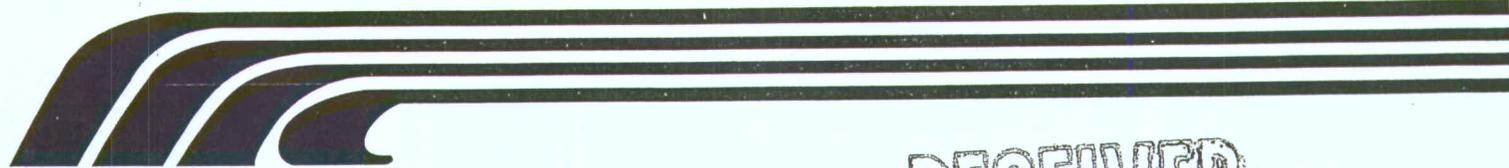
- Total petroleum hydrocarbons (TPH) for diesel range organic compounds (DRO) and gasoline range organic compounds (GRO) using modified EPA Method 8015 (ISUWP Test Suite Number 5).
- Polynuclear aromatic hydrocarbons (PAH) using EPA Method 8270C (ISUWP Test Suite Number 6).
- Ignitability using EPA Method 1010 (ISUWP Test Suite 11).
- Paint filter using EPA Method 9095 (ISUWP Test Suite 13).

Based upon review of provided analytical reports and in accordance with the ISUWP, the material appears to meet MCRL disposal criteria and may be disposed at MCRL. If you have any questions or concerns, please do not hesitate to contact the undersigned. We look forward to continuing to work with you.

Sincerely,
NWCC, Inc.

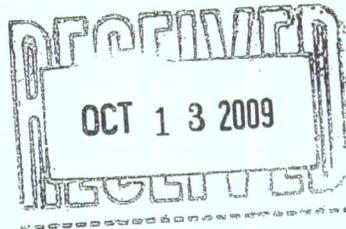


Gary R. Webber, PG
Senior Environmental Consultant



MOFFAT COUNTY

LANDFILL



October 2, 2009

Mr. Thomas Jaap
350 W. A Street, Suite 203
Casper, WY 82601

RE: Waste Characterization and Soil Disposal
Acceptance, Iles Grove Station

Tom:

On behalf of the Moffat County Board of County Commissioners, the Moffat County Landfill authorizes the disposal of approximately 200 cubic yards of contaminated soils at the Moffat County Landfill. This authorization is based upon the provided analytical reports of collected samples submitted to Energy Laboratories, Inc. for petroleum contaminated soil located at the Iles grove Station facility approximately 15 miles south of Craig, Colorado.

Based upon review of the provided information, the contaminated soils proposed for disposal at the Moffat County Regional Landfill appear to meet the 2007 MCRL Industrial, Special, and Universal Waste Plan (ISUWP) criteria and may be accepted for disposal at the Landfill.

Off-loading of the waste at the landfill will be visually monitored by an experienced and trained landfill technician. Note that Moffat County reserves the right to deny disposal of the waste at the landfill gate if its character is different than anticipated. This facility does not accept material that is characterized as a hazardous waste. Liquids and other fluid waste that fail the paint filter test also will not be accepted at this facility. The County also reserves the right to sample and test the material upon its arrival as quality control for the characterization information you provided at no delay to you. If the test results are greatly different than the data submitted, criminal charges can be assessed.

Mr. Thomas Jaap
Page 2
October 2, 2009

Moffat County is requiring only one Waste Manifest form for each project to be submitted with the first load. The Moffat County Landfill will document each load on a Special Waste sheet and Landfill tickets will be generated for each load showing the total tons of material hauled. The driver must sign each Landfill ticket.

Should you have any questions about the disposal of this waste, landfill operations or policies, state solid waste regulations or general handling of waste materials, please contact Mr. Nick Rubley at the Moffat County Landfill (970) 824-4347 or Mr. Bill Mack, Landfill Manager and Director for the Moffat County Road Department at (970) 824-3211, ext. 15.

We thank you for your cooperation.

Sincerely,

Billy E. Mack
Byd.

Billy E. Mack, Director
Moffat County Road Department

cc Nick Rubley, Moffat County Landfill

Enclosure Waste Manifest form

MOFFAT COUNTY LANDFILL NON-HAZARDOUS WASTE MANIFEST

WASTE GENERATOR

Generator: _____

Address: _____ Site Location: _____

_____ Site Address: _____

Phone: _____ Site Phone: _____

Description of Waste: _____

Description of Waste Packaging: _____

Total Volume of Waste Expected: _____

I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR Part 261 or by any applicable state law. I further certify that these wastes have been fully and accurately described, classified, and packaged, and are in proper condition for transportation according to applicable local, state, and federal regulations.

Generator or Authorized Agent Name (Print) Signature Scheduled Delivery Date

WASTE TRANSPORTER (If you have more than two transporters, please list on a separate sheet of paper.)

Transporter Name: _____ Transporter Name: _____

Address: _____ Address: _____

Phone: _____ Phone: _____

WASTE DESTINATION – MOFFAT COUNTY LANDFILL

The Moffat County Landfill hereby acknowledges approval for disposal of the above-mentioned waste by either of the following:

Moffat County: _____
(Date of Acceptance Letter)

or

Colorado Department
of Health and Environment: _____
(Date of Acceptance Letter)

Moffat County Landfill

Signature

Date

Moffat County Municipal Solid Waste Landfill

P.O. BOX 667

Ticket# 141447
 Vehicle Id *P-10
 Hauler *PRIVATE

Craig, CO 81626
 970-824-4347

Date 10/13/09
 Time In 11:05
 Time Out 11:17

Customer Name WOLD OIL PROPERTIES 2382
 Waste Code SPR Cost/ton 55.00
 Waste Descr. SPECIAL WASTE RES

Container Wt.
 Net Tons 10.44
 Load Value \$ 574.20
 Minimum Fee 8.00

Tires >4' @ \$ 8.00
 Tires <4' @ \$ 4.00
 Appliances @ \$.00
 Sm. Animals @ \$.00
 Lg. Animals @ \$.00
 Misc. @ \$.00

Total Tires < 4 \$ 0.00
 Total Tires > 4 \$ 0.00
 Total Tires \$ 0.00
 Total Misc \$ 0.00
 Total Extras \$ 0.00

Gross 44080 lb
 Tare 23200 lb
 Net 20880 lb
 Tons 10.44

Payment Type CHARGE Total Due \$ 574.20

Operator TONI

Signature J. Ayres

Moffat County Municipal Solid Waste Landfill

P.O. BOX 667

Ticket# 141459
 Vehicle Id *P-10
 Hauler *PRIVATE

Craig, CO 81626
 970-824-4347

Date 10/13/09
 Time In 14:10
 Time Out 14:20

Customer Name WOLD OIL PROPERTIES 2382
 Waste Code SPR Cost/ton 55.00
 Waste Descr. SPECIAL WASTE RES

Container Wt.
 Net Tons 16.08
 Load Value \$ 884.40
 Minimum Fee 8.00

Tires >4' @ \$ 8.00
 Tires <4' @ \$ 4.00
 Appliances @ \$.00
 Sm. Animals @ \$.00
 Lg. Animals @ \$.00
 Misc. @ \$.00

Total Tires < 4 \$ 0.00
 Total Tires > 4 \$ 0.00
 Total Tires \$ 0.00
 Total Misc \$ 0.00
 Total Extras \$ 0.00

Gross 55260 lb
 Tare 23100 lb
 Net 32160 lb
 Tons 16.08

Payment Type CHARGE Total Due \$ 884.40

Operator TONI

Signature J. Ayres

Moffat County Municipal Solid Waste Landfill

P.O. BOX 667

Ticket# 141495
 Vehicle Id *P-10
 Hauler *PRIVATE

Craig, CO 81626
 970-824-4347

Date 10/14/09
 Time In 13:13
 Time Out 13:24

Customer Name WOLD OIL PROPERTIES 2382
 Waste Code SPR Cost/ton 55.00
 Waste Descr. SPECIAL WASTE RES

Container Wt.
 Net Tons 11.60
 Load Value \$ 638.00
 Minimum Fee 8.00

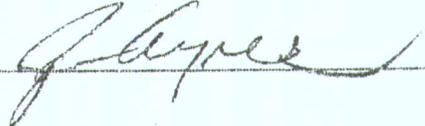
Tires >4' @ \$ 8.00
 Tires <4' @ \$ 4.00
 Appliances @ \$.00
 Sm. Animals @ \$.00
 Lg. Animals @ \$.00
 Misc. @ \$.00

Total Tires < 4 \$ 0.00
 Total Tires > 4 \$ 0.00
 Total Tires \$ 0.00
 Total Misc \$ 0.00
 Total Extras \$ 0.00

Gross 46280 lb
 Tare 23080 lb
 Net 23200 lb
 Tons 11.60

Payment Type CHARGE Total Due \$ 638.00

Operator RUBLEY

Signature 

Moffat County Municipal Solid Waste Landfill

P.O. BOX 667

Ticket# 141452
 Vehicle Id *P-10
 Hauler *PRIVATE

Craig, CO 81626
 970-824-4347

Date 10/13/09
 Time In 12:39
 Time Out 12:48

Customer Name WOLD OIL PROPERTIES 2382
 Waste Code SPR Cost/ton 55.00
 Waste Descr. SPECIAL WASTE RES

Container Wt.
 Net Tons 15.07
 Load Value \$ 828.85
 Minimum Fee 8.00

Tires >4' @ \$ 8.00
 Tires <4' @ \$ 4.00
 Appliances @ \$.00
 Sm. Animals @ \$.00
 Lg. Animals @ \$.00
 Misc. @ \$.00

Total Tires < 4 \$ 0.00
 Total Tires > 4 \$ 0.00
 Total Tires \$ 0.00
 Total Misc \$ 0.00
 Total Extras \$ 0.00

Gross 53280 lb
 Tare 23140 lb
 Net 30140 lb
 Tons 15.07

Payment Type CHARGE Total Due \$ 828.85

Operator TONI

Signature 

Moffat County Municipal Solid Waste Landfill

P.O. BOX 667
 Craig, CO 81626
 970-824-4347

Ticket# 142647
 Vehicle Id *P-10
 Hauler *PRIVATE

Date 11/25/09
 Time In 12:14
 Time Out 12:30

Customer Name WOLD OIL PROPERTIES 2382
 Waste Code SPR Cost/ton 55.00
 Waste Descr. SPECIAL WASTE RES

Container Wt.
 Net Tons 8.31
 Load Value \$ 457.05
 Minimum Fee 8.00

Tires >4' @ \$ 8.00
 Tires <4' @ \$ 4.00
 Appliances @ \$.00
 Sm. Animals @ \$.00
 Lg. Animals @ \$.00
 Misc. @ \$.00

Total Tires < 4 \$ 0.00
 Total Tires > 4 \$ 0.00
 Total Tires \$ 0.00
 Total Misc \$ 0.00
 Total Extras \$ 0.00

Gross 39640 lb
 Tare 23020 lb
 Net 16620 lb
 Tons 8.31

Payment Type CHARGE Total Due \$ 457.05

Operator RUBLEY

Signature 

APPENDIX G

Sump Disposal Documentation

APPENDIX H

Fill Dirt Documentation

October 14, 2009

November 25, 2009

3B ENTERPRISES, LLC

P.O. Box 1665
Craig, CO 81626
970-824-0225

Invoice

Date	Invoice #
10/15/2009	6600

Bill To
JIM AYRES ENTERPRISES, INC. 2236 CR 30 CRAIG, CO 81625

P.O. No.	Terms
	Net 20 days

Item	Date	Ticket #	Qty	Rate	Amount
06 FILL DIRT	10/14	37340	13.76	10.00	137.60T

Subtotal	\$137.60
Sales Tax (4.9%)	\$6.74
Total	\$144.34

PAST DUE ACCOUNT WILL BE BILLED AT 1.5% INTEREST WITH A MINIMUM OF \$3 PER MONTH.

*Ad CK# 2434
Mastercard*

600

3B Enterprises, LLC

SAND, GRAVEL AND ROCK PRODUCTS

P.O. Box 1665
Craig, Co 81626
970-824-0225

144.34 No 37340

Product Fill Dirt In Retail

Buyer Jim Hyer Ent

Address _____

City _____ State _____ Zip _____

Truck #617

Driver On Off

Purchase Order # Wald

Weighed By BWick Fee _____

ID 36

GROSS 23080 lb INBOUND

10/14/2009 01:36PM

ID 36

GROSS 50600 lb

TARE 23080 lb RECALLED

NET 27520 lb

10/14/2009 01:46PM

13.76



Enterprises, LLC

SAND, GRAVEL AND ROCK PRODUCTS

P.O. Box 1665
Craig, Co 81626
970-824-0225

No 37875

\$10.00

15.60

156.00

7.64 ID 32

163.64 GROSS

23020 lb INBOUND

11/25/2009 12:14:00PM
ID 32

GROSS 54220 lb
TARE 23020 lb RECALLED
NET 31200 lb

11/25/2009 12:49:27PM

15.60

Product Fill Dirt In Retail

Buyer Jim Ayers

Address _____

City _____ State _____ Zip _____

Truck 617-ESW

Driver On Off

Purchase Order # Wold

Weighed By B. Wick Fee _____