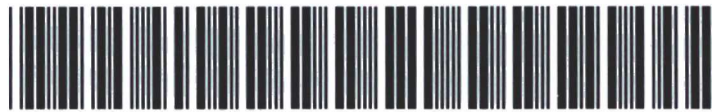




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**ENTERPRISE PRODUCTS OPERATING LP**



FINAL CLOSURE REPORT

KUTZ SEPARATOR &  
HYDROCARBON RECOVERY PLANT  
Off Arizona Road (CR 4900)  
Section 11, Township 29N, Range 11W  
San Juan County, New Mexico

March 22, 2011  
SWG Project No. 0210008

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## FINAL CLOSURE REPORT

### KUTZ SEPARATOR and HYDROCARBON RECOVERY PLANT

Off Arizona Road (CR 4900)  
San Juan County, New Mexico

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#### 1.0 EXECUTIVE SUMMARY

This report documents the final facility decommissioning and closure of the Enterprise Field Services, LLC (Enterprise) Kutz Separator and Hydrocarbon Recovery Plant. With the exception of a used oil storage tank, which is currently in service, the facility has been inactive since acquisition of the facility by Enterprise following the merger of GulfTerra Energy Partners L.P. (GulfTerra) and Enterprise in September 2004. Prior to decommissioning, the Kutz Separator and Hydrocarbon Recovery Plant, referred to hereinafter as the "Site" or "subject Site", consisted of approximately two (2) acres of security-fenced land previously developed with two (2) evaporation ponds (herein referred to as the North and South Ponds), eleven (11) steel storage tanks, four (4) open-top separator boxes, two (2) heater/separators, and a concrete drive connecting two of the three access gates. The land upon which this facility resides is currently leased from the United States Bureau of Land Management (BLM). The Site is located off Arizona Road (CR 4900) (N 36° 44' 08.04", W 107° 57' 31.70") in Section 11, Township 29N and Range 11W in San Juan County, New Mexico.

Specific details regarding the investigation are further explained in the following sections and should be read to fully comprehend the extent of the investigation and results. In addition, findings and recommendations are included in this executive summary for your convenience; however, the remaining text of the report and associated appendices should also be reviewed for a complete understanding of the limited investigation report.

The objectives of the closure activities completed at the Site were 1.) to remove the separation equipment, evaporation ponds and associated treatment and hydrocarbon recovery equipment; 2.) evaluate the presence of petroleum hydrocarbons in the on-site soil and groundwater, if encountered; and, 3.) restore the Site to natural grade and vegetation.

This facility, including the two evaporation ponds, formerly recovered hydrocarbons from liquids generated during natural gas production activities, which were separated during compression and processing. Therefore, the facility is subject to regulatory oversight by the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD). To address activities related to condensate releases, the OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically New Mexico Administrative Code (NMAC) 19.15.30 Remediation. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

In accordance with the OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, SWG utilized the general site characteristics obtained during the completion of closure activities to determine the appropriate "ranking" for the Site. Based on



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SWG's review of Site characteristics a ranking score of 10 was determined for the Site. Consequently, the OCD's *Remediation Action Levels* for the on-Site soils are 10 milligrams per kilogram (mg/Kg) benzene, 50 mg/Kg total benzene, toluene, ethylbenzene and xylenes (BTEX), and 1,000 mg/Kg total petroleum hydrocarbons (TPH).

Seven (7) soil borings were advanced at the Site in the vicinity of the treatment equipment, storage tanks, evaporation ponds and related appurtenances. Based on the analytical results, benzene, total BTEX and/or TPH concentrations were not identified in the on-site soils during investigation activities above the OCD's *Remediation Action Levels*.

USA Environment, LP (USA) coordinated the cleaning, removal, and disposal/recycling of the separator system and associated evaporation pond liners, and Site restoration activities. Prior to the initiation of closure activities, waste characterization of vessel contents was performed by Envirotech, Inc. A total of ten (10) steel storage tanks and associated appurtenances were cleaned and removed from the Site during closure activities. The only storage tank remaining on-site is the used oil tank at the northeast corner of the property. This tank is not part of the separator facility, and remains in-use for temporary storage of used lubrication oil prior to off-site recycling. Subsequent to the removal of solids and liquids from the evaporation ponds utilizing a vacuum truck and power washer, each of the liners were removed and either recycled or disposed off-site.

The contents recovered during the closure of the storage tanks, vessels and related equipment (liquids, tank bottoms, and wash water) and solids/liquids removed from the pond liners were disposed at the Envirotech, Inc. land farm for treatment.

The concrete containment walls associated with the former storage tanks and treatment equipment were visually assessed and found to be free of hydrocarbon staining. Therefore, subsequent to the destruction utilizing on-site equipment, the resulting concrete rubble was placed on the floor of the north pond prior to site grading activities. The berms surrounding the evaporation ponds were then razed, returning the site to approximate natural grade. The Site was then hydro-seeded utilizing a blend of native seeds on September 9, 2010.

During the completion of closure activities, petroleum hydrocarbon stained soil was observed in the vicinity of storage tanks 1-NT, 2-NT, and 3-NT. In total, an estimated 100 cubic yards of soil and gravel were excavated and placed on 6-mil plastic sheeting on the concrete driveway. One (1) composite soil samples was subsequently collected from the stockpiled soils to characterize the soils for on-site reuse or off-site disposal. The soil sample collected from the stockpiled soil did not exhibit benzene, total BTEX and/or TPH concentrations above the applicable OCD *Remediation Action Levels*; therefore, the soils were reused/spread on-site.

Four (4) discrete confirmation soil samples were collected from the floor of the evaporation pond (S-SW-1, S-NW-1, N-SW-1 and N-NE-1), and two (2) discrete confirmation soil samples (Sump Conf-1 and Tanks 1,2 Conf) were collected from the floor of the excavation in the vicinity of the former sump and storage tanks 1-NT, 2-NT, and 3-NT. Based on the analytical results, benzene, total BTEX and/or TPH concentrations were not identified in the on-site soils during confirmation sampling activities above the OCD's *Remediation Action Levels*.



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## 2.0 INTRODUCTION

### 2.1 Site Description & Background

Prior to decommissioning and closure, the Site consisted of approximately two (2) acres of security-fenced land developed with two (2) evaporation ponds, eleven (11) steel storage tanks, four (4) open-top separator boxes, two (2) heater/separators, and a concrete drive connecting two of the three access gates. The land upon which this facility resides is currently leased from the United States BLM. The Site is located off Arizona Road (CR 4900) (N 36° 44' 08.04", W 107° 57' 31.70") in Section 11, Township 29N and Range 11W in San Juan County, New Mexico.

El Paso Natural Gas (EPNG) formerly operated this Site and installed the first lined pond (south pond) in 1987 to replace an evaporation pond originally constructed in the 1950s, and believed to occupy the same location. The north lined pond was installed in 1996 to augment the south pond. Potential leaks at the south pond were identified in 1994 and 1995. Repairs were documented in 1995, subsequent to a failed vacuum test. Inspections of the pond liners in 1998 found no compromises of the north pond liner, however, one puncture and two small tears were identified in the south pond liner, which were repaired the same month. The north pond liner was repaired in 2002, and a new liner was apparently installed in the south pond at this time.

Facility operations and use of the North and South Ponds was discontinued prior to acquisition of the facility from GulfTerra during September 2004. Facility use has since been limited to the temporary storage of used oil in a steel storage tank which remains in use on the northeast portion of the facility.

A topographic map is included as Figure 1, and an aerial photograph of the Site vicinity is included as Figure 2 of Appendix A.

### 2.2 Scope of Work Objective

The objectives of the closure activities completed at the Site were 1.) to remove the separation equipment, evaporation ponds and associated treatment and hydrocarbon recovery equipment; 2.) evaluate the presence of petroleum hydrocarbons in the on-site soil and groundwater, if encountered; and, 3.) restore the Site to natural grade and vegetation.

### 2.3 Standard of Care & Limitations

The findings and recommendations contained in this report represent SWG's professional opinions based upon information derived from the on-Site activities and other services performed under this scope of work and were arrived at in accordance with currently acceptable professional standards. The findings were based upon analytical results provided by an independent laboratory. Evaluations of the geologic/hydrogeologic conditions at the Site for the purpose of this investigation are made from a limited number of available data points (i.e. soil borings), and Site-wide subsurface conditions may vary from these data points. SWG makes no warranties, express or implied, as to the services performed hereunder. Additionally, SWG does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties).



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This report is based upon a specific scope of work requested by Enterprise. The agreement between SWG and Enterprise outlines the scope of work, and only those tasks specifically authorized by that agreement or outlined in this report were performed. This report has been prepared for the intended use of Enterprise and their subsidiaries, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of Enterprise and SWG.

### **3.0 SITE CHARACTERIZATION**

#### **3.1 Geology & Hydrogeology**

According to the New Mexico Bureau of Geology and Mineral Resource (Geologic Map of New Mexico 2003), the Site overlies the Nacimiento geologic formation. The Nacimiento geologic formation is characterized as very coarse sandstone inter-layered with relatively impermeable shale and mudstone. The Paleocene-age Nacimiento Group includes the Puerco and Torrejon Formations. The general lithology encountered at the Site consists of brown silty sands and silty clays from the ground surface to 20 feet bgs.

The major aquifer underlying the Site vicinity is listed as the Colorado Plateaus Aquifer, which is made up of four smaller aquifers, the Uinta-Animas, the Mesa Verde, the Dakota-Glen, and the Coconino-De Chelly. The general composition of the aquifers are moderately to well-consolidated sedimentary rocks of an age ranging from Permian to Tertiary. Each aquifer is separated from the others by an impermeable confining unit. Two of the confining units are completely impermeable and cover the entire area of the aquifers. The other two confining units are less extensive and are thinner. These units allow water to flow between the principal aquifers. There are countless streams, rivers, and lakes that overlay the Colorado Plateaus Aquifers. The surface water bodies in this region provide a place for the aquifers to discharge. Some of the high altitude rivers and lakes may also provide recharge.

The initial groundwater-bearing unit (GWBU) at the Site was encountered at a depth of >70 feet bgs during the completion of investigation and on-going abatement action activities adjacent to the west of the Site, at the former EPNG flare pit. Groundwater flow direction of the initial shallow, unconfined GWBU is likely toward the nearest down-gradient water body (lakes, creeks, rivers) and can likely be approximated by observing the surface topography. Using this assumption, the groundwater flow direction at the Site is likely to the south-southwest.

#### **3.2 Land Use & Classification**

Land use was determined by evaluation of existing land use of the Site and the land that borders the Site. The Site borders existing natural gas processing and gathering equipment to the south, and an electrical substation to the southeast. The adjacent land to the north consists predominantly of rangeland occasioned with oil & gas production and gathering sites. Due to the few remaining appurtenances at the facility, and the use of adjacent lands, the current land use remains commercial/industrial.

#### **3.3 Site Ranking**



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The Site is subject to regulatory oversight by the OCD. To address activities related to condensate releases, the OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 Remediation. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

In accordance with the OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, SWG utilized the general site characteristics obtained during the completion of closure activities to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the table below:

Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	10
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or: <200 feet from private domestic water source.	Yes	20	0
	No	0	
Distance to Surface Water Body	<200 feet	20	0
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			10

Based on SWG's review of Site characteristics a ranking score of 10 was determined for the Site in accordance with the *Guidelines for Remediation of Leaks, Spills and Releases*. Consequently, the OCD's *Remediation Action Levels* for the on-Site soils are 10 mg/Kg benzene, 50 mg/Kg total BTEX, and 1,000 mg/Kg TPH.

## 4.0 SITE INVESTIGATION

### 4.1 Soil Borings

SWG's field investigation activities were conducted on May 26, 2010 by B. Chris Mitchell, a SWG environmental professional. As part of the approved scope of work, a total of seven (7) soil borings were advanced at the Site in the vicinity of the treatment equipment, storage tanks, evaporation ponds and related appurtenances.

Soil boring B-1 was advanced in the vicinity of the heater/separators and sump, outside of the concrete retaining/containment wall. Soil boring B-2 was advanced near emulsion tanks #T-1144 and #421. Soil boring B-3 was advanced on the northern portion of the Site, topographically up-gradient of the north evaporation pond. Soil boring B-4 was advanced on the west-central portion of the Site, topographically down-gradient of the north evaporation pond. Soil boring B-5 was advanced on the central portion of the Site, topographically down-gradient of the north evaporation pond and the emulsion tanks. Soil boring B-6 was advanced on the southwestern portion of the Site, topographically down-gradient of the south evaporation pond, and boring B-7 was adjacent along the southern boundary of the Site, topographically down-gradient of the south evaporation pond and hydrocarbon storage tanks.



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Figure 3 is a Site Plan that indicates the approximate location of the soil borings in relation to current and former pertinent structures and land features (Appendix A).

Soil borings B-1 through B-7 were advanced using a direct-push Geoprobe® drilling rig under the supervision of a New Mexico Office of the State Engineer-licensed driller. Soil samples were collected continuously to the termination depth of each soil boring. Soil samples were observed to document soil lithology, color, moisture content and visual and olfactory evidence of petroleum hydrocarbons. Upon retrieval of soils from the borehole, each soil sample was immediately divided into portions designated for field screening or laboratory analysis. Field headspace analysis was conducted by placing the portion of the soil sample designated for field screening into a plastic Ziplock® bag. The plastic bag was sealed and then placed in a warm area to promote volatilization. The air above the sample, the headspace, was then evaluated using a photoionization detector (PID) capable of detecting volatile organic compounds (VOCs). The PID was calibrated utilizing an isobutylene standard prior to use in the field.

During the advancement of each soil boring, an on-Site geoscientist documented the lithology encountered and constructed a continuous profile of the soil column from the surface to the soil boring terminus. Soil samples from each soil boring location were visually inspected and classified in the field. The lithology encountered during the advancement of the soil borings was similar across the site, consisting of brown silty sands and silty clays extending from the surface to the terminus of the borings at 20 feet below ground surface (bgs). Soil boring B-4 was the lone exception, as sandstone was encountered at a depth of 12 feet bgs, resulting in the termination of the soil boring at that depth.

Petroleum hydrocarbon odors were not detected in the soil samples collected from soil borings B-2 through B-7. A slight hydrocarbon odor was observed in the soil samples collected at an approximate depth of 9 to 12 feet bgs at soil boring B-1. PID readings ranging from below the instruments detection limit to 21 parts per million (ppm) were detected in the soil samples collected from the soil borings. The highest PID reading was observed in the soil sample collected from a depth of 11 to 12 feet bgs in soil boring B-1. Field screening results are presented on the soil boring logs included in Appendix B.

## **4.2 Investigation Sampling Program**

### **4.2.1 Soil Sampling Program**

SWG's soil sampling program involved submitting one (1) soil sample from each soil boring for laboratory analysis. Soil samples were collected from the zone exhibiting the highest PID reading, from a change in lithology, or from the bottom of the soil boring, based on the field professional's judgment.

Soil samples were collected and placed in laboratory prepared glassware and placed on ice in a cooler, which was secured with a custody seal. The sample cooler and completed chain-of-custody forms were relinquished to Hall Environmental Analytical Laboratories, Inc.'s (HEAL) analytical laboratory in Albuquerque, NM for normal turnaround.

### **4.2.2 Groundwater Sampling Program**



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Groundwater was not encountered during the completion of Site investigation activities. Site observations and supporting confirmation soil sampling analytical data obtained during the removal of the North and South Ponds do not indicate that historical facility operations have affected underlying groundwater.

### 4.3 Laboratory Analytical Program

The soil samples collected from the soil borings were analyzed for TPH GRO/DRO utilizing EPA method SW-846 #8015B, and BTEX utilizing EPA method SW-846 #8021B. Laboratory results are summarized in Table 1, included in Appendix C. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix D.

### 4.4 Investigation Results

In accordance with the *Guidelines for Remediation of Leaks, Spills and Releases*, a ranking score of 10 was determined for the Site. Consequently, the OCD's *Remediation Action Levels* for the on-site soils are 10 mg/Kg benzene, 50 mg/Kg total BTEX, and 1,000 mg/Kg TPH.

Based on the analytical results, benzene, total BTEX and/or TPH concentrations were not identified in the on-site soils during investigation activities above the OCD's *Remediation Action Levels*.

Soil sample intervals are presented with the soil sample analytical results (Table 1) in Appendix C and are provided on the soil boring logs included in Appendix B.

## 5.0 FACILITY CLOSURE

### 5.1 Plant Decommissioning

USA coordinated the cleaning, removal, and disposal/recycling of the separator system and associated evaporation pond liners, and Site restoration activities. These activities were performed under the direction of Mr. Kyle Summers, a SWG environmental professional. Photographic documentation is included in Appendix E.

Prior to the initiation of closure activities, waste characterization of vessel contents was performed by Envirotech, Inc. Subsequent to lock-out/tag-out of all site utilities by Enterprise personnel and subcontractors, a vacuum truck and power washer were utilized to remove vessel contents and rinse the interior finishes. An excavator, boom truck, man lift, and haul trucks were utilized to facilitate the removal of the tanks/vessels and associated piping from the Site. A total of ten (10) steel storage tanks and associated appurtenances were cleaned and removed from the Site during closure activities. The only storage tank remaining on-site is the used oil tank at the northeast corner of the property. This tank is not part of the separator facility, and remains in-use for temporary storage of used lubrication oil prior to off-site recycling. Three (3) of the steel storage tanks were transported to an Enterprise lay-down yard for potential future re-use, while the remaining tanks, vessels and related equipment were disposed by a scrap metal recycler.



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Subsequent to the removal of solids and liquids from the evaporation ponds utilizing a vacuum truck and power washer, each of the liners were removed and either recycled or disposed off-site. Three (3) liners (40-mil, 20-mil, 10-mil) and two felt beds were present on the southern pond, while two (2) liners (40-mil and 20-mil), a felt bed and high density polyethylene (HDPE) webbing were present on the northern pond. The top-most or "primary" liners on both ponds were steam-cleaned prior to removal to allow recycling. The HDPE webbing was also recycled. The remaining liners were brushed free of solids and, along with the felt material, were properly disposed of at the Waste Management, Inc. San Juan Regional Landfill.

The contents recovered during the closure of the storage tanks, vessels and related equipment (liquids, tank bottoms, and wash water) and solids/liquids removed from the pond liners were disposed at the Envirotech, Inc. land farm for treatment.

The concrete containment walls associated with the former storage tanks and treatment equipment were visually assessed and found to be free of hydrocarbon staining. Therefore, subsequent to the destruction utilizing on-site equipment, the resulting concrete rubble was placed on the floor of the north pond prior to site grading activities. The berms surrounding the evaporation ponds were then razed, returning the site to approximate natural grade. The Site was then hydro-seeded utilizing a blend of native seeds on September 9, 2010.

### 5.2 Excavation of Affected Soils

During the completion of closure activities, petroleum hydrocarbon stained soil was observed in the vicinity of storage tanks 1-NT, 2-NT, and 3-NT. In total, an estimated 60 cubic yards of soil and gravel were excavated and placed on 6-mil plastic sheeting on the concrete driveway. One (1) composite soil samples was subsequently collected from the stockpiled soils to characterize the soils for on-site reuse or off-site disposal. The soil sample collected from the stockpiled soil did not exhibit benzene, total BTEX and/or TPH concentrations above the applicable OCD *Remediation Action Levels*; therefore, the soils were reused/spread on-site.

### 5.3 Confirmation Sampling Program

SWG's confirmation soil sampling program consisted of the following:

- Four (4) discrete confirmation soil samples were collected from the floor of the evaporation ponds (S-SW-1, S-NW-1, N-SW-1 and N-NE-1) based on visual, olfactory and/or PID evidence of impairment.
- Two (2) discrete confirmation soil samples (Sump Conf-1 and Tanks 1,2 Conf) were collected from the floor of the excavation in the vicinity of the former sump and storage tanks 1-NT, 2-NT, and 3-NT subsequent to the removal of the petroleum hydrocarbon stained soils.

Soil samples were collected and placed in laboratory prepared glassware and placed on ice in a cooler, which was secured with a custody seal. The sample cooler and completed chain-of-custody forms were relinquished to HEAL's analytical laboratory in Albuquerque, NM for normal turnaround.



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#### 5.4 Laboratory Analytical Program

The soil samples collected from the soil borings were analyzed for TPH GRO/DRO utilizing EPA method SW-846 #8015B, and BTEX utilizing EPA method SW-846 #8021B. Laboratory results are summarized in Table 1, included in Appendix C. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix D.

#### 5.5 Confirmation Sampling Results

In accordance with the *Guidelines for Remediation of Leaks, Spills and Releases*, a ranking score of 10 was determined for the Site. Consequently, the OCD's *Remediation Action Levels* for the on-site soils are 10 mg/Kg benzene, 50 mg/Kg total BTEX, and 1,000 mg/Kg TPH.

Based on the analytical results, benzene, total BTEX and/or TPH concentrations were not identified in the on-site soils during confirmation sampling activities above the OCD's *Remediation Action Levels*.

Soil sample analytical results (Table 1) are presented in Appendix C.

### 6.0 CONCLUSIONS

The Enterprise Kutz Separator and Hydrocarbon Recovery Plant consists of approximately two (2) acres of security-fenced land historically developed with two (2) evaporation ponds, eleven (11) steel storage tanks, four (4) open-top separator boxes, two (2) heater/separators, and a concrete drive connecting two of the three access gates. The Site is located off Arizona Road (CR 4900) in Section 11, Township 29N and Range 11W in San Juan County, New Mexico.

EPNG formerly operated this Site and installed the first lined pond (south pond) in 1987 to replace an evaporation pond originally constructed in the 1950s, and believed to occupy the same location. The north lined pond was installed in 1996 to augment the south pond. In December 2004, operational control of the facility was transferred from EPNG to Enterprise. The ponds were subsequently taken out of service, and operations at the site were limited to the temporary storage of used oil in a steel storage tank which remains in use on the northeast portion of the facility.

The objectives of the closure activities completed at the Site were 1.) to remove the separation equipment, evaporation ponds and associated treatment and hydrocarbon recovery equipment; 2.) evaluate the presence of petroleum hydrocarbons in the on-site soil and groundwater, if encountered; and, 3.) restore the Site to natural grade and vegetation.

The Site is subject to regulatory oversight by the OCD. To address activities related to condensate releases, the OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 Remediation. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.



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In accordance with the OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, SWG utilized the general site characteristics obtained during the completion of closure activities to determine the appropriate "ranking" for the Site. Based on SWG's review of Site characteristics a ranking score of 10 was determined for the Site. Consequently, the OCD's *Remediation Action Levels* for the on-Site soils are 10 mg/Kg benzene, 50 mg/Kg total BTEX, and 1,000 mg/Kg TPH.

Seven (7) soil borings were advanced at the Site in the vicinity of the treatment equipment, storage tanks, evaporation ponds and related appurtenances. Based on the analytical results, benzene, total BTEX and/or TPH concentrations were not identified in the on-site soils during investigation activities above the OCD's *Remediation Action Levels*.

USA coordinated the cleaning, removal, and disposal/recycling of the separator system and associated evaporation pond liners, and Site restoration activities. Prior to the initiation of closure activities, waste characterization of vessel contents was performed by Envirotech, Inc. A total of ten (10) steel storage tanks and associated appurtenances were cleaned and removed from the Site during closure activities. The only storage tank remaining on-site is the used oil tank at the northeast corner of the property. This tank is not part of the separator facility, and remains in-use for temporary storage of used lubrication oil prior to off-site recycling. Subsequent to the removal of solids and liquids from the evaporation ponds utilizing a vacuum truck and power washer, each of the liners were removed and either recycled or disposed off-site.

The contents recovered during the closure of the storage tanks, vessels and related equipment (liquids, tank bottoms, and wash water) and solids/liquids removed from the pond liners were disposed at the Envirotech, Inc. land farm for treatment.

The concrete containment walls associated with the former storage tanks and treatment equipment were visually assessed and found to be free of hydrocarbon staining. Therefore, subsequent to the destruction utilizing on-site equipment, the resulting concrete rubble was placed on the floor of the north pond prior to site grading activities. The berms surrounding the evaporation ponds were then razed, returning the site to approximate natural grade. The Site was then hydro-seeded utilizing a blend of native seeds on September 9, 2010.

During the completion of closure activities, petroleum hydrocarbon stained soil was observed in the vicinity of storage tanks 1-NT, 2-NT, and 3-NT. In total, an estimated 100 cubic yards of soil and gravel were excavated and placed on 6-mil plastic sheeting on the concrete driveway. One (1) composite soil samples was subsequently collected from the stockpiled soils to characterize the soils for on-site reuse or off-site disposal. The soil sample collected from the stockpiled soil did not exhibit benzene, total BTEX and/or TPH concentrations above the applicable OCD *Remediation Action Levels*; therefore, the soils were reused/spread on-site.

Four (4) discrete confirmation soil samples were collected from the floor of the evaporation pond (S-SW-1, S-NE-1, N-SW-1 and N-NE-1), and two (2) discrete confirmation soil samples (Sump Conf-1 and Tanks 1,2 Conf) were collected from the floor of the excavation in the vicinity of the former sump and storage tanks 1-NT, 2-NT, and 3-NT. Based on the analytical results, benzene, total BTEX and/or TPH



**Final Closure Report**

Enterprise Field Services, LLC • Kutz Separator and Hydrocarbon Recovery Plant

Off Arizona Road (CR 4900), San Juan County, New Mexico

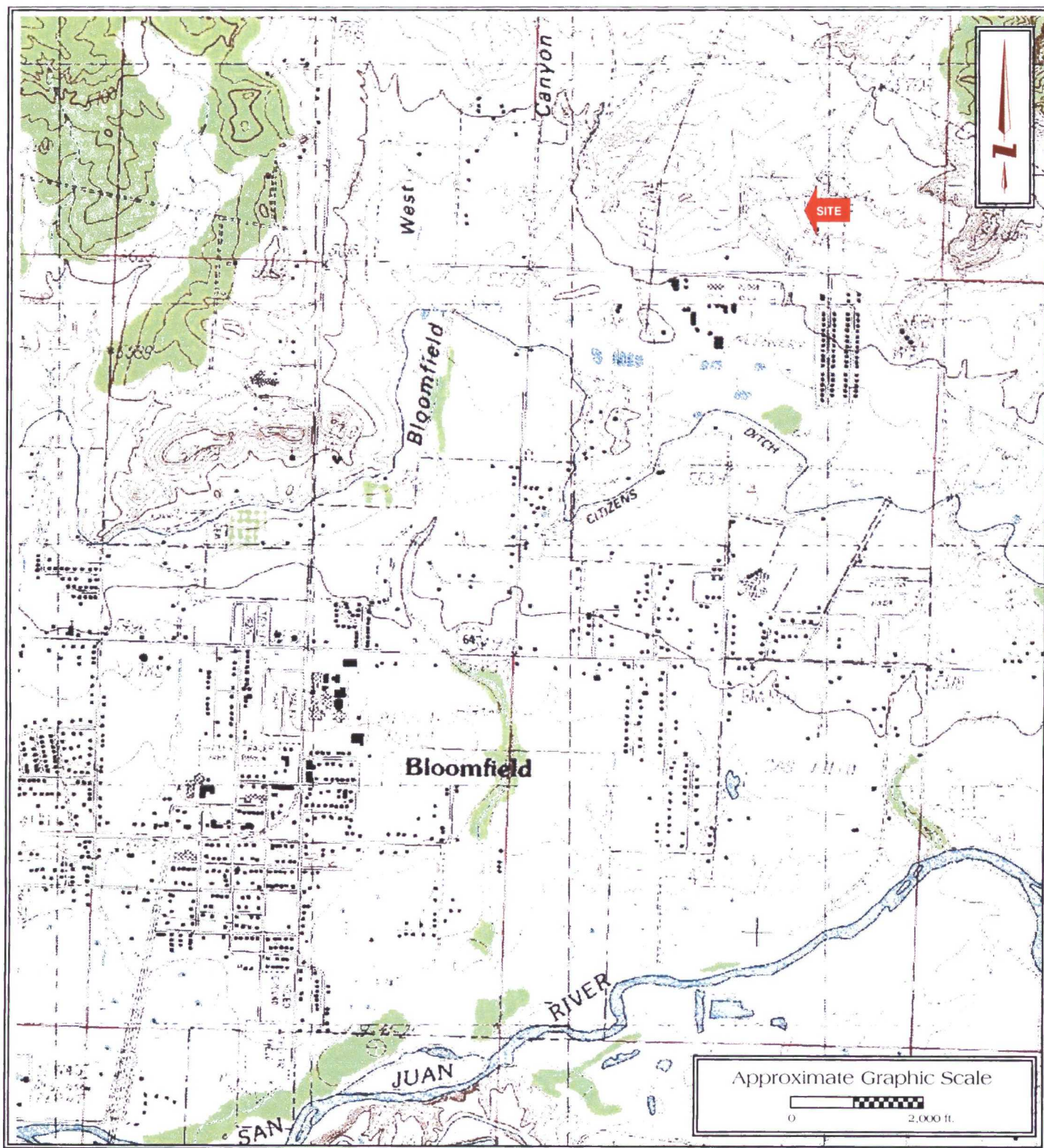
SWG Project No. 0210008

March 22, 2011

**Southwest**  
GEOSCIENCE

concentrations were not identified in the on-site soils during confirmation sampling activities above the OCD's *Remediation Action Levels*.



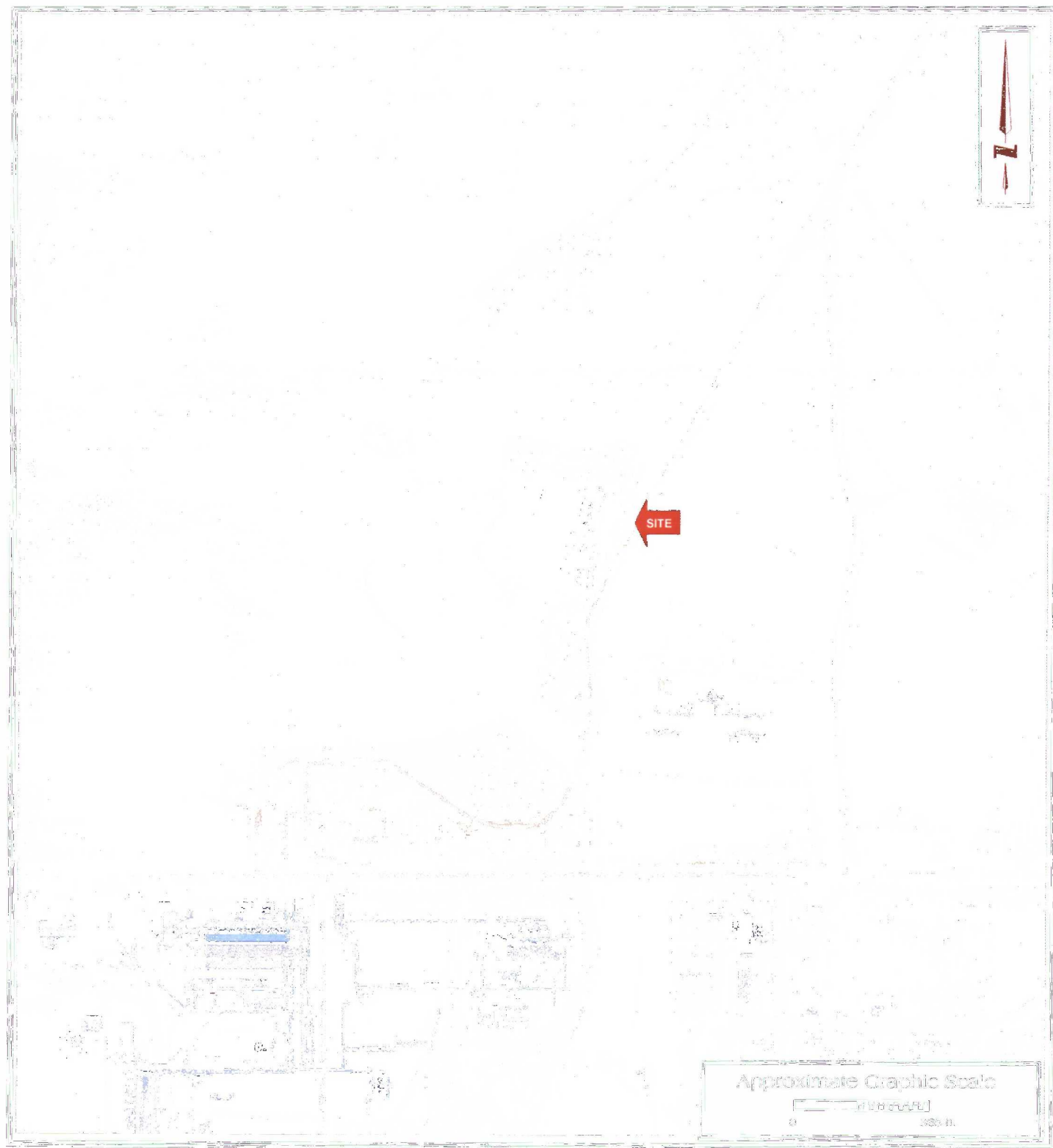


Final Closure Report  
 Kutz Separator &  
 Hydrocarbon Recovery Plant  
 N36° 44' 08.04"; W107° 57' 31.70"  
 Off Arizona Road (CR 4900)  
 San Juan County, New Mexico  
 SWG Project No. 0210008

**Southwest**  
 GEOSCIENCE

**FIGURE 1**  
 Topographic Map  
 Bloomfield, NM Quadrangle  
 Contour Interval - 10 Feet  
 1985





Final Closure Report

Kutz Separator &

Hydrocarbon Recovery Plant

N36° 44' 08.04"; W107° 57' 31.70"

Off Arizona Road (CR 4900)

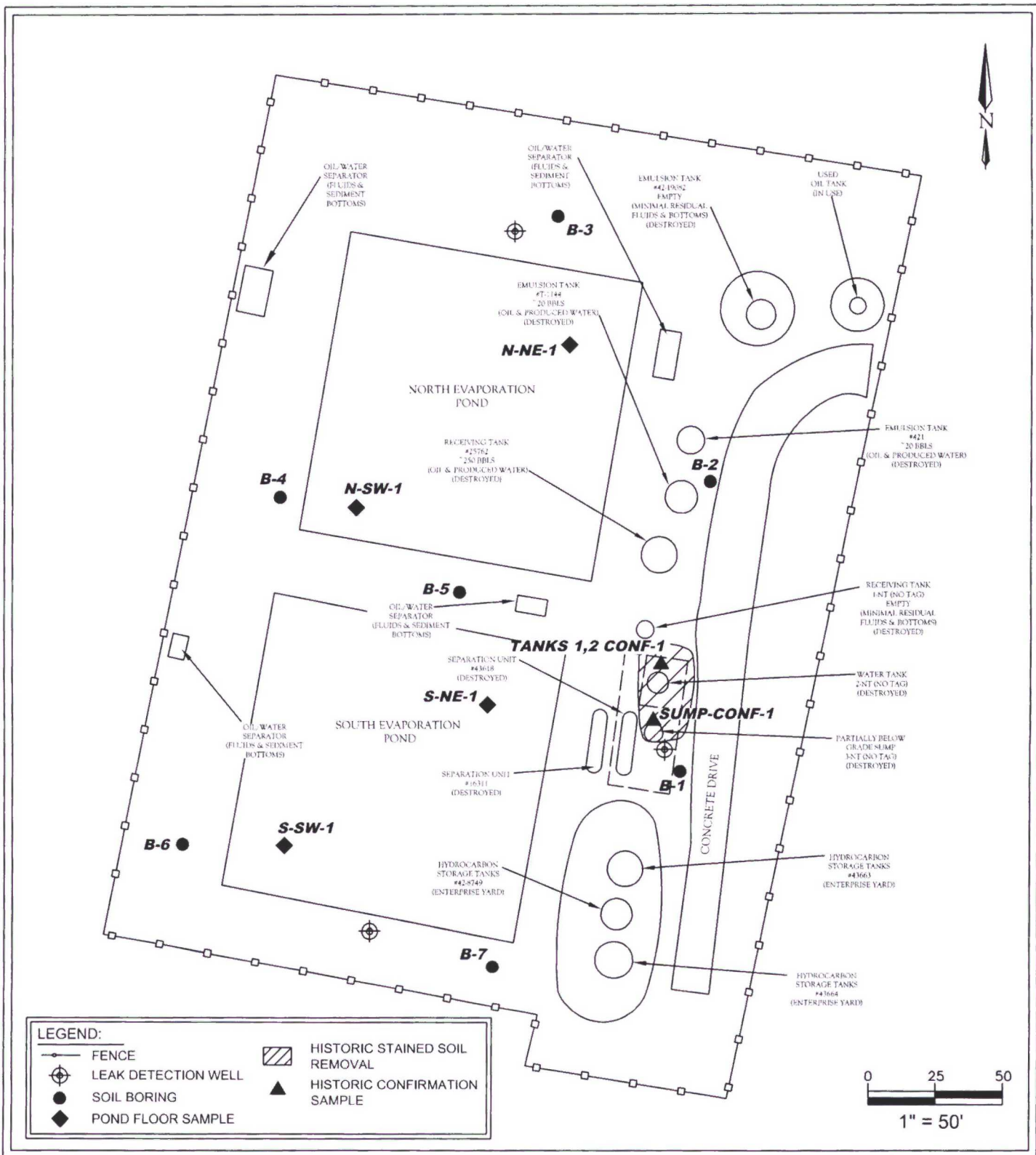
San Juan County, New Mexico

SWG Project No. 0210108

Southwest  
GEOSCIENCE

FIGURE 2  
Site Vicinity Map  
2009 Aerial Photograph





Final Closure Report  
Kutz Separator & Hydrocarbon  
Recovery Plant  
N36° 44' 08.04"; W107° 57' 31.70"  
Off Arizona Road (CR 4900)  
San Juan County, New Mexico

SWG Project No. 0210008

Southwest  
GEOSCIENCE

FIGURE 3

SITE PLAN



# SOIL BORING LOG

Soil Boring Number: B-1

Project #: 0210008  
Drawn By: RDH  
Approved By: KS

BORING AND  
SAMPLING NOTES[illegible]

NOTE: This log is not to be used outside of the original report.



Client: Enterprise Field Services, LLC  
 Project Name: Kutz Separator  
 Project Location: San Juan County, New Mexico  
 Project Manager: Kyle Summers

# SOIL BORING LOG

## DRILLING & SAMPLING INFORMATION

Date Started: 5.26.10  
 Date Completed: 5.26.10  
 Drilling Company: Earthworx Environmental Services, LLC  
 Driller: Louis Trujillo  
 Geologist: B. Chris Mitchell  
 Boring Method: Geoprobe  
 Bore Hole Dia: 3-Inch  
 Sampler OD: 3-Inch

Soil Boring Number: B-2  
 Project #: 0210008  
 Drawn By: RDH  
 Approved By: KS

**BORING METHOD**  
 HSA - HOLLOW STEM AUGERS  
 CFA - CONTINUOUS FLIGHT AUGERS  
 GP - GEOPROBE  
 AR - AIR ROTARY

**SAMPLER TYPE**  
 CB - FIVE FOOT CORE BARREL  
 SS - DRIVEN SPLIT SPOON  
 ST - PRESSED SHELBY TUBE

**GROUNDWATER DEPTH**  
 ∇ AT COMPLETION  
 ∇ AT WELL STABILIZATION

					BORING AND SAMPLING NOTES
Sample Interval	% Recovery	Groundwater Depth	FHQ/ID Readings (ppm)		

Monitor Well Interval	SOIL CLASSIFICATION		Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FHQ/ID Readings (ppm)
	SURFACE ELEVATION:								
	SILTY CLAY, Brown, Dry, No Odor			5 10 15 20 25 30					
	SILTY SAND, Brown, Dry, No Odor								
	SILTY CLAY, Brown, Dry, No Odor								
	SILTY SAND, Brown, Dry, No Odor								
	Bottom of Boring @ 20'								

NOTE: This log is not to be used outside of the original report.



Client: Enterprise Field Services, LLC  
 Project Name: Kutz Separator  
 Project Location: San Juan County, New Mexico  
 Project Manager: Kyle Summers

# SOIL BORING LOG

## DRILLING & SAMPLING INFORMATION

Date Started: 5.26.10  
 Date Completed: 5.26.10  
 Drilling Company: Earthworx Environmental Services, LLC  
 Driller: Louis Trujillo  
 Geologist: B. Chris Mitchell  
 Boring Method: Geoprobe  
 Bore Hole Dia: 3-Inch  
 Sampler OD: 3-Inch

Soil Boring Number: B-3  
 Project #: 0210008  
 Drawn By: RDH  
 Approved By: KS

**BORING METHOD**  
 HSA - HOLLOW STEM AUGERS  
 CFA - CONTINUOUS FLIGHT AUGERS  
 GP - GEOPROBE  
 AR - AIR ROTARY

**SAMPLER TYPE**  
 CB - FIVE FOOT CORE BARREL  
 SS - DRIVEN SPLIT SPOON  
 ST - PRESSED SHELBY TUBE

**GROUNDWATER DEPTH**  
 ↓ AT COMPLETION  
 ↓ AT WELL STABILIZATION

BORING AND SAMPLING NOTES					
Sample Interval	% Recovery	Groundwater Depth	FID/ID Readings (ppm)		

Soil Description	Soil Classification	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/ID Readings (ppm)	Boring and Sampling Notes
SURFACE ELEVATION:									
SILTY SAND, Brown, Dry, No Odor									
SILTY CLAY, Brown, Dry, No Odor									
SILTY SAND, Brown, Dry, No Odor									
Bottom of Boring @ 20'									

NOTE: This log is not to be used outside of the original report.

**Southwest**  
 GEOSCIENCE



Client: Enterprise Field Services, LLC  
 Project Name: Kutz Separator  
 Project Location: San Juan County, New Mexico  
 Project Manager: Kyle Summers

# SOIL BORING LOG

## DRILLING & SAMPLING INFORMATION

Date Started: 5.26.10  
 Date Completed: 5.26.10  
 Drilling Company: Earthworx Environmental Services, LLC  
 Driller: Louis Trujillo  
 Geologist: B. Chris Mitchell  
 Boring Method: Geoprobe  
 Bore Hole Dia: 3-inch  
 Sampler OD: 3-inch

Soil Boring Number: B-4  
 Project #: 0210008  
 Drawn By: RDH  
 Approved By: KS

**BORING METHOD**  
 HSA - HOLLOW STEM AUGERS  
 CFA - CONTINUOUS FLIGHT AUGERS  
 GP - GEOPROBE  
 AR - AIR ROTARY

**SAMPLER TYPE**  
 CB - FIVE FOOT CORE BARREL  
 SS - DRIVEN SPLIT SPOON  
 ST - PRESSED SHIELBY TUBE

**GROUNDWATER DEPTH**  
 ▼ AT COMPLETION  
 ▼ AT WELL STABILIZATION

Soil Boring Number	Project #	Drawn By	Approved By	Boring Method	Sampler OD	Well Diam	Screen Size	Screen Length	Casing Length	Groundwater Depth	Boring and Sampling Notes

Soil Classification	Surface Elevation

Soil Classification	Surface Elevation	Soil Boring Number	Project #	Drawn By	Approved By	Boring Method	Sampler OD	Well Diam	Screen Size	Screen Length	Casing Length	Groundwater Depth	Boring and Sampling Notes

Soil Classification	Surface Elevation	Soil Boring Number	Project #	Drawn By	Approved By	Boring Method	Sampler OD	Well Diam	Screen Size	Screen Length	Casing Length	Groundwater Depth	Boring and Sampling Notes

NOTE: This log is not to be used outside of the original report.

**Southwest**  
 GEOSCIENCE



# SOIL BORING LOG

Soil Boring Number: B-5

Project #: 0210008  
 Drawn By: RDH  
 Approved By: KS

BORING AND  
SAMPLING NOTES[illegible]

NOTE: This log is not to be used outside of the original report.



Client: Enterprise Field Services, LLC  
 Project Name: Kutz Separator  
 Project Location: San Juan County, New Mexico  
 Project Manager: Kyle Summers

# SOIL BORING LOG

## DRILLING & SAMPLING INFORMATION

Date Started: 5.26.10  
 Date Completed: 5.26.10  
 Drilling Company: Earthworx Environmental Services, LLC  
 Driller: Louis Trujillo  
 Geologist: B. Chris Mitchell  
 Boring Method: Geoprobe  
 Bore Hole Dia: 3-Inch  
 Sampler OD: 3-Inch

Soil Boring Number: B-6  
 Project #: 0210008  
 Drawn By: RDH  
 Approved By: KS

**BORING METHOD**  
 HSA - HOLLOW STEM AUGERS  
 CFA - CONTINUOUS FLIGHT AUGERS  
 GP - GEOPROBE  
 AR - AIR ROTARY

**SAMPLER TYPE**  
 CB - FIVE FOOT CORE BARREL  
 SS - DRIVEN SPLIT SPOON  
 ST - PRESSED SHELBY TUBE

**GROUNDWATER DEPTH**  
 ↓ AT COMPLETION  
 ↓ AT WELL STABILIZATION

BORING AND SAMPLING NOTES					
Sample Interval	% Recovery	Groundwater Depth	PID/HID Readings (ppm)		

Stratum Depth	SOIL CLASSIFICATION		Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	PID/HID Readings (ppm)
	SURFACE ELEVATION:							
	SILTY SAND, Brown, Dry, No Odor							
	CLAYEY SILT, Brown, Dry, No Odor							
	SILTY SAND, Brown, Dry, No Odor							
	Bottom of Boring @ 20'							

NOTE: This log is not to be used outside of the original report.

**Southwest**  
 GEOSCIENCE



# SOIL BORING LOG

Soil Boring Number: B-7

Project #: 0210008

Drawn By: RDH

Approved By: KS

N/A					
-----	--	--	--	--	--

N/A				
-----	--	--	--	--

NA				
----	--	--	--	--

N/A				
-----	--	--	--	--

GROUNDWATER DEPTH

▼ AT COMPLETION

▼ AT WELL STABILIZATION

**†** ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

ST-PRESSED SHEET-TUBE

BORING AND  
SAMPLING NOTESStratum  
Depth)Depth  
Scale

Sample  
No.

Sample:

Groundwork

CHL-FL/CHL-F

No Recovery 1'-4'

No Recovery 7'-12'

A vertical scale with major tick marks and labels at 5, 10, 15, 20, 25, and 30. There are minor tick marks between the major labels, indicating every 1 unit.

08:20

[illegible]

--	--

[illegible]

No Recovery 1'-4'

# Southwest GEOSCIENCE



TABLE 1  
Kutz Separator & Hydrocarbon Recovery Plant  
SOIL ANALYTICAL RESULTS

Sample I.D.	Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	Total TPH (mg/kg)
New Mexico Energy, Minerals & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	-	-	1,000
Investigative Soil Borings										
B-1	5/26/2010	10-12	<0.050	<0.050	<0.050	<0.10	<0.25	<5.0	91	91
B-2	5/26/2010	8-10	<0.050	<0.050	<0.050	<0.10	<0.25	<5.0	<10.0	<15.0
B-3	5/26/2010	18-20	<0.050	<0.050	<0.050	<0.10	<0.25	<5.0	<10.0	<15.0
B-4	5/26/2010	10-12	<0.050	<0.050	<0.050	<0.10	<0.25	<5.0	<10.0	<15.0
B-5	5/26/2010	18-20	<0.050	<0.050	<0.050	<0.10	<0.25	<5.0	<10.0	<15.0
B-6	5/26/2010	12-14	<0.050	<0.050	<0.050	<0.10	<0.25	<5.0	<10.0	<15.0
B-7	5/26/2010	18-20	<0.050	<0.050	<0.050	<0.10	<0.25	<5.0	<10.0	<15.0
Evaporation Pond Confirmation Samples										
N-SW-1	9/1/2010	1' below pond floor	<0.050	<0.050	<0.050	<0.10	<0.25	<20.0		<20.0
N-NE-1	9/1/2010	1' below pond floor	<0.050	<0.050	<0.050	<0.10	<0.25	<20.0		<20.0
S-SW-1	9/1/2010	1' below pond floor	<0.050	<0.050	<0.050	<0.10	<0.25	<20.0		<20.0
S-NE-1	9/1/2010	1' below pond floor	<0.050	<0.050	<0.050	<0.10	<0.25	24		24
Soil Removal - Confirmation Samples										
Sump Conf -1	9/8/2010	4	<0.050	<0.050	<0.050	<0.10	<0.25	<5.0	11	<15.0
Tanks 1,2 Conf-1	9/8/2010	4	<0.050	<0.050	<0.050	<0.10	<0.25	<5.0	90	<95.0
Kutz Comp*	2/10/2011	5 part composite 2.5'	<0.50	<0.50	<0.50	<1.00	<2.5	<50.0	910	910

ND=Not Detected above laboratory reporting limit

!-Indicates an estimated value between the method detection limit and the laboratory Practical Quantitation Limit

\*Composite sample collected from excavated soils to evaluate for on-site reuse.





COVER LETTER

Friday, March 24, 2011

Kyle Summers  
Southwest GeoScience  
606 S. Rio Grande Unit A  
Aztec, NM 87410

TEL: (903) 821-5603  
FAX:

RE: Kutz Separator

Order No: 1005853

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/27/10 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued June 7, 2010.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Laboratory Manager

NM Lab #9425  
AZ License #AZ0682  
ORELAP Lab #NM100001  
Texas Lab #T104704424-08-TX





**Hall Environmental Analysis Laboratory, Inc.**

Date: 25-Mar-11

**CLIENT:** Southwest Geoscience  
**Lab Order:** 1005853  
**Project:** Kutz Separator  
**Lab ID:** 1005853-01

**Client Sample ID:** B-1 (10-12)  
**Collection Date:** 5/26/2010 9:40:00 AM  
**Date Received:** 5/27/2010  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JB</b>
Diesel Range Organics (DRO)	91	10		mg/Kg	1	6/2/2010 6:09:56 PM
Surr: DNOP	95.5	61.7-135		%REC	1	6/2/2010 6:09:56 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/1/2010 6:34:02 PM
Surr: BFB	103	65.9-118		%REC	1	6/1/2010 6:34:02 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	6/2/2010 11:53:35 PM
Toluene	ND	0.050		mg/Kg	1	6/2/2010 11:53:35 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/2/2010 11:53:35 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/2/2010 11:53:35 PM
Surr: 4-Bromofluorobenzene	96.2	64.7-120		%REC	1	6/2/2010 11:53:35 PM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 25-Mar-11

CLIENT: Southwest Geoscience  
Lab Order: 1005853  
Project: Kutz Separator  
Lab ID: 1005853-02

Client Sample ID: B-2 (8-10)  
Collection Date: 5/26/2010 10:10:00 AM  
Date Received: 5/27/2010  
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/2/2010 6:47:11 PM
Surr: DNOP	99.2	61.7-135		%REC	1	6/2/2010 6:47:11 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/3/2010 12:23:54 AM
Surr: BFB	95.2	65.9-118		%REC	1	6/3/2010 12:23:54 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	6/3/2010 12:23:54 AM
Toluene	ND	0.050		mg/Kg	1	6/3/2010 12:23:54 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/3/2010 12:23:54 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/3/2010 12:23:54 AM
Surr: 4-Bromofluorobenzene	102	64.7-120		%REC	1	6/3/2010 12:23:54 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 25-Mar-11

<b>CLIENT:</b>	Southwest Geoscience	<b>Client Sample ID:</b>	B-3 (18-20)
<b>Lab Order:</b>	1005853	<b>Collection Date:</b>	5/26/2010 10:30:00 AM
<b>Project:</b>	Kutz Separator	<b>Date Received:</b>	5/27/2010
<b>Lab ID:</b>	1005853-03	<b>Matrix:</b>	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/2/2010 8:01:12 PM
Surr: DNOP	90.0	61.7-135		%REC	1	6/2/2010 8:01:12 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/3/2010 12:54:10 AM
Surr: BFB	83.4	65.9-118		%REC	1	6/3/2010 12:54:10 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	6/3/2010 12:54:10 AM
Toluene	ND	0.050		mg/Kg	1	6/3/2010 12:54:10 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/3/2010 12:54:10 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/3/2010 12:54:10 AM
Surr: 4-Bromofluorobenzene	87.4	64.7-120		%REC	1	6/3/2010 12:54:10 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 25-Mar-11

**CLIENT:** Southwest Geoscience**Client Sample ID:** B-4 (10-12)**Lab Order:** 1005853**Collection Date:** 5/26/2010 10:55:00 AM**Project:** Kutz Separator**Date Received:** 5/27/2010**Lab ID:** 1005853-04**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JB</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/2/2010 8:38:12 PM
Surr: DNOP	93.8	61.7-135		%REC	1	6/2/2010 8:38:12 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/3/2010 1:24:30 AM
Surr: BFB	90.2	65.9-118		%REC	1	6/3/2010 1:24:30 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	6/3/2010 1:24:30 AM
Toluene	ND	0.050		mg/Kg	1	6/3/2010 1:24:30 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/3/2010 1:24:30 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/3/2010 1:24:30 AM
Surr: 4-Bromofluorobenzene	97.7	64.7-120		%REC	1	6/3/2010 1:24:30 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 25-Mar-11

**CLIENT:** Southwest Geoscience  
**Lab Order:** 1005853  
**Project:** Kutz Separator  
**Lab ID:** 1005853-05

**Client Sample ID:** B-5 (18-20)  
**Collection Date:** 5/26/2010 11:25:00 AM  
**Date Received:** 5/27/2010  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/2/2010 9:15:27 PM
Surr: DNOP	93.7	61.7-135		%REC	1	6/2/2010 9:15:27 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/3/2010 1:54:47 AM
Surr: BFB	89.2	65.9-118		%REC	1	6/3/2010 1:54:47 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	6/3/2010 1:54:47 AM
Toluene	ND	0.050		mg/Kg	1	6/3/2010 1:54:47 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/3/2010 1:54:47 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/3/2010 1:54:47 AM
Surr: 4-Bromofluorobenzene	96.4	64.7-120		%REC	1	6/3/2010 1:54:47 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



# Hall Environmental Analysis Laboratory, Inc.

Date: 25-Mar-11

<b>CLIENT:</b>	Southwest Geoscience	<b>Client Sample ID:</b>	B-6 (12-14)
<b>Lab Order:</b>	1005853	<b>Collection Date:</b>	5/26/2010 11:45:00 AM
<b>Project:</b>	Kutz Separator	<b>Date Received:</b>	5/27/2010
<b>Lab ID:</b>	1005853-06	<b>Matrix:</b>	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/2/2010 9:52:28 PM
Surr: DNOP	90.5	61.7-135		%REC	1	6/2/2010 9:52:28 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/3/2010 2:25:01 AM
Surr: BFB	83.2	65.9-118		%REC	1	6/3/2010 2:25:01 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	6/3/2010 2:25:01 AM
Toluene	ND	0.050		mg/Kg	1	6/3/2010 2:25:01 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/3/2010 2:25:01 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/3/2010 2:25:01 AM
Surr: 4-Bromofluorobenzene	88.0	64.7-120		%REC	1	6/3/2010 2:25:01 AM

## Qualifiers:

\* Value exceeds Maximum Contaminant Level  
 E Estimated value  
 J Analyte detected below quantitation limits  
 NC Non-Chlorinated  
 PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 25-Mar-11

**CLIENT:** Southwest Geoscience  
**Lab Order:** 1005853  
**Project:** Kutz Separator  
**Lab ID:** 1005853-07

**Client Sample ID:** B-7 (18-20)  
**Collection Date:** 5/26/2010 12:15:00 PM  
**Date Received:** 5/27/2010  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/2/2010 10:28:58 PM
Surr: DNOP	90.2	61.7-135		%REC	1	6/2/2010 10:28:58 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/3/2010 2:55:14 AM
Surr: BFB	91.0	65.9-118		%REC	1	6/3/2010 2:55:14 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	6/3/2010 2:55:14 AM
Toluene	ND	0.050		mg/Kg	1	6/3/2010 2:55:14 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/3/2010 2:55:14 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/3/2010 2:55:14 AM
Surr: 4-Bromofluorobenzene	99.1	64.7-120		%REC	1	6/3/2010 2:55:14 AM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: Southwest Geoscience  
Project: Kutz Separator

Work Order: 1005853

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8015B: Diesel Range Organics</b>											
Sample ID: MB-22462		MBLK									
Batch ID: 22462											
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-22462		LCS									
Batch ID: 22462											
Diesel Range Organics (DRO)	46.50	mg/Kg	10	50	0	93.0	64.6	116			
Sample ID: LCSD-22462		LCSD									
Batch ID: 22462											
Diesel Range Organics (DRO)	45.31	mg/Kg	10	50	0	90.6	64.6	116	2.59	17.4	
<b>Method: EPA Method 8015B: Gasoline Range</b>											
Sample ID: 1005853-01A MSD		MSD									
Batch ID: 22459											
Gasoline Range Organics (GRO)	25.74	mg/Kg	5.0	25	2.17	94.3	69.5	120	0.928	11.6	
Sample ID: MB-22459		MBLK									
Batch ID: 22459											
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-22459		LCS									
Batch ID: 22459											
Gasoline Range Organics (GRO)	25.34	mg/Kg	5.0	25	0	101	77.7	135			
Sample ID: 1005853-01A MS		MS									
Batch ID: 22459											
Gasoline Range Organics (GRO)	25.98	mg/Kg	5.0	25	2.17	95.2	69.5	120			
<b>Method: EPA Method 8021B: Volatiles</b>											
Sample ID: 1005853-01A MSD		MSD									
Batch ID: 22459											
Methyl tert-butyl ether (MTBE)	1.335	mg/Kg	0.10	1	0	133	67.9	135	1.76	28	
Benzene	0.8690	mg/Kg	0.050	1	0	86.9	78.8	132	2.57	27	
Toluene	0.8859	mg/Kg	0.050	1	0	88.6	78.9	112	0.0451	19	
Ethylbenzene	0.9352	mg/Kg	0.050	1	0	93.5	69.3	125	0.882	10	
Xylenes, Total	2.880	mg/Kg	0.10	3	0	96.0	73	128	1.29	13	
Sample ID: MB-22459		MBLK									
Batch ID: 22459											
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10								
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: LCS-22459		LCS									
Batch ID: 22459											
Methyl tert-butyl ether (MTBE)	1.415	mg/Kg	0.10	1	0	141	67.9	135			S
Benzene	0.9206	mg/Kg	0.050	1	0	92.1	78.8	132			
Toluene	0.8823	mg/Kg	0.050	1	0	88.2	78.9	112			
Ethylbenzene	0.9505	mg/Kg	0.050	1	0	95.1	69.3	125			
Xylenes, Total	2.887	mg/Kg	0.10	3	0	96.2	73	128			
Sample ID: 1005853-01A MS		MS									
Batch ID: 22459											
Methyl tert-butyl ether (MTBE)	1.311	mg/Kg	0.10	1	0	131	67.9	135			
Benzene	0.8916	mg/Kg	0.050	1	0	89.2	78.8	132			
Toluene	0.8863	mg/Kg	0.050	1	0	88.6	78.9	112			
Ethylbenzene	0.9433	mg/Kg	0.050	1	0	94.3	69.3	125			
Xylenes, Total	2.844	mg/Kg	0.10	3	0	94.8	73	128			

## Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits



COVER LETTER

Tuesday, January 11, 2011

Kyle Summers  
Southwest Geoscience  
606 S. Rio Grande Unit A  
Aztec, NM 87410

TEL: (903) 821-5603  
FAX

RE: Kutz Seperator

Order No.: 1009209

Dear Kyle Summers:

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 9/3/2010 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 14, 2010.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Laboratory Manager

NM Lab # NM9425  
AZ license # AZ0682  
ORELAP Lab # NM100001  
Texas Lab# T104704424-08-TX





**Hall Environmental Analysis Laboratory, Inc.**

Date: 11-Jan-11

**CLIENT:** Southwest Geoscience  
**Lab Order:** 1009209  
**Project:** Kutz Seperator  
**Lab ID:** 1009209-01

**Client Sample ID:** N-SW-1  
**Collection Date:** 9/1/2010 3:00:00 PM  
**Date Received:** 9/3/2010  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	9/8/2010 4:54:52 PM
Toluene	ND	0.050		mg/Kg	1	9/8/2010 4:54:52 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/8/2010 4:54:52 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/8/2010 4:54:52 PM
Surr: 4-Bromofluorobenzene	94.9	88.9-151		%REC	1	9/8/2010 4:54:52 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: JB
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	9/9/2010

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 11-Jan-11

**CLIENT:** Southwest Geoscience  
**Lab Order:** 1009209  
**Project:** Kutz Separator  
**Lab ID:** 1009209-02

**Client Sample ID:** N-NE-1  
**Collection Date:** 9/1/2010 3:10:00 PM  
**Date Received:** 9/3/2010  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	9/8/2010 5:25:15 PM
Toluene	ND	0.050		mg/Kg	1	9/8/2010 5:25:15 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/8/2010 5:25:15 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/8/2010 5:25:15 PM
Surr: 4-Bromofluorobenzene	105	88.9-151		%REC	1	9/8/2010 5:25:15 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: JB
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	9/9/2010

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 11-Jan-11

**CLIENT:** Southwest Geoscience  
**Lab Order:** 1009209  
**Project:** Kutz Seperator  
**Lab ID:** 1009209-03

**Client Sample ID:** S-SW-1  
**Collection Date:** 9/1/2010 3:30:00 PM  
**Date Received:** 9/3/2010  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						<b>Analyst: NSB</b>
Benzene	ND	0.050		mg/Kg	1	9/9/2010 11:55:15 AM
Toluene	ND	0.050		mg/Kg	1	9/9/2010 11:55:15 AM
Ethylbenzene	ND	0.050		mg/Kg	1	9/9/2010 11:55:15 AM
Xylenes, Total	ND	0.10		mg/Kg	1	9/9/2010 11:55:15 AM
Surr: 4-Bromofluorobenzene	105	88.9-151		%REC	1	9/9/2010 11:55:15 AM
<b>EPA METHOD 418.1: TPH</b>						<b>Analyst: JB</b>
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	9/9/2010

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 11-Jan-11

**CLIENT:** Southwest Geoscience  
**Lab Order:** 1009209  
**Project:** Kutz Separator  
**Lab ID:** 1009209-04

**Client Sample ID:** S-NE-1  
**Collection Date:** 9/1/2010 3:40:00 PM  
**Date Received:** 9/3/2010  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	9/9/2010 12:25:30 PM
Toluene	ND	0.050		mg/Kg	1	9/9/2010 12:25:30 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/9/2010 12:25:30 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/9/2010 12:25:30 PM
Surr: 4-Bromofluorobenzene	99.5	88.9-151		%REC	1	9/9/2010 12:25:30 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: JB
Petroleum Hydrocarbons, TR	24	20		mg/Kg	1	9/9/2010

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: Southwest Geoscience  
Project: Kutz Seperator

Work Order: 1009209

Analyte	Result	Units	PQL	SPK Val	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 418.1: TPH											
Sample ID: MB-23697		MBLK				Batch ID: 23697	Analysis Date:				9/9/2010
Petroleum Hydrocarbons, TR	ND	mg/Kg	20								
Sample ID: LCS-23697		LCS				Batch ID: 23697	Analysis Date:				9/9/2010
Petroleum Hydrocarbons, TR	104.0	mg/Kg	20	100	0	104	86.8	116			
Sample ID: LCSD-23697		LCSD				Batch ID: 23697	Analysis Date:				9/9/2010
Petroleum Hydrocarbons, TR	100.5	mg/Kg	20	100	0	100	86.8	116	3.46	16.2	

Method: EPA Method 8021B: Volatiles

Sample ID: 1009209-01A MSD		MSD				Batch ID: 23688	Analysis Date:				9/8/2010 6:56:03 PM
Benzene	1.083	mg/Kg	0.050	1	0.0114	107	67.2	113	1.23	14.3	
Toluene	1.009	mg/Kg	0.050	1	0	101	62.1	116	5.80	15.9	
Ethylbenzene	1.087	mg/Kg	0.050	1	0	109	67.9	127	4.82	14.4	
Xylenes, Total	3.323	mg/Kg	0.10	3	0	111	60.6	134	3.01	12.6	
Sample ID: MB-23688		MBLK				Batch ID: 23688	Analysis Date:				9/8/2010 7:56:40 PM
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: LCS-23688		LCS				Batch ID: 23688	Analysis Date:				9/8/2010 7:26:18 PM
Benzene	1.056	mg/Kg	0.050	1	0	106	83.3	107			
Toluene	1.009	mg/Kg	0.050	1	0	101	74.3	115			
Ethylbenzene	1.084	mg/Kg	0.050	1	0	108	80.9	122			
Xylenes, Total	3.281	mg/Kg	0.10	3	0	109	85.2	123			
Sample ID: 1009209-01A MS		MS				Batch ID: 23688	Analysis Date:				9/8/2010 6:25:47 PM
Benzene	1.096	mg/Kg	0.050	1	0.0114	108	67.2	113			
Toluene	1.069	mg/Kg	0.050	1	0	107	62.1	116			
Ethylbenzene	1.141	mg/Kg	0.050	1	0	114	67.9	127			
Xylenes, Total	3.425	mg/Kg	0.10	3	0	114	60.6	134			

## Qualifiers:

E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
NC Non-Chlorinated  
R RPD outside accepted recovery limits



# Chain-of-Custody Record

Turn-Around Time:

Client: Southwest Geoscience

Invoice to Dallas office

Mailing Address: 549 Zia Street

Astec, NM 87410

Phone #: 903 821 5603

email or Fax#: Kyle Summers@Southwestge

oscience.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

☒ Standard ☐ Rush

Project Name:

Kutz Sapara for

Project #:

0210008

Project Manager:

Kyle Summers

Sampler: Kyle Summers

Container Type and #

Preservative Type

Sample Request ID

BTEX + MTBE + TMB's (8021)

BTEX + MTBE + TPH (Gas only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (F, Cl, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)



**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date: 9/2/10 Time: 1100

Relinquished by: [Signature]

Received by: [Signature]

Date: 9/3/10 Time: 9:00

Remarks:

YES

YES

If necessary,

yes submitted to Hall Environmental may be subcontracted to other accredited laboratories. This

is as notice of this possibility. Any sub-contracted data will be

notated on the analytical report.





## COVER LETTER

Friday, September 17, 2010

Kyle Summers  
Southwest Geoscience  
606 S. Rio Grande Unit A  
Aztec, NM 87410

TEL: (903) 821-5603  
FAX

RE: Kutz Separator

Order No.: 1009528

Dear Kyle Summers:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 9/10/2010 for the analyses presented in the following report.


This report is an addendum to the report dated September 17, 2010. This is an updated report.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Laboratory Manager

NM Lab # NM9425  
AZ license # AZ0682  
ORELAP Lab # NM100001  
Texas Lab# T104704424-08-TX





**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Jan-11

**CLIENT:** Southwest Geoscience  
**Lab Order:** 1009528  
**Project:** Kutz Separator  
**Lab ID:** 1009528-01

**Client Sample ID:** Sump Conf-1  
**Collection Date:** 9/8/2010 2:00:00 PM  
**Date Received:** 9/10/2010  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>SCC</b>
Diesel Range Organics (DRO)	11	10		mg/Kg	1	9/15/2010 10:32:46 PM
Surr: DNOP	96.2	61.7-135		%REC	1	9/15/2010 10:32:46 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/16/2010 4:44:06 PM
Surr: BFB	96.9	60.2-161		%REC	1	9/16/2010 4:44:06 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	9/16/2010 4:44:06 PM
Toluene	ND	0.050		mg/Kg	1	9/16/2010 4:44:06 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/16/2010 4:44:06 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/16/2010 4:44:06 PM
Surr: 4-Bromofluorobenzene	95.3	88.9-151		%REC	1	9/16/2010 4:44:06 PM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Jan-11

CLIENT: Southwest Geoscience  
Lab Order: 1009528  
Project: Kutz Separator  
Lab ID: 1009528-02

Client Sample ID: Tanks 1,2 Conf-1  
Collection Date: 9/8/2010 4:00:00 PM  
Date Received: 9/10/2010  
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: SCC
Diesel Range Organics (DRO)	90	10		mg/Kg	1	9/15/2010 11:06:53 PM
Surr: DNOP	111	61.7-135		%REC	1	9/15/2010 11:06:53 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/16/2010 5:14:25 PM
Surr: BFB	124	60.2-161		%REC	1	9/16/2010 5:14:25 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	9/16/2010 5:14:25 PM
Toluene	ND	0.050		mg/Kg	1	9/16/2010 5:14:25 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/16/2010 5:14:25 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/16/2010 5:14:25 PM
Surr: 4-Bromofluorobenzene	117	88.9-151		%REC	1	9/16/2010 5:14:25 PM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: Southwest Geoscience  
Project: Kutz Separator

Work Order: 1009528

Analyte	Result	Units	PQL	SPK Val	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8015B: Diesel Range Organics</b>											
Sample ID: MB-23766		MBLK									
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-23766		LCS									
Diesel Range Organics (DRO)	39.90	mg/Kg	10	50	0	79.8	64.6	116			
<b>Method: EPA Method 8015B: Gasoline Range</b>											
Sample ID: MB-23759		MBLK									
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-23759		LCS									
Gasoline Range Organics (GRO)	26.27	mg/Kg	5.0	25	0	105	74.2	136			
<b>Method: EPA Method 8021B: Volatiles</b>											
Sample ID: MB-23759		MBLK									
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: LCS-23759		LCS									
Benzene	1.009	mg/Kg	0.050	1	0.0158	99.3	83.3	107			
Toluene	0.9572	mg/Kg	0.050	1	0	95.7	74.3	115			
Ethylbenzene	1.031	mg/Kg	0.050	1	0.0112	102	80.9	122			
Xylenes, Total	3.119	mg/Kg	0.10	3	0	104	85.2	123			

## Qualifiers:

E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit

11 Holding times for preparation or analysis exceeded  
NC Non-Chlorinated  
R RPD outside accepted recovery limits









## COVER LETTER

Tuesday, February 22, 2011

Kyle Summers  
Southwest Geoscience  
606 S. Rio Grande Unit A  
Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Kutz Separator

Order No.: 1102339

Dear Kyle Summers:

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 2/11/2011 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", written over a horizontal line.

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901  
AZ license # AZ0682  
ORELAP Lab # NM100001  
Texas Lab# T104704424-08-TX



4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109  
505.345.3975 ■ Fax 505.345.4107  
[www.hallenvironmental.com](http://www.hallenvironmental.com)



**Hall Environmental Analysis Laboratory, Inc.**

Date: 22-Feb-11

**CLIENT:** Southwest Geoscience  
**Lab Order:** 1102339  
**Project:** Kutz Separator  
**Lab ID:** 1102339-01

**Client Sample ID:** Kutz Comp  
**Collection Date:** 2/10/2011 11:45:00 AM  
**Date Received:** 2/11/2011  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JB</b>
Diesel Range Organics (DRO)	910	100		mg/Kg	10	2/16/2011 3:34:36 PM
Surr: DNOP	0	81.8-129	S	%REC	10	2/16/2011 3:34:36 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	2/17/2011 7:33:36 PM
Surr: BFB	100	89.7-125		%REC	10	2/17/2011 7:33:36 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.50		mg/Kg	10	2/17/2011 7:33:36 PM
Toluene	ND	0.50		mg/Kg	10	2/17/2011 7:33:36 PM
Ethylbenzene	ND	0.50		mg/Kg	10	2/17/2011 7:33:36 PM
Xylenes, Total	ND	1.0		mg/Kg	10	2/17/2011 7:33:36 PM
Surr: 4-Bromofluorobenzene	101	85.3-139		%REC	10	2/17/2011 7:33:36 PM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: Southwest Geoscience  
Project: Kutz Separator

Work Order: 1102339

Analyte	Result	Units	PQL	SPK Val	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8015B: Diesel Range Organics</b>											
Sample ID: MB-25622		MBLK									
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Sample ID: LCS-25622		LCS									
Diesel Range Organics (DRO)	47.73	mg/Kg	10	50	0	95.5	66.2	120			
<b>Method: EPA Method 8015B: Gasoline Range</b>											
Sample ID: 1102339-01AMSD		MSD									
Gasoline Range Organics (GRO)	39.70	mg/Kg	25	25	0	159	69.2	144	14.6	20.5	S
Sample ID: MB-25606		MBLK									
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-25606		LCS									
Gasoline Range Organics (GRO)	26.78	mg/Kg	5.0	25	0	107	95.7	120			
Sample ID: 1102339-01AMS		MS									
Gasoline Range Organics (GRO)	34.30	mg/Kg	25	25	0	137	69.2	144			
<b>Method: EPA Method 8021B: Volatiles</b>											
Sample ID: MB-25606		MBLK									
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: LCS-25606		LCS									
Benzene	0.9348	mg/Kg	0.050	1	0	93.5	83.3	107			
Toluene	0.9230	mg/Kg	0.050	1	0	92.3	74.3	115			
Ethylbenzene	0.9556	mg/Kg	0.050	1	0.0095	94.6	80.9	122			
Xylenes, Total	2.918	mg/Kg	0.10	3	0.0141	96.8	85.2	123			

## Qualifiers:

E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
NC Non-Chlorinated  
R RPD outside accepted recovery limits



# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name SOUTHWEST GEOSCIENCE

Date Received:

2/11/2011

Work Order Number 1102339

Received by: MMG

Checklist completed by:

Signature

2/11/11

Date

Sample ID labels checked by:

Initials

Matrix:

Carrier name: FedEx

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 checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	Not Shipped
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <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"/>		
Water - VOA vials have zero headspace?	No VOA vials submitted <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Number of preserved bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	<2 >12 unless noted below.

Container/Temp Blank temperature?

<6° C Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action



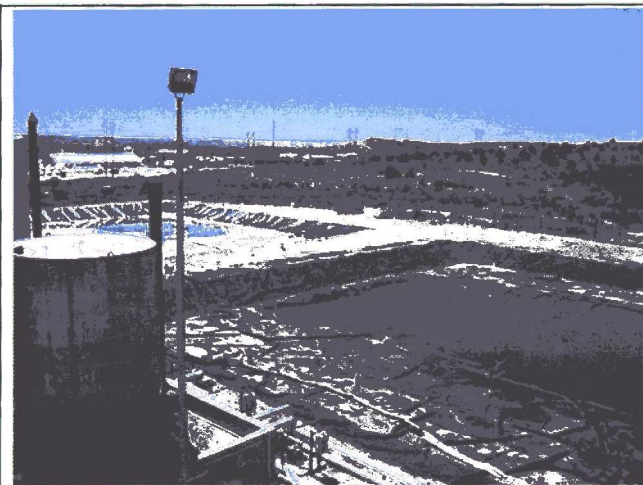
## CHAIN OF CUSTODY RECORD

<b>Southwest GEOSCIENCE</b> Environmental & Hydrogeologic Consultants				Laboratory: <u>Hall</u>				ANALYSIS REQUESTED				Lab use only Due Date: _____  Temp. of coolers when received (C°): <table border="1" style="width:100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr> <td colspan="5">Page <u>1</u> of <u>1</u></td></tr> </table>					1	2	3	4	5	Page <u>1</u> of <u>1</u>				
				1	2	3	4										5									
Page <u>1</u> of <u>1</u>																										
Address: <u>Albuquerque</u>				Contact: <u>Andy Freeman</u>																						
Office Location: <u>Antec</u>				Phone: _____																						
Project Manager: <u>H. Summers</u>				PO/SO #: <u>0410002</u>																						
Sample's Name: <u>Kyle Summers</u>				Sampler's Signature: <u>[Signature]</u>																						
Proj. No. <u>0410002</u>		Project Name: <u>Rutz Separator</u>				No/Type of Containers																				
Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 L	250 ml	P/O	Lab Sample ID (Lab Use Only)														
5	7/10/11	1145	X		Rutz Comp						2	X	X	1102339												
<div style="position: relative;"> <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; border-left: 2px solid black; border-bottom: 2px solid black; transform: rotate(45deg);"></div> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); font-size: 2em;">           NFS KL         </div> </div>																										
Turn around time <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush																										
Relinquished by (Signature): <u>[Signature]</u>			Date: <u>7/10/11</u> Time: <u>1600</u>		Received by (Signature): <u>[Signature]</u>			Date: _____ Time: _____		NOTES:																
Relinquished by (Signature): _____			Date: _____ Time: _____		Received by (Signature): <u>Michael Garcia</u>			Date: <u>7/11/11</u> Time: <u>11:05</u>																		
Relinquished by (Signature): _____			Date: _____ Time: _____		Received by (Signature): _____			Date: _____ Time: _____																		
Relinquished by (Signature): _____			Date: _____ Time: _____		Received by (Signature): _____			Date: _____ Time: _____																		
Matrix Container: WW - Wastewater VOA - 40 ml vial    W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - sludge O - Oil A/G - Amber / Or Glass 1 Liter    250 ml - Glass wide mouth    P/O - Plastic or other _____																										





1.) View of tanks and fixtures (facing south) prior to removal.



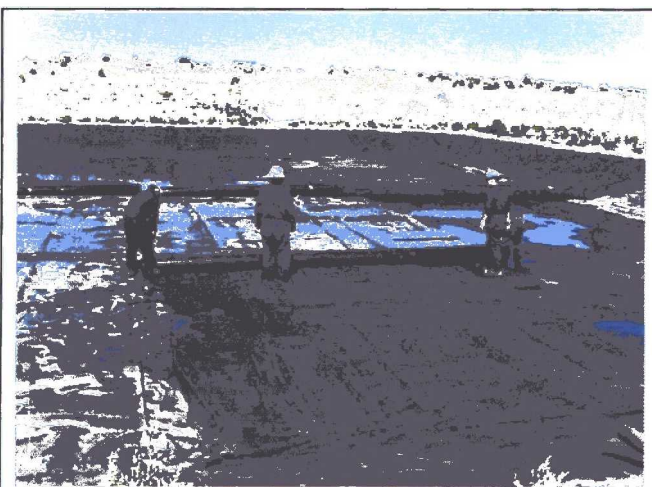
2.) View of evaporation ponds (facing southwest) prior to removal.



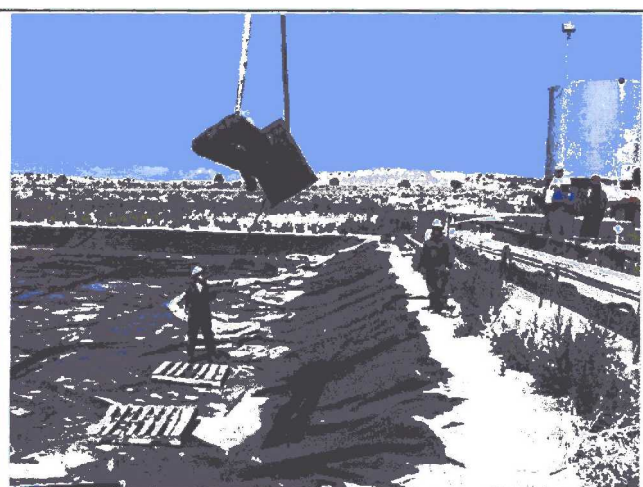
3.) View of northern tanks (facing north).



4.) General view of liner cleaning activities prior to removal.



5.) General view of the removal of the primary or top liner from the southern pond.



6.) View of the portion of the northern pond used as power-washing pad.





7.) Representative view of the storage tanks loaded for off-site disposal.



8.) General view of the soils underlying the bottom liner subsequent to the removal of all liners in the northern pond.



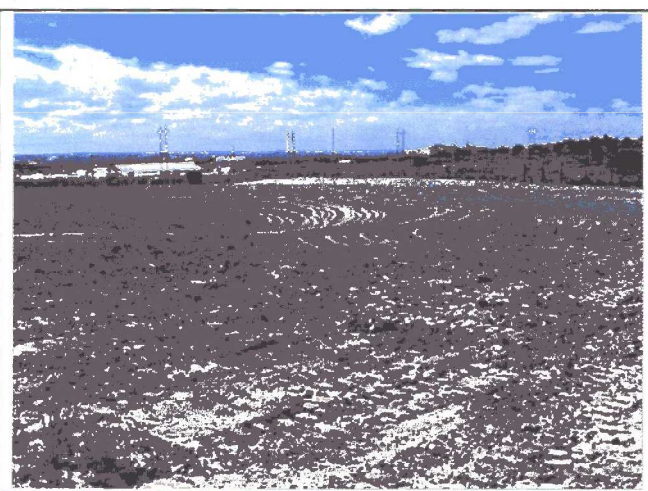
9.) View of the miscellaneous metal items being loaded for off-site recycling as scrap metal.



10.) View of the stained soil encountered on the eastern portion of the Site.



11.) General view of the stained potentially impacted soil stockpiled on-site prior to final characterization.



12.) Representative view during hydro-seeding after final site grading.