



Response Action Completion Report
Rafferty Fee Lease – Well No. 1 (#19053)
Silsbee North (Yegua 2) Field
NPS Site 181
Big Thicket National Preserve
Hardin County, Texas

Prepared for:

Buford Curtis, Inc. P.O. Box 1236 Silsbee, Texas 77656

September 2009

Project No. 7007-0001

SKA Consulting, LP 10260 Westheimer Rd., Suite 605 Houston, Texas 77042

P: 713.266.6056 F: 713.266.0996 www.skaconsulting.com

RESPONSE ACTION COMPLETION REPORT RAFFERTY FEE LEASE - WELL NO. 1 (#19053) SILSBEE NORTH (YEGUA 2) FIELD NPS SITE 181 BIG THICKET NATIONAL PRESERVE HARDIN COUNTY, TEXAS

SKA PROJECT NO. 7007-0001

Prepared for:

BUFORD CURTIS, INC. P.O. BOX 1236 SILSBEE, TEXAS 77656

Prepared by:

SKA CONSULTING, L.P. 10260 WESTHEIMER, SUITE 605 HOUSTON, TEXAS 77042

JONATHAN SANWALD ENVIRONMENTAL SCIENTIST

Signatur

TRENT McDANIEL, P.G. PROJECT MANAGER

Reviewed By

BRIAN T. WEAVER, P.G. VICE PRESIDENT, PARTNER

Signature

SEPTEMBER 2009

TEXAS REGISTERED ENGINEERING FIRM NO. F-005009
TEXAS REGISTERED GEOSCIENCE FIRM NO. 50011

Professional Signatures and Seals

Professional Geoscientist

Trent McDaniel, P.G.	10191	August 31, 2010
Professional Geoscientist	Geoscientist License number	Expiration date
Signature	Date	
713-266-6056	713-266-0996	mcdanieltw@skaconsulting.com
Telephone number	FAX number	E-mail
Professional Engineer		
Professional Engineer	P.E. License number	Expiration date
Signature	Date	
Telephone number	FAX number	E-mail
Seals, as applicable:		

Table of Contents _____

1.0 Executive Summary	
2.0 Introduction	2
2.1 Site Location	
2.2 Site History	2
3.0 Response Action	5
3.1 Scope of Response Actions	
3.1.1 Site Preparation	
3.1.2 Soil Excavations	
3.1.3 Soil Land Farm	6
3.2 Areas and Volumes	7
3.2.1 Soil Excavations	7
3.2.2 Soil Land Farm	7
3.3 Confirmation Sampling	7
3.3.1 Data Collection	
3.3.2 Comparison of Data Cleanup Criteria	8
3.4 Site Restoration	
4.0 Conclusions	10

<u>Tables</u>

Table 1 – Summary of Confirmation Soil Analytical Results

Table 2 - Summary of Backfill Soil Analytical Results

Figures

Figure 1 – Site Vicinity and Topographic Map

Figure 2 – Site Plan

Figure 3 – Excavation and Confirmation Soil Sample Location Map

Figure 4 - Confirmation Soil Sample COC Map

Appendices

Appendix 1 – Affidavit of Compliance

Appendix 2 - Site Photographs

Appendix 3 – RRC Land Farm Permit

Appendix 4 – Laboratory Certificates of Analysis and Chain-of-Custody Documentation

1.0 Executive Summary_

SKA Consulting, L.P. (SKA) was retained by Buford Curtis, Inc., (Client) to conduct soil response actions and to prepare a Response Action Completion Report (RACR) for a former earthen oilfield pit located at the Rafferty Fee Lease – Well No. 1 (Site) within the Jack Gore Baygall Unit of the Big Thicket National Preserve (BITH) in Hardin County, Texas.

The Site is located approximately 30 miles north of Beaumont, Texas near the end of Youngblood Road (formerly called Zig Zag Road by others) which is an unimproved road traversing through the Jack Gore Baygall Unit of the BITH. The Site consists of a former oil well formerly operated by Buford Curtis, Inc. The former well bore located at the Site was reportedly plugged and abandoned in accordance with Railroad Commission of Texas (RRC) rules and regulations on December 2, 2002. No remnants of historical oil/gas exploration and production (E&P) equipment are located on the Site. The Site consists of a former oil well pad and earthen oilfield pit and is generally overgrown with native vegetation.

This RACR details response actions conducted by SKA in July 2009 at the Site based on a scope of work outlined in SKA's Plan of Operations dated February 8, 2008. The Plan of Operations was subsequently approved by the National Park Service (NPS) on October 17, 2008. In addition, the Plan of Operations were conducted in accordance with SKA's Response Letter dated October 28, 2008, a subsequent NPS Response Letter dated November 21, 2008, and a signed Affidavit of Compliance by Buford Curtis, Inc. to the NPS in January 2009.

The primary objective of the response actions detailed within this RACR is to obtain regulatory closure of the former oilfield pit located at the Site. This objective was accomplished by: (1) the excavation (removal) of 150 cubic yards (loose volume) of total petroleum hydrocarbon (TPH) impacted soils from within an earthen oilfield pit located on the Site; (2) the collection and laboratory analysis of 6 confirmation soil samples from within the excavation to demonstrate that native soil concentrations are below the applicable RRC regulatory standard for soil of 10,000 milligrams per kilogram (mg/Kg); (3) the off-site transportation of 150 cubic yards (loose volume) of impacted soil to a RRC-approved land farm location; (4) backfilling the excavation to surrounding grade with NPS-approved soils; and (4) prepare a report for submittal to the NPS and RRC documenting the findings and conclusions of the response actions.

In summary, the analytical testing results for all confirmation soil samples collected from the former oilfield pit (excavation) on the Site reported no TPH concentrations exceeding the applicable RRC regulatory standard for soil previously approved in the Plan of Operations. Therefore, SKA concludes the necessary response actions for soils are complete and no further investigations and/or response actions are warranted at the Site.

Based on the findings and conclusions of this RACR, SKA concludes that all appropriate response actions for soils have been achieved in accordance with the NPS-approved Plan of Operations. Therefore, SKA, on behalf of Buford Curtis, Inc., respectfully requests RRC and NPS concurrence by: (1) RRC issue regulatory closure ("No Further Action") for the earthen oilfield pit located at the Site, and (2) NPS issue approval of these response actions concluding no further environmental investigations and/or response actions are warranted at the Site.

2.0	Introduct	tion	
	11161 6 6 6 6 6		

This section of the RACR describes the site location and layout and operational history for the Site.

2.1 Site Location

The Rafferty Fee Lease – Well No. 1 (Site) is located at coordinates 30° 28' 57.4" N; 94° 8' 50.1" W within the Jack Gore Baygall Unit of the Big Thicket National Preserve (BITH) in Hardin County, Texas (*Figure 1*). The Site is near the end of Youngblood Road (formerly called Zig Zag Road by others) which is an unimproved road traversing through the BITH. The Site consists of a former oil well site formerly operated by Buford Curtis, Inc. The former well bore located at the Site was reportedly plugged and abandoned in accordance with Railroad Commission of Texas (RRC) rules and regulations on December 2, 2002. No remnants of historical oil/gas exploration and production (E&P) equipment are located on the Site. The Site consists of a former well pad and earthen oilfield pit and is generally overgrown with native vegetation.

2.2 Site History

In August 2005, Michael Baker, Jr., Inc. (Baker) conducted a Focused Site Investigation (FSI) at the Site in an effort to "provide recommendations for the restoration of the site to natural conditions to the extent practical." Baker proposed to "approximately delineate the horizontal and vertical extent of soil contamination" and identify any possible contamination migration pathways and/or receptors. Additionally, at the request of the Water Resources Division (WDR) of the NPS, Baker proposed to assess possible impacts to surface water and groundwater at the Site.

To accomplish these objectives, Baker advanced a total of eight soil borings at the Site. Three of these soil borings were converted into temporary groundwater monitoring wells. Additionally, Baker collected three surface soil samples from the Site and collected one surface water sample from the pit located at the Site.

Based on the results of their field investigations, Baker concluded the following:

- Crude oil impacted approximately 100-cubic-yards of soil located near the well bore and south of the former well pad; however, additional delineation activities were warranted on this area of the Site.
- Polycyclic aromatic hydrocarbons (PAHs) are not chemicals of concern at the Site;
- There is no naturally occurring radioactive material (NORM) located at the Site;
- Groundwater exhibited low levels of benzene only;
- The surface water in the pit is uncontaminated;
- Contamination migration pathways include soil-to-groundwater, groundwater migration, and human/ecological uptake; and

• Impacts to receptors appear limited to flora and fauna exposure to surface soil. Human contact to surface soil is possible, but limited due to the use and location of the Site.

On December 19, 2006, the RRC submitted a Notice of Violation letter to Buford Curtis, Inc. citing the following:

- Violation of Statewide Rule 8: "An inspection by our field inspector indicated that a pit
 measuring approximately 20 feet in diameter has not been closed. The pit should be
 closed and the area cleaned-up/remediated to facilitate natural attenuation."
- "The surface owner has furnished analytical identifying an area south of the former well bore that has a TPH (total petroleum hydrocarbon) reading higher than the state required limit of 10,000 ppm. This area should be cleaned-up/remediated to facilitate natural attenuation."

Based on these findings and conclusions, the NPS requested that Buford Curtis, Inc. conduct additional site investigations and/or response actions at the Site. As such, Buford Curtis, Inc. retained SKA in April 2007 to prepare and submit a work plan to conduct soil and groundwater investigations and pit bottom sampling activities to address the concerns of the RRC and NPS.

On August 28, 2007, SKA conducted soil and groundwater investigations and pit bottom sampling activities in accordance with an NPS-approved Work Plan (April 20, 2007) and response letter (July 12, 2007) prepared by SKA for the Site. Based on the results of soil and groundwater investigations and pit bottom sampling activities performed by SKA, the following findings and conclusions were made regarding the current environmental conditions for the Site:

- The soil and groundwater located within and immediately adjacent to the "approximate extent of soil impacts" (as determined by Baker) do not exhibit concentrations of regulated substance above RRC regulatory standards. As a result, SKA concluded that no additional investigations and/or response actions were warranted on this portion of the Site.
- Only one soil sample collected from the pit bottom (Pit 2) exhibited a TPH concentration
 of 12,900 mg/Kg, which exceeds the RRC regulatory standard of 10,000 mg/Kg. As a
 result, SKA concluded that response actions (i.e., soil excavation, removal, and
 disposal) appeared to be warranted on this portion of the Site.

Based on the findings of the soil and groundwater investigations and the pit bottom sampling actitivities, SKA concluded that no additional investigations were warranted for the Site; however, response actions were warranted for the former oilfield pit based on the elevated TPH concentration in soil. SKA submitted a copy of the report to both the RRC and NPS for review and approval.

On December 4, 2007, the NPS issued a letter entitled "Summary of Findings, Soil and Groundwater Investigation, Pit Bottom Sampling Activities, Rafferty Fee Lease-Well No. 1 (19053), Silsbee North (Yegua 2) Field, NPS Site 181, Big Thicket National Preserve, Hardin County, Texas". In their letter, the NPS concurred with SKA the need for response actions of soils within the former oilfield pit and set an attainment goal for cleanup of the pit area soils at 10,000 mg/Kg for TPH, based on regulatory levels promulgated by the State of Texas for protection of groundwater.

As a result, on February 8, 2008, SKA submitted a NPS-required Plan of Operations to both the RRC and NPS that outlined the necessary scope of work to achieve regulatory closure of the former oilfield pit in accordance with RRC rules and regulations. As such, the Plan of Operations only addressed the final environmental closure activities required of the former oilfield pit located on the Site. No other possible work tasks were addressed in the Plan of Operations.

On October 17, 2008, the NPS issued a Conditional Approval Letter for the Plan of Operations that outlined specific conditions for the scope of work, specific tasks to be conducted during the response actions, and requested additional information/data. As a result, on October 28, 2008, SKA submitted a Response Letter offering additional information/data and requesting clarification of NPS comments in their October 28, 2009 letter. On November 21, 2008, the NPS issued a Response Letter providing clarification of their initial Conditional Approval Letter. Once the Plan of Operations was approved by the RRC and NPS, Buford Curtis, Inc. submitted a signed Affidavit of Compliance to the NPS in January 2009. A copy of the signed affidavit is included in *Appendix 1*.

3.0 Response Action ____

The following sections summarize the objectives and response actions completed on the Site.

3.1 Scope of Response Actions

The Plan of Operations prepared by SKA and submitted to the RRC and NPS in February 2008 summarized environmental investigations previously conducted on the Site. The results of pit bottom sampling activities previously conducted by SKA and submitted to the RRC and NPS identified a TPH concentration in one soil sample from the bottom of the former oilfield pit that exceeded the RRC regulatory standard for soil of 10,000 mg/Kg (RRC Soil-to-Groundwater Protection Limits for Delineation and Remediation – Field Guide for the Assessment and Cleanup of Soil and Groundwater Contaminated with Condensate from a Spill Incident [Title 16, Chapter 3, Oil and Gas Division, Statewide Rules 8, 20, and 91]).

Based on our evaluations, SKA concluded environmental response actions were warranted for soil within the former oilfield pit located on the Site. As a result, SKA recommended source removal for elevated organic constituent concentrations (i.e., TPH) in soil within the former oilfield pit; specifically, areas where concentrations of TPH in soil exceeded the applicable RRC regulatory standard of 10,000 mg/Kg. Therefore, the primary objective of the response actions is to obtain regulatory closure of the former oilfield pit locate at the Site.

As a result, the objective of the response actions was accomplished by:

- (1) Off-site removal of rainwater contained within the earthen pit prior to commencement of excavation activities:
- (2) Site preparation activities including the minimal clearing of vegetation and installation of silt fencing around the earthen pit;
- (3) Cleaning and inspection of all equipment utilized for the response actions prior to mobilization to the Site;
- (4) Excavation (removal) of soils impacted with TPH at concentrations exceeding the RRC regulatory standard for soil of 10,000 mg/Kg;
- (5) Collection of six confirmation soil samples from the sidewalls and bottom of the excavation and analysis of the confirmation soil samples for TPH;
- (6) Asses the confirmation soil sample testing results to demonstrate the remaining native soils were below the RRC regulatory standard for soil of 10,000 mg/Kg;
- (7) Transportation of the TPH-impacted soils to an RRC-approved land farm location; and,
- (8) Backfilling of the excavation to surrounding grade with RRC and NPS-approved backfill soils.

All response actions were performed in accordance with the Plan of Operations approved by the NPS in October 2008.

3.1.1 Site Preparation

On July 2, 2009, Buford Curtis, Inc. mobilized to the Site to conduct site preparation activities before the commencement of response action/soil excavation activities. Prior to mobilizing to the Site, all equipment was inspected for leaks and cleaned to minimize the potential for the introduction on non-native and/or invasive species. Buford Curtis, Inc. installed silt fencing around the work areas to prevent erosion and sediment runoff from the pit area during and after response action activities. With NPS approval, Buford Curtis, Inc. cleared a limited amount of vegetation surrounding the pit to create the necessary work area to accomplish the response actions. Additionally, the rainwater was removed from the former oilfield pit to a truck-mounted water tank via a portable water pump. The cleared vegetation and purged rainwater was removed from the Site and transported off-site to private property by Beech Creek Disposal, a subcontractor to Buford Curtis, Inc.

On June 25, 2009 and July 2, 2009, SKA issued a 10-day and 48-hour notifications of response action commencement, respectively, to the RRC and NPS.

3.1.2 Soil Excavations

On July 7, 2009, Buford Curtis, Inc. initiated soil excavation activities at the Site. Buford Curtis, Inc. utilized a track mounted excavator to excavate soils within the former oilfield pit located on the Site. Mr. Jonathan Sanwald, Environmental Scientist with SKA, performed all soil excavation oversight and confirmation soil sampling activities during the excavations. Ms. Stephanie Burgess, Biologist, Oil and Gas Program Manager with the NPS, was also onsite to observe the soil excavation and confirmation soil sampling activities. No representatives from the RRC were present at the time of the soil excavations. Photographs taken by SKA's on-site personnel during the response action activities are included in *Appendix 2*. A Site Plan is included as *Figure 2*.

3.1.3 Soil Land Farm

Beech Creek Disposal transported the TPH-impacted soils generated from the response actions (excavations) of the former oilfield pit to a land farm located on private property approximately 20 miles northwest of the Site on County Road 4535 in Spurger, Hardin County, Texas (30° 40′ 3.4″ N; 94° 12′ 32.1″ W).

On January 4, 2009, SKA mobilized to the land farm location on private property with Mr. Ron Latil with the RRC and Mr. Buford Curtis to inspect the land farm area. After a visual inspection of the land farm area and a brief discussion with SKA and Buford Curtis, Mr. Latil provided verbal approval of the land farm area. As a result, on January 12, 2009, SKA submitted a Land Farm Permit Application to the RRC. The RRC Land Farm Permit Application proposed that Buford Curtis, Inc. would transport all excavated soils originating from the Rafferty Fee Lease – Well No. 1 (#19053) to the land farm located on private property. The land farm location is described as a flat open pasture land which slopes slightly to the east and no drainage courses or waterways are present in the land farm area.

On February 17, 2009, the RRC approved the Land Farm Permit Application and issued Land Farm Permit No. MP 03-8211-A. The land farm permit was subsequently renewed and SKA received the land farm renewal on June 30, 2009. A copy of the RRC Land Farm Permit is included in *Appendix 3*.

3.2 Areas and Volumes

The following section describes the locations of the response actions conducted on the subject property and the quantity of media removed from the subject property. In an effort to determine the extent of the excavation, SKA's on-site personnel continuously inspected the sidewalls and bottoms of the excavation area. However, the ultimate extent of the excavation was determined by laboratory analytical testing results.

3.2.1 Soil Excavations

On July 7, 2009, SKA conducted soil response actions by excavating 150 cubic yards (loose volume) of TPH impacted soil from an area measuring 20 feet by 28 feet and 8 feet deep (*Figure 3*). Although the excavation measured 20 feet by 28 feet and 8 feet deep, due to the difference of the surrounding grade and the bottom of the earthen pit (approximately 3 to 4 feet below grade), SKA only removed approximately 150 cubic yards (loose volume) from the former oilfield pit. Photographs taken by our on-site personnel during the soil response actions are included in *Appendix 2*.

3.2.2 Soil Land Farm

On July 7, 2009, 150 cubic yards (loose volume) of excavated soils originating from the former oilfield pit were immediately loaded into dump trucks and transported by Buford Curtis, Inc. to the RRC-approved land farm located on private property approximately 20 miles northwest of the Site. The boxes of the dump trucks were lined with 6-millimeter polyethylene sheeting to prevent any inadvertent spills of excavated soils. Once transported to the land farm location, the excavated soil was placed in the RRC-approved land farm area.

3.3 Confirmation Sampling

On July 7, 2009, SKA collected a total of 6 confirmation soil samples from the excavation of the former oilfield pit. Based on sampling procedures outlined in the NPS-approved Plan of Operations, a total of 6 grab confirmation soil samples were collected from the excavation; 4 from the sidewalls, and 2 from the bottom. The following sections provide descriptions of confirmation sampling procedures, sample analysis, and the "clean-up" levels for response actions performed by SKA within the former oilfield pit.

Prior to laboratory sample collection, soil samples were continuously collected from the bottoms and sidewalls during excavation activities and field screened by SKA personnel utilizing a Photo-ionizing Detector (PID) equipped with a 10.6-electron-volt (eV) bulb calibrated to 100 parts per million (ppm) isobutylene to determine the presence of organic vapors in soils. Once favorable field screening results were obtained, confirmation soil samples were collected and placed into laboratory-supplied glass jars, labeled, and temporarily stored in an ice-filled chest for preservation. The confirmation soil samples collected during the response actions were then transported to the laboratory by SKA personnel. The laboratory analyses were performed on an expedited 24-hour turn-around-time by ALS Laboratory Group (ALS) of Houston, Texas, which is an EPA-approved laboratory. Additionally, ALS is a National Environmental Laboratory Accreditation Conference (NELAC)-accredited laboratory under the Texas Laboratory Accreditation Program. All analyses were performed in accordance with the Texas Natural Resource Conservation Commission's (TNRCC, currently the Texas Commission on Environmental Quality [TCEQ]) *Total Petroleum Hydrocarbon TNRCC Method 1005, Revision 03*, dated June 1, 2001.

The analytical methods for all of the analyses performed were based on achieving laboratory sample detection limits (SDLs) that are at or below the RRC regulatory standard for TPH. Laboratory certificates of analysis and Chain-of-Custody documentation are included as *Appendix 4*.

3.3.1 Data Collection

A total of 6 grab confirmation soil samples were collected by SKA personnel from the excavation and analyzed in the testing laboratory for TPH by TX Method 1005. The 4 sidewall confirmation soil samples (PIT-NSW-4, PIT-ESW-4, PIT-SSW-4, PIT-WSW-4) were collected from a depth of 4 feet below the surrounding ground surface in the center of the sidewall, while the 2 bottom confirmation soil samples (PIT-BOT1-8 and PIT-BOT2-8) were collected from a depth of 8 feet below the surrounding ground surface at the bottom of the excavation.

3.3.2 Comparison of Data to Clean-up Criteria

The TPH testing results reported detectable TPH (C6 to C35) concentration in all 6 confirmation soil samples. The TPH (C6 to C35) concentrations ranged from 199 mg/Kg (PIT-BOT1-8) to 4,370 mg/Kg (PIT-ESW-4); however, none of the detected TPH (C6 to C35) concentrations exceed the applicable RRC regulatory standard for soil of 10,000 mg/Kg (Soil-to-Groundwater Protection Limit).

Based on the analytical testing results, SKA concluded that the TPH impacted soils were successfully removed from the former oilfield pit. Therefore, SKA submitted the laboratory certificates of analysis to the NPS and RRC on July 9, 2009 for review and concurrence that the soil response actions (excavation) activities were complete. On July 10, 2009, the NPS and RRC both provided written approval to proceed with backfilling and pit closure activities.

A Confirmation Soil COC Map is included as *Figure 4*. The results of analytical testing performed on the confirmation soil samples obtained from the soil excavations are summarized in *Table 1*.

3.4 Site Restoration

Buford Cutis, Inc. utilized soils obtained from private property located approximately 20 miles northwest of the Site on County Road 4535 in Spurger, Hardin County, Texas (30° 40' 3.4" N; 94° 12' 32.1" W) for backfilling activities at the Site.

On December 12, 2008, Ms. Stephanie Burgess with the NPS visually inspected the private property from which the backfill soils would be obtained to determine whether the soil was suitable based on conditions required by the NPS in their Conditional Approval letter. Subsequently, Ms. Burgess provided written approval to use the proposed backfill soils contingent upon determining that the backfill soils were free of physical and chemical contaminants as outlined in the NPS-approved Plan of Operation.

On January 7, 2009 SKA personnel mobilized to the property from which the backfill soils would be obtained to collect one composite soil sample (Big Thicket Backfill) from the proposed backfill soil area for analytical testing. SKA obtained soil for the composite sample by utilizing a stainless steel hand auger to install three soil borings in the backfill soil area. The backfill soil was observed to be a silty-clay (CL) as described by the Unified Soil Classification System

(USCS) with an orange to light brown color with medium plasticity and no odor. In accordance with the NPS-approved Plan of Operations, the backfill soil sample was analyzed in the testing laboratory for volatile organic compounds (VOCs) by EPA Method 8260, TPH by Method TX1005, Resource Conservation and Recovery Act (RCRA) 8 Metals by EPA Method SW6020/7471A, Chlorides by EPA Method E300, and semi-volatile organic compounds (SVOCs) by EPA Method 8270.

The analytical testing results for the backfill soil sample reported no detectable TPH concentrations and detectable metal, SVOC, and VOC constituent concentrations. However, none of the detected metals, SVOC, and VOC constituent concentrations exceeded their respective critical regulatory standards for residential land use (i.e., Texas Commission on Environmental Quality [TCEQ] Texas Risk Reduction Program [TRRP] Tier 1 Soil Protective Concentration Levels [PCLs], Texas-Specific Background Concentrations [30 TAC 350.51m], and/or RRC Soil-to-Groundwater Protection Limits).

Based on our review of the backfill soil sample results, SKA concludes that no Chemicals of Concern (COC) are present in the proposed backfill soil above critical regulatory standards for residential land use (TCEQ or RRC) and the soil is acceptable as backfill and can be used during the response actions on the Site. SKA submitted the backfill soil testing results to the NPS for review and approval on January 20, 2009. The NPS provided written approval on January 29, 2009 for the use of the proposed backfill soil at the Site. A summary of backfill soil analytical results is included as *Table 2*. Laboratory certificates of analysis and Chain-of-Custody documentation are included as *Appendix 4*.

On July 13, 2009, SKA initiated backfilling activities of the recently excavated oilfield pit at the Site with the approval of the NPS and RRC. Mr. Jonathan Sanwald with SKA performed oversight activities during backfill activities and Ms. Stephanie Burgess with the NPS was also onsite during backfill activities. A total of 234 cubic yards (loose volume) of NPS-approved backfill soil was placed in the excavation and machine compacted by COS with the trackmounted excavator. Backfilling activities were deemed complete when the excavation area was brought to grade with the surrounding ground surface of the Site. After the completion of backfilling activities, the safety fencing surrounding the excavation was removed; however, the silt fencing surrounding the work area was left in place pending revegetation of the work area. Photographs taken by SKA on-site personnel of the backfilling activities are included in *Appendix 2*.

4.0 Conclusions

SKA utilized excavation (removal) of impacted soil to achieve regulatory closure of the former oilfield pit located at the Site. SKA removed 150 cubic yards (loose volume) of TPH impacted soil from the former oilfield pit located at the Site. Confirmation soil samples were collected from the native soil and analyzed in the testing laboratory. Based on the analytical testing results, all confirmation soil samples collected from the former oilfield pit (excavation) reported no TPH concentrations exceeding the applicable RRC regulatory standard for soil previously approved in the Plan of Operations. Approximately 150 cubic yards (loose volume) of TPH-impacted (excavated) soils were transported off-site to a RRC-approved land farm location. Next, a total of 234 cubic yards (loose volume) of NPS-approved backfill soil was placed into the excavation to surrounding grade. Therefore, SKA concludes the necessary response actions for soils are complete and no further investigations and/or response actions are warranted at Rafferty Fee Lease-Well No. 1 (#19053).

Based on the findings and conclusions of this RACR, SKA concludes that all appropriate response actions for soils have been achieved in accordance with the NPS-approved Plan of Operations. Therefore, SKA, on behalf of Buford Curtis, Inc., respectfully requests RRC and NPS concurrence by: (1) RRC issue regulatory closure ("No Further Action") for the earthen oilfield pit located at the Site, and (2) NPS issue approval of these response actions concluding no further environmental investigations and/or response actions are warranted at the Site.



TABLE 1 SUMMARY OF CONFIRMATION SOIL ANALYTICAL RESULTS RAFFERTY FEE LEASE - WELL NO. 1 (#19053) SILSBEE NORTH (YEGUA 2) FIELD NPS SITE 181

BIG THICKET NATIONAL PRESERVE HARDIN COUNTY, TEXAS

				то	TAL PETROLE	UM HYDROCAF	RBONS
Sample Name	Sample Location	Sample Depth (ft-bgs)	Sample Date	ပို့ ဗီ Method TX1005 mg/Kg	Section 2 Sectio	S S Method TX1005 mg/Kg	Total Petroleum Method TX1005 (Ce-C35)
			Confirmation	Soil Samples			
PIT-NSW-4	North Sidewall	4	7/7/2009	110 J	1,700	340	2,150
PIT-ESW-4	East Sidewall	4	7/7/2009	200 J	3,500	670	4,370
PIT-SSW-4	South Sidewall	4	7/7/2009	42 J	1,600	300	1,940
PIT-WSW-4	West Sidewall	4	7/7/2009	130	2,200	330	2,660
PIT-BOT1-8	Bottom	8	7/7/2009	25 J	140	34 J	199
PIT-BOT2-8	Bottom	8	7/7/2009	250	2,000	290	2,540
Soil-	Railroad Commission to-Groundwater Prote r Delineation and Re	ection Limits		-	-	-	10,000

Notes:

Concentrations bolded represent those detected at or above the laboratory's Sample Detection Limit (SDL).

Regulatory standards were obtained from Table 2 of the Railroad Commision of Texas' Field Guide for the Assessment and Cleanup of Soil and Groundwater Contaminated with Condensate From a Spill Incident (Title 16, Chapter 3, Oil and Gas Division, Statewide Rules 8, 20, and 91)

[&]quot;mg/Kg" indicates milligrams per kilogram.

[&]quot;J" laboratory qualifier indicates that the analyte is an estimated value between the SDL and the Method Quantitation Limit (MQL).

[&]quot;-" indicates that no regulatory standard has been established.

TABLE 2 SUMMARY OF BACKFILL SOIL ANALYTICAL RESULTS RAFFERTY FEE LEASE - WELL NO. 1 (#19053) SILSBEE NORTH (YEGUA 2) FIELD NPS SITE 181 BIG THICKET NATIONAL PRESERVE

HARDIN COUNTY, TEXAS

ni		2_				RCRA	8 Metals				Semi-Volit	ile Organic C	ompounds		٧	olitile Organi	ic Compound	ds		Tota	Petroleum	1 Hydrocar	oons	Chlorides
ple Name	ple Depth gs)	iple Date	Method	Method Method	Cad mit many many many many many many many many	Chromium	Lead Method	Metcury	Selenium Method	IIS Method	Bis(2-ethylhexyl) phthalate	Podiew Poutyl benzyl-phthalate	Di-n-butyl phthalate	Ethylbenzene Wethod	m,p-Xylene Wethod	o-Xylene Method	Methylene Chloride	Napthalene poulpw	Toluene	Method Ce-C ₁₂	C ₁₂ -C ₂₈	C ₂₈ -C ₃₅	Total TPH (Ce-C ₃₆)	Chloride lons
a a a	Sam (ft-b	am	6020	6020	6020	6020	6020	7471A	6020	7471A	8270	8270	8270	8260	8260	8260	8260	8260	8260	TX1005	TX1005	TX1005	TX1005	E300
<u> </u>	S E	S	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
											· · · · · · ·	Soil Borings												
Big Thicket Backfill	0-1	1/7/2009	0.792	19.5	<0.033	3.36	4.28	0.0148 J	0.600	<0.022	0.0059 J	0.022 B	0.0066 J	0.00064 J	0.0021 J	0.00070 J	0.0022 J	0.0015 J	0.00078 J	<18	<18	<18	<18	11.8
											Regu	latory Standar	ds											
Soil-to-Ground	ommission of water Protect ion and Reme	tion Limits		-	-		•		•		-			7.6	120	120		•	8.2			-	10,000	3,000
Res	RP TIER 1 ^{GW} S sidential PCL Acre Source)		5.0	440	1.5	2,400	3.0	0.0078	2.3	0.48	160	2,700	3,300	7.6	110	71	0.013	31	8.2	65	200	200	-	-
Texas-Specific Ba (30 T	ackground Co (AC 350.51m)		5.9	300	-	30	15	0.04	0.3	•	-	•	•	•	•	-			-	-	-	-	-	-

Notes:

"<0.033" indicates the sample result is less than the laboratory's Sample Detection Limit (SDL).

Concentrations bolded represent those detected at or above the laboratory's SDL.

"B" Laboratory qualifier indicates that the analyte was detected in the associated method blank.

Railroad Commission Regulatory standards were obtained from Table 2 of the Railroad Commission of Texas' Field Guide for the Assessment and Cleanup of Soil and Groundwater

Contaminated with Condensate From a Spill Incident (Title 16, Chapter 3, Oil and Gas Division, Statewide Rules 8, 20, and 91)

TCEQ TRRP Tier 1 Residential Soil Protective Concentration Levels (30 TAC Chapter 350; Table 1: Tier I Residential Soil PCLs; dated March 25, 2009).

TCEQ Texas-Specific Background Concentrations were obtained from 30 TAC Chapter 350.51(m).

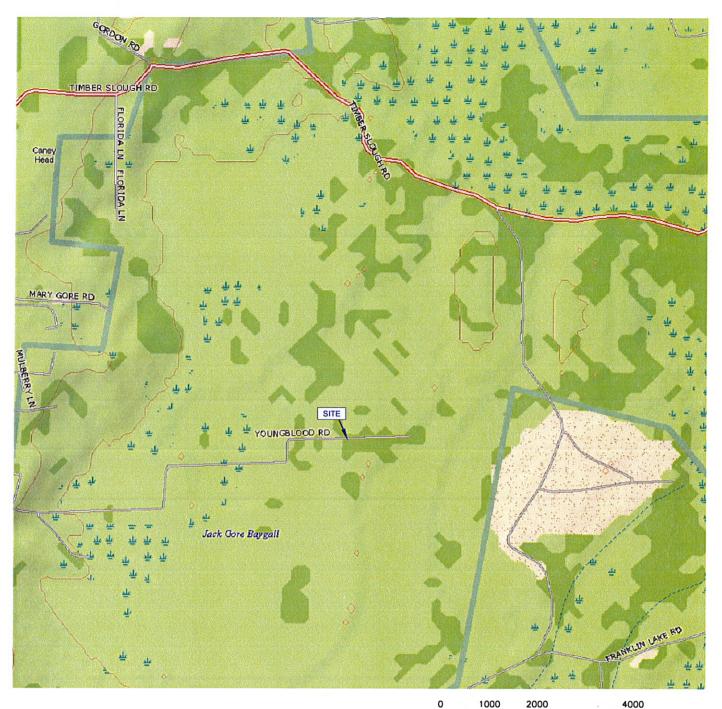
[&]quot;mg/Kg" indicates milligrams per kilogram.

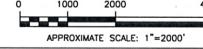
[&]quot;J" Laboratory qualifier indicates that the analyte is an estimated value between the SDL and the Method Quantitation Limit (MQL).

[&]quot;TPH" represents total petroleum hydrocarbons.

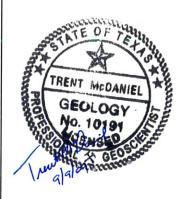
[&]quot;-" indicates that no regulatory standard has been established.







REFERENCE USGS 7.5-MINUTE TOPOGRAPHIC QUADRANGLE DESERTER BAYGALL, TEXAS 1984





SKA CONSULTING, L.P. 10260 WESTHEIMER, SUITE 605 HOUSTON TEXAS 77042

FIGURE

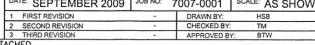
1

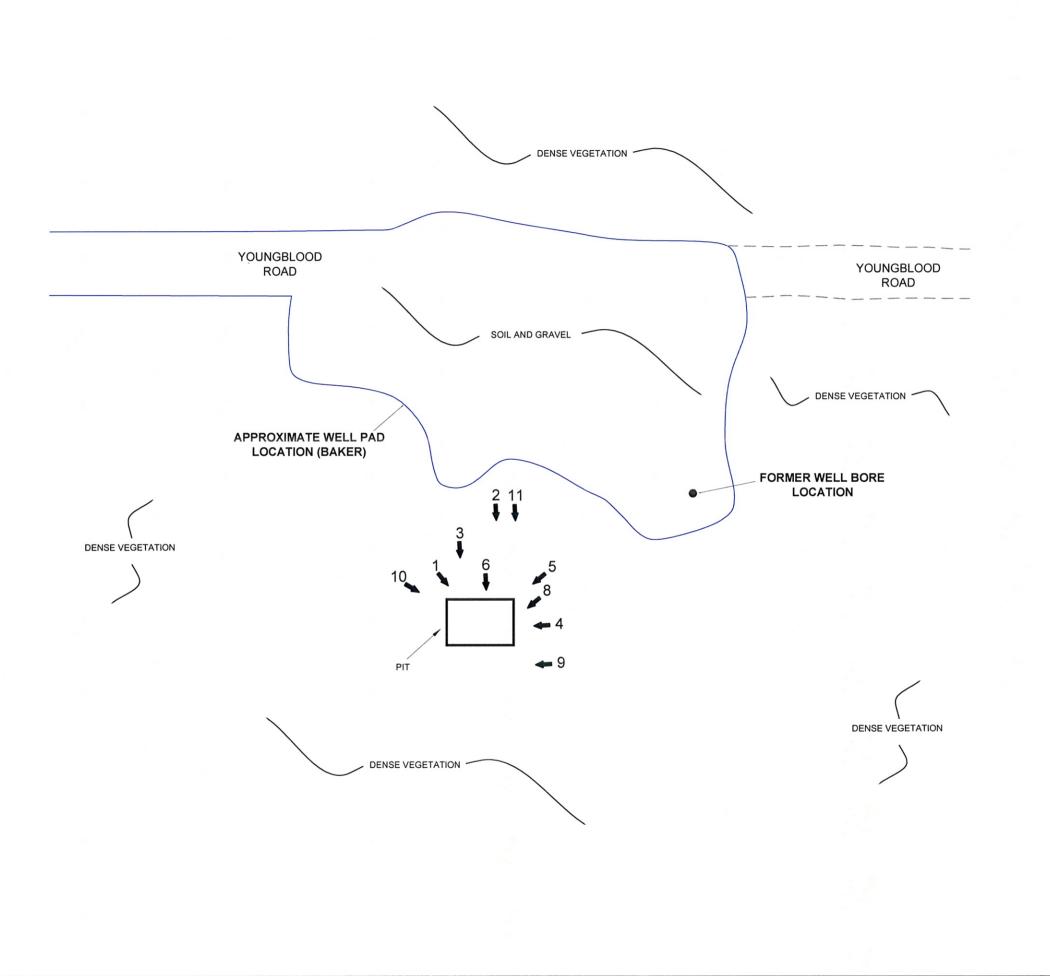
Texas Registered Engineering Firm F-005009 Texas Registered Geoscience Firm 50011

RAFFERTY FEE LEASE - WELL NO. 1 (#19053)	
SILSBEE NORTH (YEGUA 2) FIELD	
NPS SITE 181	
BIG THICKET NATIONAL PRESERVE	
LIADDIN COUNTY TEVAC	

SITE VICINITY AND TOPOGRAPHIC MAP

HARDIN COUNTY, TEXAS DATE: SEPTEMBER 2009 JOB NO: SCALE: AS SHOWN 7007-0001





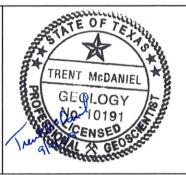
LEGEND

-

PHOTOGRAPH LOCATION AND DIRECTION

SOURCE: SITE FEATURE LOCATIONS BASED ON FOCUSED SITE INVESTIGATION, BAKER, 2005





FIGURE



SKA CONSULTING, L.P. 10260 WESTHEIMER, SUITE 605 HOUSTON TEXAS 77042

Texas Registered Engineering Firm F-005009 Texas Registered Geoscience Firm 50011

SITE PLAN
RAFFERTY FEE LEASE - WELL NO. 1 (#19053) SILSBEE NORTH (YEGUA 2) FIELD
NPS SITE 181
BIG THICKET NATIONAL PRESERVE

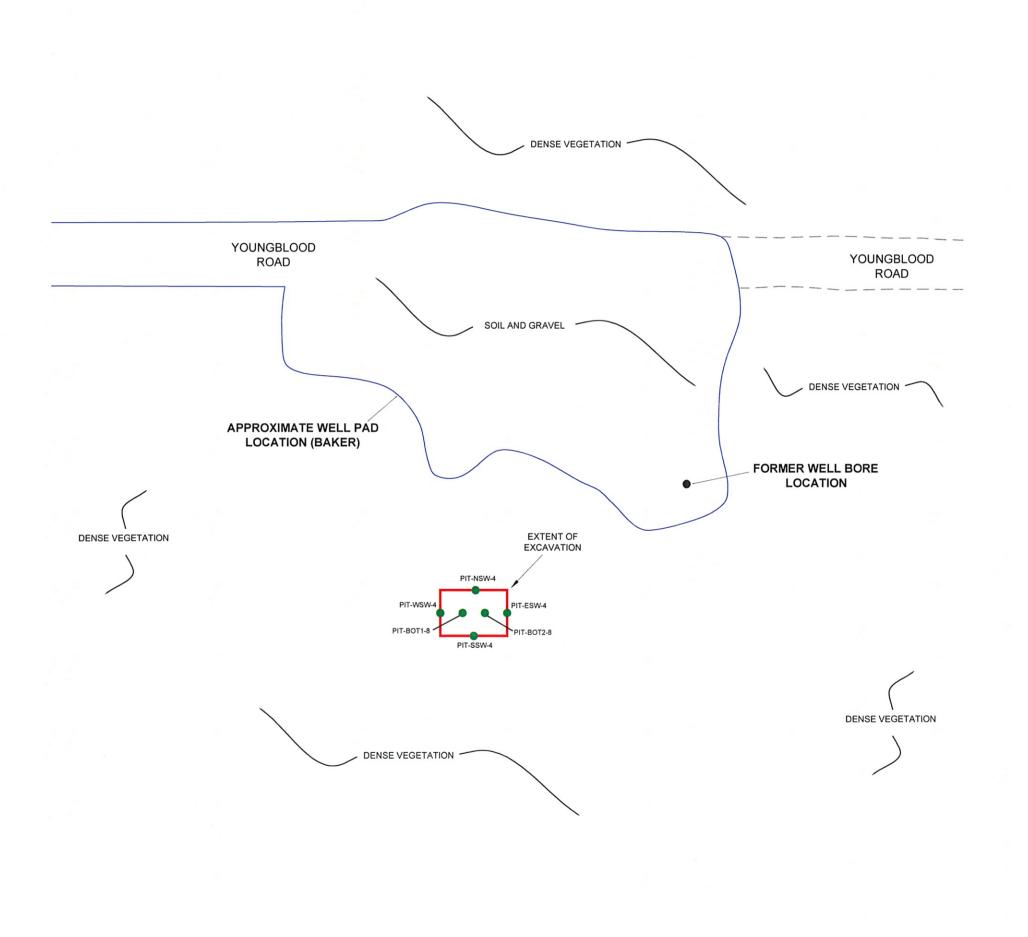
HARDIN COUNTY, TEXAS

DATE: SEPTEMBER 2009 | JOB NO: 7007-0001 | SCALE: AS SHOWN

 1
 FIRST REVISION
 DRAWN BY:
 HSB

 2
 SECOND REVISION
 CHECKED BY:
 TM

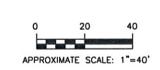
 3
 THIRD REVISION
 APPROVED BY:
 BTW

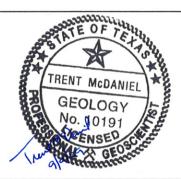


LEGEND

PIT-NSW-4 CONFIRMATION SAMPLE LOCATION (JULY 2009)

SOURCE: SITE FEATURE LOCATIONS BASED ON FOCUSED SITE INVESTIGATION, BAKER, 2005







SKA CONSULTING, L.P. 10260 WESTHEIMER, SUITE 605 HOUSTON TEXAS 77042

FIGURE

Texas Registered Engineering Firm F-005009 Texas Registered Geoscience Firm 50011

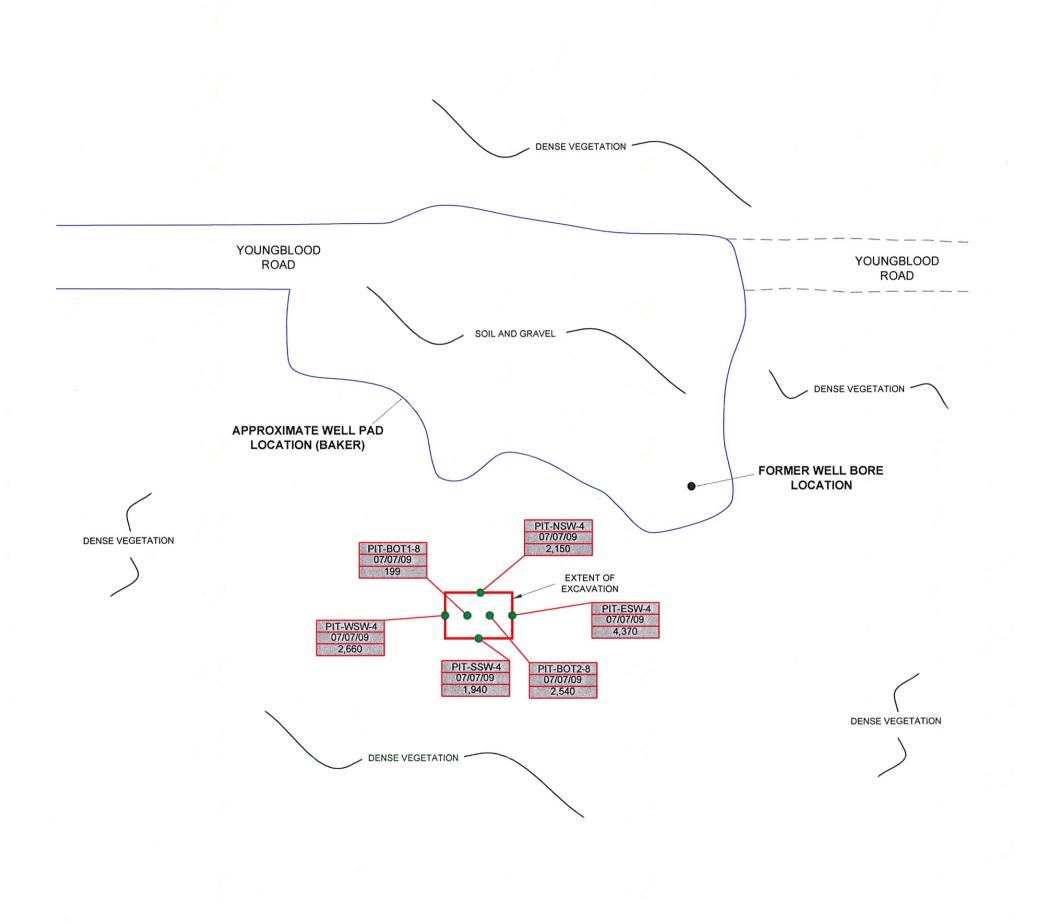
EXCAVATION AND CONFIRMATION SOIL SAMPLE MAP

RAFFERTY FEE LEASE - WELL NO. 1 (#19053) SILSBEE NORTH (YEGUA 2) FIELD NPS SITE 181 BIG THICKET NATIONAL PRESERVE

HARDIN COUNTY, TEXAS DATE: SEPTEMBER 2009 | JOB NO: 7007-0001 | SCALE: AS SHOWN

	OLI ILIVIDLI LEGOS		, 00, 000,	7100	,,,
1	FIRST REVISION	-	DRAWN BY:	HSB	
2	SECOND REVISION		CHECKED BY:	TM	
13	3 THIRD REVISION	-	APPROVED BY:	BTW	

FILE INFO: G:\2007\7007-0001\Dwg\RACR\fig3.dwg blissittehs NO XREFS ATTACHED



LEGEND

PIT-NSW-4

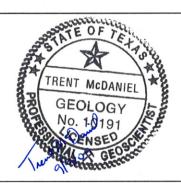
CONFIRMATION SAMPLE LOCATION (JULY 2009)

TOTAL PETROLEUM HYDROCARBONS

SOIL SAMPLE NAME
DATE
TPH CONCENTRATION (mg/kg)

SOURCE: SITE FEATURE LOCATIONS BASED ON FOCUSED SITE INVESTIGATION, BAKER, 2005





FIGURE



SKA CONSULTING, L.P. 10260 WESTHEIMER, SUITE 605 HOUSTON TEXAS 77042

Texas Registered Engineering Firm F-005009 Texas Registered Geoscience Firm 50011

CONFIRMATION SOIL SAMPLE COC MAP

RAFFERTY FEE LEASE - WELL NO. 1 (#19053) SILSBEE NORTH (YEGUA 2) FIELD NPS SITE 181

NPS SITE 181
BIG THICKET NATIONAL PRESERVE
HARDIN COUNTY, TEXAS

			,	
DA	TE: SEPTEMBER 2009	JOB NO:	7007-0001	SCALE: AS SHOWN
1	FIRST REVISION	-	DRAWN BY:	HSB
2	SECOND REVISION	-	CHECKED BY:	TM
3	THIRD REVISION	-	APPROVED BY	Y: BTW



APPENDIX 1 AFFIDAVIT OF COMPLIANCE



RE:

January 19, 2009

David J. Fisher, Partner

Board Certified
Personal Injury Trial Law
Texas Board of Legal Specialization

560 S. 4th Street
Silsbee, Texas 77656-4926
409-386-0386 | fax 409-386-0900
Email: djf@obt.com

Other offices in Austin, Houston – The Woodlands, and Beaumont | online at www.obt.com

RECEIVED JAN21'0912:55

Mr. Todd Brindle United States Department of the Interior Big Thicket National Preserve 6044 FM 420 Kountze, Texas 776265

Affidavit of Compliance

Dear Superintendent Brindle:

Buford Curtis, Inc.'s Plan of Operations for Reclamation at the Rafferty Fee #1 Well Site Within the Neches Bottom and Jack Gore Baygall Unit of the Big Thicket National Preserve, Hardin County, is and will be in compliance with the conditional approval and all applicable regulations to the best of their ability.

Buford Curtis

SWORN TO AND SUBSCRIBED BEFORE ME by the said Buford Curtis on this the Cold day of January 2009, to certify which witness my hand and seal of office.

AMY IVINS
Notary Public, State Of Texas My Commission Expires
11-08-2011

NOTARY PUBLIC STATE OF TEXAS

My Commission Expires:

APPENDIX 2 SITE PHOTOGRAPHS



Photo No. 1: View to the southeast of the earthen pit prior to commencing soil excavation activities.



Photo No. 2: View to the south of the silt fence being installed around the entire work area prior to commencing soil excavation activities.

RESPONSE ACTION COMPLETION REPORT
RAFFERTY FEE LEASE-WELL NO. 1 (#19053)
SILSBEE NORTH (YEGUA 2) FIELD
NPS SITE 181
BIG THICKET NATIONAL PRESERVE
HARDIN COUNTY, TEXAS



Photo No. 3: View to the south of excavated soils being loaded into a dump truck during soil excavation activities.



Photo No. 4: View to the west of soil excavation activities being conducted within the former oilfield pit.

RESPONSE ACTION COMPLETION REPORT RAFFERTY FEE LEASE-WELL NO. 1 (#19053) SILSBEE NORTH (YEGUA 2) FIELD NPS SITE 181 BIG THICKET NATIONAL PRESERVE HARDIN COUNTY, TEXAS



Photo No. 5: View to the southwest of the former oilfield pit once soil excavation activities were completed.



Photo No. 6: View to the south of the orange safety fencing installed around the excavation.

RESPONSE ACTION COMPLETION REPORT RAFFERTY FEE LEASE-WELL NO. 1 (#19053) SILSBEE NORTH (YEGUA 2) FIELD NPS SITE 181 BIG THICKET NATIONAL PRESERVE HARDIN COUNTY, TEXAS



Photo No. 7: View to the southeast of the excavated soil at the land farm location.



Photo No. 8: View to the southwest of backfilling activities.



Photo No. 9: View to the west of machine compaction of the backfill soil placed in the excavation.



Photo No. 10: View to the southwest of the completed backfilling activities.



Photo No. 11: View to the south of the Site after completion of response action activities.

APPENDIX 3 RRC LAND FARM PERMIT



TOMMIE SEITZ DIRECTOR OIL AND GAS DIVISION GUY M GROSSMAN, P.G. DISTRICT DIRECTOR

RAILROAD COMMISSON OF TEXAS

OIL AND GAS DIVISION

JUNE 30, 2009

BUFORD CURTIS, INC (195448) P O BOX 1236 SILSBEE, TX 77656

Re:

MP 03-8211-A

Offlease Landfarming of Drilling Fluid

Rafferty Fee Lease

Well #1 (DP# 294776) Silsbee, No Field

Hardin County, Texas

Pursuant to Rule 8 (d) (6) (G), you are hereby authorized to landfarm 12 cubic yards of hydrocarbon contaminated soil on Buford Curtis's property, which contains 76.142 acres and is located 3 mile(s)N. from Silsbee, TX. Plat of the approved disposal site is attached and incorporated into this permit.

Only drilling fluid generated at the above-referenced well may be disposed of at the above-described disposal site. No drilling fluid with a chloride concentration exceeding 3000_ mg/l may be landfarmed at the disposal site. No oil base drilling fluid may be landfarmed at the disposal site. Any oil on top of the waste must be removed. All drilling fluid shall be landfarmed in such a manner that the fluid will not migrate off the approved disposal site or enter any watercourse or drainageway, including any drainage ditch, dry creek, flowing creek, river, or any other body of surface water.

The waste / soil mixture must meet the following limitations:

 $pH \ge 6$ and ≤ 10 Electrical Conductivity ≤ 4 mmhos/cm Total Petroleum Hydrocarbons $\le 1\%$

The authority granted by this letter expires 60 days from the date of this letter. Distribution of this document by E-Mail only. E-mailed to Terry Pickering at tpickering@curtisoilfield.com

Sincerely yours,
Ronald E. Smelley

Ronald E. Smelley

(for) Guy M. Grossman, P.G.

District 03 Director

GMG:RES:nc 2009-644

APPENDIX 4 LABORATORY CERTIFICATES OF ANALYSIS AND CHAIN-OFCUSTODY DOCUMENTATION

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

09-Jul-2009

Trent McDaniel SKA Consulting, L.P. 10260 Westheimer Suite 605 Houston, TX 77042

Tel: (713) 266-6056 Fax: (713) 266-0996

Re: Big Thicket - 7007-0001

Work Order: 0907150

Dear Trent.

ALS Laboratory Group received 7 samples on 08-Jul-2009 08:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 22.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Glenda H. Ramos

Actor Coronado

Hector Coronado Project Manager Certificate No: T104704231-08-TX

ALS Group USA, Corp.
Part of the ALS Laboratory Group

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338
Phone: (281) 530-5656 Fax: (281) 530-5887
www.alsglobal.com www.elabi.com
A Campbell Brothers Limited Company

Client:

SKA Consulting, L.P.

Project:

Big Thicket - 7007-0001

Work Order:

0907150

TRRP Laboratory Data

Date: 09-Jul-09

Package Cover Page

This data package consists of all or some of the following as applicable:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation:
- R2 Sample identification cross-reference
- Test reports (analytical data sheets) for each environmental sample that includes: R3
 - a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- Test reports/summary forms for blank samples; R5
- Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c)The laboratory's LCS QC limits.
- Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's OC limits for analytical duplicates.
- List of method quantitation limits (MQLs) for each analyte for each method and matrix;?
- R10 Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the labor in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Rev Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, if applicable: [NA] This laboratory is an in-house laboratory controlled by the person responding to rule. The official sign the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this c package and is by signature affirming the above release statement is true.

Hector Coronado

Actor Coronada

Project Manager

		Laboratory Review Chec	klist: Reportable Data					
Lab	orato	ry Name: ALS Laboratory Group	RC Date: 07/09/2009					
Proj	ect N	Jame: 7007-0001-Big Thicket La	boratory Job Number: 0907150					
Rev	iewei	r Name: Hector Coronado Pro	ep Batch Number(s): 36975, R78891					
# ¹	A ²	Description		Yes	No	NA ³	NR ⁴	ER#5
R1	OI	CHAIN-OF-CUSTODY (C-O-C)						
		1) Did samples meet the laboratory's standard conditions of s	ample acceptability upon receipt?	X	20.000.00			
		2) Were all departures from standard conditions described in		X				
R2	OI	SAMPLE AND QUALITY CONTROL (QC) IDENTIFIC		SHEW.	11111111	2011	TALES	
IX2	OI	1) Are all field sample ID numbers cross-referenced to the la		X	DH3	- State		
		2) Are all laboratory ID numbers cross-referenced to the corr		X	_	_		
R3	OI	TEST REPORTS	esponding QC data:	Λ	404	441735	1023	
KS	01	Were all samples prepared and analyzed within holding tin	mes?	X	arvert	08.00	1011136	The country of
		2) Other than those results < MQL, were all other raw values		X	_			
			s bracketed by caribration standards:	X		-		
		3) Were calculations checked by a peer or supervisor?	ruicar?	X	_	_		
		4) Were all analyte identifications checked by a peer or super		X			_	
		5) Were sample quantitation limits reported for all analytes n				_	_	
		6) Were all results for soil and sediment samples reported on		X		_		
		7) Was % moisture (or solids) reported for all soil and sedime	ent samples?	X		77	_	
2		8) If required for the project, TICs reported?		5500000		X	100000000	
R4	О	SURROGATE RECOVERY DATA		BH ST	75,50	20119	Miles	METERS.
		Were surrogates added prior to extraction?		X		_		
		2) Were surrogate percent recoveries in all samples within th			X		aurore de	1
R5	OI	TEST REPORTS/SUMMMARY FORMS FOR BLANK	SAMPLES	Elziná	William)		현택	HETCH.
		1) Were appropriate type(s) of blanks analyzed?		X				
		2) Were blanks analyzed at the appropriate frequency?		X				
		3) Were method blanks taken through the entire analytical pr	ocess, including preparation and, if	X				
		applicable, cleanup procedures?						
		4) Were blank concentrations < MQL?		X				
R6	OI	LABORATORY CONTROL SAMPLES (LCS):		122.2			HE	
		1) Were all COCs included in the LCS?		X				
		2) Was each LCS taken through the entire analytical procedur	re, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?		X				
		4) Were LCS (and LCSD, if applicable) %Rs within the labor		X				
		5) Does the detectability data document the laboratory's capa	bility to detect the COCs at the MDL	X				
		used to calculate the SQLs?		- ·		_		
		6) Was the LCSD RPD within QC limits?		X		1010010	118600	
R7	OI	MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICA		7755	State 1	350		
		1) Were the project/method specified analytes included in the	e MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?		X				
		3) Were MS (and MSD, if applicable) %Rs within the labora	tory QC limits?		X	_		2
		4) Were MS/MSD RPDs within laboratory QC limits?		-	X			3
R8	OI	ANALYTICAL DUPLICATE DATA				\$413		
		1) Were appropriate analytical duplicates analyzed for each r		X			_	
		2) Were analytical duplicates analyzed at the appropriate free		X				
		3) Were RPDs or relative standard deviations within the labo	ratory QC limits?	X				
R9	OI	METHOD QUANTITATION LIMITS (MQLS):		2000	NO YE	210		
		1) Are the MQLs for each method analyte listed and included		X				
		2) Do the MQLs correspond to the concentration of the lowes		X				
		3) Are unadjusted MQLs included in the laboratory data pack	age?	X				
R10	OI	OTHER PROBLEMS/ANOMALIES				301	His	
		1) Are all known problems/anomalies/special conditions note	d in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the rep	oorted data?	X				
		3) If requested, is the justification for elevated SQLs documer		X				

¹ Items identified by the letter "R" should be included in the laboratory data package submitted in 0 the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

²

NA = Not applicable; NR = Not Reviewed;

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

	Laboratory Review Cho	ecklist: Supporting Data					
Laborato	ory Name: ALS Laboratory Group LR	RC Date: 07/09/2009					
Project N	Name: 7007-0001-Big Thicket Lal	boratory Job Number: 0907150					
Reviewe	er Name: Hector Coronado Pre	ep Batch Number(s): 36975, R78891					
#1 A2	POSSESSES AND ADMINISTRATION OF THE PROPERTY O	•	Yes	No	NA ³	NR ⁴	ER#5
	INITIAL CALIBRATION (ICAL)		Ward.		HERITA		
51 01	1) Were response factors (RFs) and/or relative response factors	ors (RRFs) for each analyte within the OC	X		25000000	STORY STORY	28 25 25 20 20 20
	limits?	ors (rad s) for each analyte within the Qe					
	2) Were percent RSDs or correlation coefficient criteria met		X				
	3) Was the number of standards recommended in the method	d used for all analytes?	X				
	4) Were all points generated between the lowest and highest	standard used to calculate the curve?	X				
	5) Are ICAL data available for all instruments used?		X				
	6) Has the initial calibration curve been verified using an app	propriate second source standard?	X				
S2 OI	INITIAL AND CONTINUING CALIBRATION VERI	IFICATION (ICCV AND CCV) AND					
	1) Was the CCV analyzed at the method-required frequency		X				
	2) Were percent differences for each analyte within the meth	nod-required QC limits?	X				
	3) Was the ICAL curve verified for each analyte?		X				
	4) Was the absolute value of the analyte concentration in the	e inorganic CCB < MDL?	X				
S3 O	MASS SPECTRAL TUNING:						
	1) Was the appropriate compound for the method used for tu	ming?	X				
	2) Were ion abundance data within the method-required QC		X				
S4 O	INTERNAL STANDARDS (IS):			Service .			
	Were IS area counts and retention times within the method-r	required OC limits?	X				
S5 OI	RAW DATA (NELAC SECTION 1 APPENDIX A G						
	1) Were the raw data (e.g., chromatograms, spectral data) rev		X				
	2) Were data associated with manual integrations flagged on		X				\top
S6 O	DUAL COLUMN CONFIRMATION						
	Did dual column confirmation results meet the method-requi	ired OC?			X		
S7 O	TENTATIVELY IDENTIFIED COMPOUNDS (TICS):			3364			
	If TICs were requested, were the mass spectra and TIC data	subject to appropriate checks?			X		
S8 I	INTERFERENCE CHECK SAMPLE (ICS) RESULTS:						
	Were percent recoveries within method QC limits?		X				\top
S9 I	SERIAL DILUTIONS, POST DIGESTION SPIKES	S, AND METHOD OF STANDARD					
	Were percent differences, recoveries, and the linearity within		X				
S10 OI	PROFICIENCY TEST REPORTS:						
	Are proficiency testing or inter-laboratory comparison result	ts on file?	X				
S11 OI	METHOD DETECTION LIMIT (MDL) STUDIES						
	1) Was a MDL study performed for each reported analyte?		X				
	2) Is the MDL either adjusted or supported by the analysis of	f DCSs?	X				
S12 OI	STANDARDS DOCUMENTATION				1155		
	Are all standards used in the analyses NIST-traceable or obta	ained from other appropriate sources?	X				
S13 OI	COMPOUND/ANALYTE IDENTIFICATION PROCED	DURES					
	Are the procedures for compound/analyte identification docu	umented?	X				
S14 OI	DEMONSTRATION OF ANALYST COMPETENCY (I	DOC)					
	1) Was DOC conducted consistent with NELAC 5C or ISO/I	IEC 4.2.2?	X				
	2) Is documentation of the analyst's competency up-to-date a	and on file?	X				
S15 OI	VERIFICATION/VALIDATION DOCUMENTATION I	FOR METHODS					
	Are all the methods used to generate the data documented,	verified, and validated, where applicable,	X				
	(NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	54 (1920 State) 553					
S16 OI	LABORATORY STANDARD OPERATING PROCEDU	URES (SOPS):	Bin's				
	Are laboratory SOPs current and on file for each method per		X				T

Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

- O = organic analyses; I = inorganic analyses (and general chemistry, when applicable). NA = Not applicable.
- NR = Not Reviewed.
- $ER\# = Exception \ Report \ identification \ number \ (an \ Exception \ Report \ should \ be \ completed \ for \ an \ item \ if "NR" \ or "No" \ is \ checked).$

	Laboratory Review Cl	hecklist: Exception Report					
Laborate	ory Name: ALS Laboratory Group	LRC Date: 07/09/2009					
Project 1	Name: 7007-0001-Big Thicket	Laboratory Job Number: 0907150					
Reviewe	Reviewer Name: Hector Coronado Prep Batch Number(s): 36975, R78891						
ER#1	DESCRIPTION						
1	TPH (samples 0907150-02, 03, 04 and 06) Rec	covery out of control limits for surrogate due to dilution.					
2	Batch 36975 TPH (sample 0907150-01) MS/MSD recovery out of control limits. Confirmed by						
	reanalysis.	50					
3	Batch 36975 TPH (sample 0907150-01)MSD I	RPD recovery above control limits.					

¹ ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

Date: 09-Jul-09

Client:

SKA Consulting, L.P.

Project:

Big Thicket - 7007-0001

Work Order:

0907150

Work Order Sample Summary

Lab Samp II	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	<u>Hold</u>
0907150-01	PIT-NSW-4	Soil		7/7/2009 16:45	7/8/2009 08:45	
0907150-02	PIT-ESW-4	Soil		7/7/2009 16:35	7/8/2009 08:45	
0907150-03	PIT-SSW-4	Soil		7/7/2009 16:15	7/8/2009 08:45	
0907150-04	PIT-WSW-4	Soil		7/7/2009 16:25	7/8/2009 08:45	
0907150-05	PIT-BOT 1-8	Soil		7/7/2009 16:55	7/8/2009 08:45	
0907150-06	PIT-BOT 2-8	Soil		7/7/2009 17:05	7/8/2009 08:45	
0907150-07	Trip Blank	Trip Blank		7/7/2009 17:05	7/8/2009 08:45	

Client:

SKA Consulting, L.P.

Project:

Big Thicket - 7007-0001

Sample ID:

Note:

PIT-NSW-4

Collection Date: 7/7/2009 04:45 PM

Date: 09-Jul-09

Work Order: 0907150

Lab ID: 0907150-01

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TEXAS TPH		Meth	nod:TX1005		Prep: TX100	5PR / 7/8/09	Analyst: KMB
nC6 to nC12	110	J	37	120	mg/Kg-dry	2	7/9/2009 09:17
>nC12 to nC28	1,700		37	120	mg/Kg-dry	2	7/9/2009 09:17
>nC28 to nC35	340		37	120	mg/Kg-dry	2	7/9/2009 09:17
Total Petroleum Hydrocarbon	2,150		37	120	mg/Kg-dry	2	7/9/2009 09:17
Surr: 2-Fluorobiphenyl	124			70-130	%REC	2	7/9/2009 09:17
Surr: Trifluoromethyl benzene	97.2			70-130	%REC	2	7/9/2009 09:17
MOISTURE		Meth	nod:E160.3				Analyst: TDW
Percent Moisture	16.2	n	0.010	0.0100	wt%	1	7/8/2009 17:00

Client:

SKA Consulting, L.P.

Project:

Big Thicket - 7007-0001

Sample ID:

Note:

PIT-ESW-4

Collection Date: 7/7/2009 04:35 PM

Date: 09-Jul-09

Work Order: 0907150

Lab ID: 0907150-02

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TEXAS TPH		Meth	od:TX1005		Prep: TX100	5PR / 7/8/09	Analyst: KMB
nC6 to nC12	200	J	96	300	mg/Kg-dry	5	7/9/2009 09:48
>nC12 to nC28	3,500		96	300	mg/Kg-dry	5	7/9/2009 09:48
>nC28 to nC35	670		96	300	mg/Kg-dry	5	7/9/2009 09:48
Total Petroleum Hydrocarbon	4,370		96	300	mg/Kg-dry	5	7/9/2009 09:48
Surr: 2-Fluorobiphenyl	164	S		70-130	%REC	5	7/9/2009 09:48
Surr: Trifluoromethyl benzene	120			70-130	%REC	5	7/9/2009 09:48
MOISTURE		Meth	od:E160.3				Analyst: TDW
Percent Moisture	18.8	n	0.010	0.0100	wt%	1	7/8/2009 17:00

Client:

SKA Consulting, L.P.

Project:

Big Thicket - 7007-0001

Sample ID:

Note:

PIT-SSW-4

Collection Date: 7/7/2009 04:15 PM

Date: 09-Jul-09

Work Order: 0907150

Lab ID: 0907150-03

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TEXAS TPH		Meth	nod: TX1005		Prep: TX100	5PR / 7/8/09	Analyst: KMB
nC6 to nC12	42	J	39	120	mg/Kg-dry	2	7/9/2009 10:18
>nC12 to nC28	1,600		39	120	mg/Kg-dry	2	7/9/2009 10:18
>nC28 to nC35	300		39	120	mg/Kg-dry	2	7/9/2009 10:18
Total Petroleum Hydrocarbon	1,940		39	120	mg/Kg-dry	2	7/9/2009 10:18
Surr: 2-Fluorobiphenyl	163	S		70-130	%REC	2	7/9/2009 10:18
Surr: Trifluoromethyl benzene	114			70-130	%REC	2	7/9/2009 10:18
MOISTURE		Meth	nod:E160.3				Analyst: TDW
Percent Moisture	19.0	n	0.010	0.0100	wt%	1	7/8/2009 17:00

Client:

Note:

SKA Consulting, L.P.

Project:

Big Thicket - 7007-0001

Sample ID:

PIT-WSW-4

Collection Date: 7/7/2009 04:25 PM

Date: 09-Jul-09

Work Order: 0907150

Lab ID: 0907150-04

Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TEXAS TPH		Meti	nod:TX1005		Prep: TX100	5PR / 7/8/09	Analyst: KMB
nC6 to nC12	130		38	120	mg/Kg-dry	2	7/9/2009 09:17
>nC12 to nC28	2,200		38	120	mg/Kg-dry	2	7/9/2009 09:17
>nC28 to nC35	330		38	120	mg/Kg-dry	2	7/9/2009 09:17
Total Petroleum Hydrocarbon	2,660		38	120	mg/Kg-dry	2	7/9/2009 09:17
Surr: 2-Fluorobiphenyl	166	S		70-130	%REC	2	7/9/2009 09:17
Surr: Trifluoromethyl benzene	110			70-130	%REC	2	7/9/2009 09:17
MOISTURE		Meti	nod:E160.3				Analyst: TDW
Percent Moisture	16.8	n	0.010	0.0100	wt%	1	7/8/2009 17:00

See Qualifiers Page for a list of qualifiers and their explanation.

Client:

Note:

SKA Consulting, L.P.

Project:

Big Thicket - 7007-0001

Sample ID:

PIT-BOT 1-8

Collection Date: 7/7/2009 04:55 PM

Date: 09-Jul-09

Work Order: 0907150

Lab ID: 0907150-05

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TEXAS TPH		Meth	od:TX1005		Prep: TX100	5PR / 7/8/09	Analyst: KMB
nC6 to nC12	25	J	20	61	mg/Kg-dry	1	7/9/2009 03:31
>nC12 to nC28	140		20	61	mg/Kg-dry	1	7/9/2009 03:31
>nC28 to nC35	34	J	20	61	mg/Kg-dry	1	7/9/2009 03:31
Total Petroleum Hydrocarbon	199		20	61	mg/Kg-dry	1	7/9/2009 03:31
Surr: 2-Fluorobiphenyl	112			70-130	%REC	1	7/9/2009 03:31
Surr: Trifluoromethyl benzene	111			70-130	%REC	1	7/9/2009 03:31
MOISTURE		Meth	od:E160.3				Analyst: TDW
Percent Moisture	18.4	n	0.010	0.0100	wt%	1	7/8/2009 17:00

Client:

SKA Consulting, L.P.

Project:

Big Thicket - 7007-0001

Sample ID:

Note:

PIT-BOT 2-8

Collection Date: 7/7/2009 05:05 PM

Date: 09-Jul-09

Work Order: 0907150

Lab ID: 0907150-06

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TEXAS TPH		Meth	od:TX1005		Prep: TX100	5PR / 7/8/09	Analyst: KMB
nC6 to nC12	250		39	120	mg/Kg-dry	2	7/9/2009 09:48
>nC12 to nC28	2,000		39	120	mg/Kg-dry	2	7/9/2009 09:48
>nC28 to nC35	290		39	120	mg/Kg-dry	2	7/9/2009 09:48
Total Petroleum Hydrocarbon	2,540		39	120	mg/Kg-dry	2	7/9/2009 09:48
Surr: 2-Fluorobiphenyl	151	S		70-130	%REC	2	7/9/2009 09:48
Surr: Trifluoromethyl benzene	92.6			70-130	%REC	2	7/9/2009 09:48
MOISTURE		Meth	od:E160.3				Analyst: TDW
Percent Moisture	17.7	n	0.010	0.0100	wt%	1	7/8/2009 17:00

DATES REPORT

ALS Laboratory Group

0907150 SKA Consulting, L.P. Big Thicket - 7007-0001 Work Order: Client: Project:

Sample ID						
	Client Sample ID	Matrix	Collection Date	TCLP Date	Prep Date	Analysis Date
Batch ID 36975	975 Test Name: Texas TPH	<u>PH</u>				
0907150-01A PIT-NSW-4	PIT-NSW-4	Soil	7/7/2009 4:45:00 PM	7/8/20	7/8/2009 10:00 AM	7/9/2009 09:17 AM
0907150-02A PIT-ESW-4	PIT-ESW-4	,-	7/7/2009 4:35:00 PM	7/8/20	7/8/2009 10:00 AM	7/9/2009 09:48 AM
0907150-03A PIT-SSW-4	PIT-SSW-4	, -	7/7/2009 4:15:00 PM	7/8/20	7/8/2009 10:00 AM	7/9/2009 10:18 AM
0907150-04A PIT-WSW-4	PIT-WSW-4		7/7/2009 4:25:00 PM	7/8/20	7/8/2009 10:00 AM	7/9/2009 09:17 AM
0907150-05A PIT-BOT 1-8	PIT-BOT 1-8		7/7/2009 4:55:00 PM	7/8/20	7/8/2009 10:00 AM	7/9/2009 03:31 AM
0907150-06A PIT-BOT 2-8	PIT-BOT 2-8		7/7/2009 5:05:00 PM	7/8/20	7/8/2009 10:00 AM	7/9/2009 09:48 AM
Batch ID R7	Batch ID R78891 Test Name: Moisture	9				
0907150-01A PIT-NSW-4	PIT-NSW-4	Soil	7/7/2009 4:45:00 PM			7/8/2009 05:00 PM
0907150-02A PIT-ESW-4	PIT-ESW-4		7/7/2009 4:35:00 PM			7/8/2009 05:00 PM
0907150-03A PIT-SSW-4	PIT-SSW-4		7/7/2009 4:15:00 PM			7/8/2009 05:00 PM
0907150-04A PIT-WSW-4	PIT-WSW-4		7/7/2009 4:25:00 PM			7/8/2009 05:00 PM
0907150-05A	PIT-BOT 1-8	•	7/7/2009 4:55:00 PM			7/8/2009 05:00 PM
0907150-06A PIT-BOT 2-8	PIT-BOT 2-8		7/7/2009 5:05:00 PM			7/8/2009 05:00 PM

Date: 09-Jul-09

WorkOrder:

0907150

Test Code:

MOISTURE

Test Number: Test Name: E160.3

Moisture

METHOD DETECTION / REPORTING LIMITS

Matrix: Solid

Units: wt%

Type AnalyteCASMDLUnadjusted MQLA Percent MoistureMOIST0.010.01

Date: 09-Jul-09

WorkOrder:

0907150

Test Code:

TX1005_S_REV3

Test Number:

TX1005

Test Name:

Texas TPH

METHOD DETECTION / REPORTING LIMITS

Matrix: Solid

Units: mg/Kg

Type	Analyte	CAS	MDL	Unadjusted MQL
Α	>nC12 to nC28	TPHDRO	16	50
Α	>nC28 to nC35	10W40MOTO	16	50
Α	nC6 to nC12	TPHGRO	16	50
M	Total Petroleum Hydrocarbon	TPH	16	50
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0
S	Surr: Trifluoromethyl benzene	98-08-8	0	0

Client:

SKA Consulting, L.P.

Work Order:

0907150

Project:

Big Thicket - 7007-0001

QC BATCH REPORT

Batch ID: 36975 Instrume	nt ID FID-10		Metho	d: TX1005						
MBLK Sample ID: FBLKS1-0	90708-36975				Units: mg/	Kg	Analysis	Date: 7/8	3/2009 09	:29 PM
Client ID:	Run II	D: FID-10_	_090708A		SeqNo: 171 :	3630	Prep Date: 7/8/2	009	DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	U	50								
>nC12 to nC28	U	50								
>nC28 to nC35	U	50								
Total Petroleum Hydrocarbon	U	50								
Surr: 2-Fluorobiphenyl	31.27	0	25	(125	70-130	0			
Surr: Trifluoromethyl benzene	30.42	0	25	(122	70-130	0			
LCS Sample ID: FLCSS1-0	90708-36975				Units: mg/	Kg	Analysis	Date: 7/8	3/2009 09	:59 PM
Client ID:		D: FID-10 _	090708A		SeqNo: 171	•	Prep Date: 7/8/2		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	243.1	50	250	(97.2	75-125	0			
>nC12 to nC28	242.9	50	250		97.1	75-125	0			
Surr: 2-Fluorobiphenyl	28.8	0	25	(70-130	0			
Surr: Trifluoromethyl benzene	27.1	0	25	(108	70-130	0			
LCSD Sample ID: FLCSDS1-	.090708-36975				Units: mg/	Ka	Analysis	s Date: 7/8	8/2009 10	:30 PM
Client ID:		D: FID-10	090708A		SeqNo: 171		Prep Date: 7/8/2		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	244.5	50	250	(97.8	75-125	243.1	0.58	20	
>nC12 to nC28	242.2	50	250		96.9	75-125	242.9	0.267	20	
Surr: 2-Fluorobiphenyl	30.1	0	25	(120	70-130	28.8	4.43	20	
		0	25	(110	70-130	27.1	1.4	20	
Surr: Trifluoromethyl benzene	27.48	0	20							
		0	25		Units: mg/	Kg	Analysis	s Date: 7/8	8/2009 11	:30 PM
MS Sample ID: 0907150-0	1AMS	D: FID-10				::::::::::::::::::::::::::::::::::::::	Analysis Prep Date: 7/8/2		8/2009 11 DF: 1	:30 PM
MS Sample ID: 0907150-0	1AMS				Units: mg/	::::::::::::::::::::::::::::::::::::::				:30 PM
MS Sample ID: 0907150-0 Client ID: PIT-NSW-4	1AMS				Units: mg/	3634	Prep Date: 7/8/2		DF: 1	
MS Sample ID: 0907150-0 Client ID: PIT-NSW-4 Analyte	1AMS Run II	D: FID-10 _	_090708A	SPK Ref	Units: mg/ SeqNo: 171 %REC	3634 Control	Prep Date: 7/8/2	009	DF: 1 RPD	:30 PM
MS Sample ID: 0907150-0 Client ID: PIT-NSW-4 Analyte nC6 to nC12	1AMS Run II Result	D: FID-10 _	_ 090708A SPK Val	SPK Ref Value	Units: mg/ SeqNo: 171 %REC	3634 Control Limit	Prep Date: 7/8/2 RPD Ref Value	009	DF: 1 RPD	
	Run II Result 387.2	D: FID-10 _ MQL 49	_090708A SPK Val 243.4	SPK Ref Value	Units: mg/ SeqNo: 171 %REC 1 112 5 94.4	Control Limit 75-125	Prep Date: 7/8/2 RPD Ref Value	009	DF: 1 RPD	Qua

Client:

SKA Consulting, L.P.

Work Order:

0907150

Project:

Big Thicket - 7007-0001

Batch ID: 36975 Instr	ument ID FID-10		Method	d: TX1005						
MSD Sample ID: 09071	50-01AMSD			l	Jnits: mg/	Kg	Analysi	s Date: 7/	9/2009 10	:18 AN
Client ID: PIT-NSW-4	Run II	D: FID-10_	_090708A	Se	qNo: 171	3690	Prep Date: 7/8/2	2009	DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua
nC6 to nC12	397.1	49	243.9	115.1	116	75-125	387.2	2.52	20	
>nC12 to nC28	2170	49	243.9	1665	207	75-125	1895	13.5	20	SEC
Surr: 2-Fluorobiphenyl	62.74	0	24.39	0	257	70-130	37.28	50.9	20	SR
Surr: Trifluoromethyl benzene	26.91	0	24.39	0	110	70-130	31.44	15.5	20	

0907150-05A

0907150-06A

0907150-04A

QC BATCH REPORT

Client:

SKA Consulting, L.P.

Work Order:

0907150

Project:

Big Thicket - 7007-0001

QC BATCH REPORT

Batch ID: R7	78891	Instrument ID B	alance1		Method	E160.3	1						
DUP	Sample ID:	0907015-04ADUP					L	Jnits: wt%		Analysi	is Date: 7/	8/2009 05	:00 PM
Client ID:			Run II	D: BALAI	NCE1_090708	BC	Se	qNo: 171 3	3759	Prep Date:		DF: 1	
Analyte			Result	MQL	SPK Val	SPK Ref Value	26	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Mois	sture		9.584	0.010	0		0	0	0-0	9.771	1.93	20	
The following	ng samples w	vere analyzed in t	nis batch:	1 -	9907150-01A			50-02A 50-05A		907150-03A 907150-06A			

ALS Laboratory Group Date: 09-Jul-09

Client: SKA Consulting, L.P. QUALIFIERS,

Project: Big Thicket - 7007-0001
WorkOrder: 0907150

ACRONYMS, UNITS

Qualifier Description Value exceeds Regulatory Limit Not accredited a В Analyte detected in the associated Method Blank above the Reporting Limit E Value above quantitation range Н Analyzed outside of Holding Time Analyte detected below quantitation limit J Not offered for accreditation n ND Not Detected at the Reporting Limit 0 Sample amount is > 4 times amount spiked P Dual Column results percent difference > 40% R RPD above laboratory control limit Spike Recovery outside laboratory control limits S U Analyzed but not detected above the MDL Acronym Description DUP Method Duplicate LCS Laboratory Control Sample LCSD Laboratory Control Sample Duplicate **MBLK** Method Blank MDL Method Detection Limit MQL Method Quantitation Limit MS Matrix Spike MSD Matrix Spike Duplicate PDS Post Digestion Spike **PQL** Practical Quantitaion Limit SD Serial Dilution SDL Sample Detection Limit TRRP Texas Risk Reduction Program Units Reported Description

mg/Vg dry Milligrams per Vilogram Dry weight

mg/Kg-dry Milligrams per Kilogram - Dry weight corrected wt%

ALS

$ot\!\!\!/$ ALS Laboratory Group

10450 Standliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5687

Chain of Custody Form

Page___of__

Group				
☐ ALS Laboratory	3352 128th Ave.	Holland, MI 49424-9263	Tel: +1 616 399 6070	East 4.4 848 300 8485

Fax. +1 281 530 5667						
		年の本日本日本の 大田	** ALS Project Manager:	t Manager:	1. 致學問題其以我亦以一一即仍然與獨議	Mork Order #: 040112
Customer Information			Project Information		Param	Parameter/Method Request for Analysis
* Fourthase Order	FEET Project Name				A VOC (8260) Select	
**************************************	Project Number				BTEX/MTBE (8021)	
Company Name TRC Corporation	BIIITO Company	Holly Energy	yy Partners		Ç TPH (TX 1005)	
*Send Report To Bryan Gibert	Invoice Attract				D PAHs (8270) Low-Level	Level
	12 12 12 12 12 12 12 12 12 12 12 12 12 1	P.O. Box 719	19		Ē Total Metals (6020	Total Metals (6020/7000) Pb, Vn, As, Se
Access And Tessing Suite 250	SSUPPE STATE	~ » » · · ·	ī		SOL	
City/State/Zip. Austin, TX 70752	City/State/Zip	Artesia, NM 88210	A 88210		G RCI Profile	
14 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A SERVICE COLORS	(505) 746-5362	5362		讲, Moisture	
######################################	東京 日本	F.E.F.		-	2 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
*** Mail Address **	e-Mail Address:					
10. State of the s	Target Date of the state of the	10	Matrix	Fig. # Bottles	A STATE OF THE PARTY OF THE PAR	SECONDICH CONTRACTOR OF THE SECONDICE SECONDIC
58-79	1/6/09	45	M HC	9	X	
1_	7/6/09/1	(%)	PH M	7	XXX	
CH-WW	7/6/69	455	3	2	×	
		روزير	3	3	_	
		Sto	W Kd	ф	^ × ×	
		540	E HC	හ	×	
3			W HCJ	60	^ × ×	
B AC-07-06-09-00	_	929	3 3	w	×	
Ĭ.,	76109	1	S MCE	h	7	
					5 Y 1	
Sampler(s) Please Print & Sign, Programme Sign	Shipment Method	thod:	Required Turn	around Time: (VIC Days, *	Required Turnaround Time: (Oheck Box)	The state of the s
/// C:ate:	7 Time: 1745	Received by:)	Notes: 10 Day TAT.	
Relinquished by:	Time:		OL Liverity		A STATE OF THE SCOOL OF THE STATE OF THE STA	CC Package: (CheckOne Box Below)
Cogged by (Individually) 中央企業 (Individually)	25 125 3 4 Ir d	GLASHED (Labortory)	bomtory); Fig. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	9-5035	A man was was well as a second of the seco	1 TRRP Level IV SW846/CLP Other Ot
The section of the se	8	enhantited to	chmitted to ALS Laboratory Gron			Copyright 2008 by ALS Laboratory Group.

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

Copyright 2008 by ALS Laboratory Group.

to 7 16/11 Feder Tracks 1	1090
inder's Malt W 512 279-1	_
Company TR	
Address 505 E. Hanne	
V Austral TX ZIP 79729	
our Internal Billing Reference	•0



ALS Laboratory Group

10450 Stancliff Rd., Suite 210
Houston, Texas 77099

Tel. +1 281 530 5656

Fax. +1 281 530 5887

	erania de la composición del composición de la c	=1 - tr -	-	
A	ALS Laborate	Jr.M	Gre	oup
	10450 Standliff Rd., Suite	210		•
	Houston, Texas 77099			
110	Tel. +1 281 530 5656		. 4	5
(ALS)	Fax. +1 281 530 5887			

Time: 1745	CUSTODY SEAL	Spalygpoken By:
17.709	Date: 7609 Time: 1745	13
		7.739
	Name: Clint Wisser Company: TRC	7.739

1	CUS	TODY	SEAL	:	:
Hame:	CIM+ 1	Time:	1745		
Company:	TRO	WEGV-EI			_
	-				_

Sample Receipt Checklist

Client Name:	<u>SKA</u>					Date/Time	Received:	08-J	ul-09 0	8:45			
Work Order:	090715	<u>0</u>				Received b	y:	RSZ					
Checklist comp	leted by	Richard Sanchez eSignature		08-Jul-09 Date	<u></u> -	Reviewed by:	Acctar C	arana	da			08-Jul-09	9
Matrices: Carrier name:	water Client												
Shipping contai	ner/coole	er in good condition?		Yes	v	No 🗌	Not Pres	ent					
Custody seals in	ntact on	shipping container/coole	r?	Yes		No 🗌	Not Pres	ent	✓				
Custody seals in	ntact on	sample bottles?		Yes		No 🗆	Not Pres	ent	✓				
Chain of custod	y presen	t?		Yes	✓	No 🗌							
Chain of custod	y signed	when relinquished and r	eceived?	Yes	V	No 🗌							
Chain of custod	y agrees	with sample labels?		Yes	V	No 🗌							
Samples in prop	per conta	niner/bottle?		Yes	V	No 🗌							
Sample contain	ers intac	t?		Yes	V	No 🗆							
Sufficient samp	le volum	e for indicated test?		Yes	V	No 🗆							
All samples rec	eived wit	hin holding time?		Yes	V	No 🗆							
Container/Temp	Blank te	emperature in compliand	e?	Yes	V	No 🗌							
Temperature(s)	/Thermo	meter(s):		1.4c			00	3					
Cooler(s)/Kit(s):	:			<u>2503</u>									
Water - VOA via	als have :	zero headspace?		Yes	V	No 🗌	No VOA vials	s subm	nitted				
Water - pH acce	eptable u	pon receipt?		Yes		No 🗌	N/A						
pH adjusted? pH adjusted by:				Yes		No 🗆	N/A 🗹						
Login Notes:	Trip	blank not on COClogg	ed in without an	alysis.		2							
====	==:	======	====	====		====	====			===	= == =	==:	==
Client Contacted	d:		Date Contacted	:		Person	Contacted:						
Contacted By:			Regarding:										
Comments:													
CorrectiveAction	n:									9	RC P	ane 1 c	of 1

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

16-Jan-09

Trent McDaniel SKA Consulting, L.P. 10260 Westheimer Suite 605 Houston, TX 77042

Tel: (713) 266-6056 Fax: (713) 266-0996

Re: 7007-0001-Big Thicket

Work Order: 0901074

Dear Trent,

ALS Laboratory Group received 2 samples on 1/7/2009 03:40 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 45.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Glenda H. Ramos

Hector Coronado

Hector Coronado Project Manager certificate No: T104704231-08-TX

ALS Group USA, Corp.
Part of the ALS Laboratory Group

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338
Phone: (281) 530-5656 Fax: (281) 530-5887
www.alsglobal.com www.elabi.com

A Campbell Brothers Limited Company

Client: SKA Con

SKA Consulting, L.P.

Project: 7007-0001-Big Thicket

Work Order: 0901074

TRRP Laboratory Data Package Cover Page

Date: 16-Jan-09

This data package consists of all or some of the following as applicable:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation:
- R2 Sample identification cross-reference
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c)The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;?
- R10 Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the labor in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Rev Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, if applicable: [NA] This laboratory is an in-house laboratory controlled by the person responding to rule. The official sign the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this c package and is by signature affirming the above release statement is true.

Hector Coronado

Lector Coronado

Project Manager

		Laboratory Review Ch	ecklist: Reportable Data									
Lab	orato	ry Name: ALS Laboratory Group	LRC Date: 01/16/2009									
Proj	ect N	ame: 7007-0001-Big Thicket	Laboratory Job Number: 0901074									
_		Name: Hector Coronado	Prep Batch Number(s): 33870, 33881, 339 R72145									
# ¹	A^2	Description		Yes	No	NA ³	NR ⁴	ER#5				
R1	OI	CHAIN-OF-CUSTODY (C-O-C)										
		1) Did samples meet the laboratory's standard conditions of	of sample acceptability upon receipt?	X				100000000				
		2) Were all departures from standard conditions described		X								
R2	OI	SAMPLE AND QUALITY CONTROL (QC) IDENTIF			2243	SELE	Horse					
112	01	1) Are all field sample ID numbers cross-referenced to the		X		10100278	0000000	CEGREGITE				
		2) Are all laboratory ID numbers cross-referenced to the contraction of the contraction o		X	\vdash	\vdash						
R3	OI	TEST REPORTS	on opening QC unit.	Sittis	300	44.64	in the					
	0.	Were all samples prepared and analyzed within holding	times?	X								
		2) Other than those results < MQL, were all other raw val		X								
		3) Were calculations checked by a peer or supervisor?		X								
		4) Were all analyte identifications checked by a peer or su	pervisor?	X								
		5) Were sample quantitation limits reported for all analyte	es not detected?	X								
		6) Were all results for soil and sediment samples reported		X								
		7) Was % moisture (or solids) reported for all soil and sed	iment samples?	X								
		8) If required for the project, TICs reported?				X						
R4	О	SURROGATE RECOVERY DATA					ME.					
		1) Were surrogates added prior to extraction?		X	_							
		2) Were surrogate percent recoveries in all samples within		X	_							
R5	OI	TEST REPORTS/SUMMMARY FORMS FOR BLAN	K SAMPLES			119		1200				
l		Were appropriate type(s) of blanks analyzed?		X	_	_	_	ऻ				
		2) Were blanks analyzed at the appropriate frequency?		X	-	_	_					
		3) Were method blanks taken through the entire analytical applicable, cleanup procedures?	process, including preparation and, if	X								
		4) Were blank concentrations < MQL?			X			1				
R6	OI	LABORATORY CONTROL SAMPLES (LCS):		249239		Atalasi Subali	3524 mg	STREET, LO				
		1) Were all COCs included in the LCS?		X								
		2) Was each LCS taken through the entire analytical proce	dure, including prep and cleanup steps?	X	_	_						
		3) Were LCSs analyzed at the required frequency?		X	_		_	_				
		4) Were LCS (and LCSD, if applicable) %Rs within the la		X		_						
		5) Does the detectability data document the laboratory's caused to calculate the SQLs?	ipability to detect the COCs at the MDL	X								
		6) Was the LCSD RPD within QC limits?		X								
R7	OI	MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLI	CATE (MSD) DATA	E HAI		1						
		1) Were the project/method specified analytes included in	the MS and MSD?	X								
		2) Were MS/MSD analyzed at the appropriate frequency?		X								
		3) Were MS (and MSD, if applicable) %Rs within the lab	oratory QC limits?		X			2				
		4) Were MS/MSD RPDs within laboratory QC limits?			X		_	3				
R8	OI	ANALYTICAL DUPLICATE DATA		2750								
		1) Were appropriate analytical duplicates analyzed for each		X	_		_	_				
		2) Were analytical duplicates analyzed at the appropriate		X	┞	_	_	ـــــ				
		3) Were RPDs or relative standard deviations within the la	aboratory QC limits?	X	013000			22.25.17				
R9	OI	METHOD QUANTITATION LIMITS (MQLS):	11: 4 11		11600		444					
		1) Are the MQLs for each method analyte listed and include		X	-	-	-	-				
		2) Do the MQLs correspond to the concentration of the lov		X	-	-	-	-				
D10	OT	3) Are unadjusted MQLs included in the laboratory data pa	аскаде!	X	1000	Sint-	12501700	2514.00				
R10	OI	OTHER PROBLEMS/ANOMALIES	ated in this LBC and ED9	v	Sale is	2111271	Digital and					
		1) Are all known problems/anomalies/special conditions in		X	+-	\vdash	\vdash	 				
		2) Were all necessary corrective actions performed for the 3) If requested, is the justification for elevated SQLs documents of the second sec		X	+	\vdash	-	 - 				
-	-	13) II requested, is the justification for elevated SQLS docui	nenca:	1	-	-	-	+				

Items identified by the letter "R" should be included in the laboratory data package submitted in 0 the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
 NA = Not applicable;
 NR = Not Reviewed;
 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

			hecklist: Supporting Data				
Lal	oorato	ry Name: ALS Laboratory Group	LRC Date: 01/16/2009				
Pro	ject l	Name: 7007-0001-Big Thicket	Laboratory Job Number: 0901074				
Re	viewe		Prep Batch Number(s): 33870, 33881, 33903, R72145	3390	7, 33956,	R7210	02,
# ¹	A ²	Description		Yes	No NA	NR⁴	ER# ⁵
S1	OI	INITIAL CALIBRATION (ICAL)					
		1) Were response factors (RFs) and/or relative response falimits?	actors (RRFs) for each analyte within the QC	X			
		2) Were percent RSDs or correlation coefficient criteria m	net?	X			
		3) Was the number of standards recommended in the meth	nod used for all analytes?	X			
		4) Were all points generated between the lowest and higher	est standard used to calculate the curve?	X			
		5) Are ICAL data available for all instruments used?		X			
		6) Has the initial calibration curve been verified using an a	appropriate second source standard?	X			
S2	OI	INITIAL AND CONTINUING CALIBRATION VE	CRIFICATION (ICCV AND CCV) AND				
		1) Was the CCV analyzed at the method-required frequency		X			
		2) Were percent differences for each analyte within the mo		X			
		3) Was the ICAL curve verified for each analyte?		X			
		4) Was the absolute value of the analyte concentration in t	the inorganic CCB < MDL?	X			
S3	О	MASS SPECTRAL TUNING:			light days		
		1) Was the appropriate compound for the method used for	tuning?	X			
		2) Were ion abundance data within the method-required Q	C limits?	X			
S4	0	INTERNAL STANDARDS (IS):					
		Were IS area counts and retention times within the method	d-required QC limits?	X			
S5	OI	RAW DATA (NELAC SECTION 1 APPENDIX A					
		1) Were the raw data (e.g., chromatograms, spectral data)	reviewed by an analyst?	X			
		2) Were data associated with manual integrations flagged	on the raw data?	X			
S6	0	DUAL COLUMN CONFIRMATION					
		Did dual column confirmation results meet the method-red	quired QC?		X		
S7	0	TENTATIVELY IDENTIFIED COMPOUNDS (TICS	5):				
		If TICs were requested, were the mass spectra and TIC da	ta subject to appropriate checks?		X		
S8	I	INTERFERENCE CHECK SAMPLE (ICS) RESULT					
		Were percent recoveries within method QC limits?		X			
S9	I	SERIAL DILUTIONS, POST DIGESTION SPIKE	ES, AND METHOD OF STANDARD				
		Were percent differences, recoveries, and the linearity with	hin the QC limits specified in the method?	X			
S10	OI	PROFICIENCY TEST REPORTS:					
		Are proficiency testing or inter-laboratory comparison res	ults on file?	X			
S11	OI	METHOD DETECTION LIMIT (MDL) STUDIES					
	T	1) Was a MDL study performed for each reported analytes	?	X			
		2) Is the MDL either adjusted or supported by the analysis	s of DCSs?	X			
S12	OI	STANDARDS DOCUMENTATION					
		Are all standards used in the analyses NIST-traceable or o		X			
S13	OI	COMPOUND/ANALYTE IDENTIFICATION PROCE					
		Are the procedures for compound/analyte identification do	ocumented?	X			
S14	OI	DEMONSTRATION OF ANALYST COMPETENCY					
		1) Was DOC conducted consistent with NELAC 5C or ISC	O/IEC 4.2.2?	X			
1	1	10.7 1 6.1 1		37			

X

(NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?

2) Is documentation of the analyst's competency up-to-date and on file?

VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS

LABORATORY STANDARD OPERATING PROCEDURES (SOPS):

Are laboratory SOPs current and on file for each method performed?

S15 OI

S16 OI

Are all the methods used to generate the data documented, verified, and validated, where applicable,

¹ Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

² O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

NA = Not applicable.

⁴ NR = Not Reviewed.

⁵ ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

	Laboratory Re	eview Checklist: Exception Report			
Laborat	tory Name: ALS Laboratory Group	LRC Date: 01/16/2009			
Project	Name: 7007-0001-Big Thicket	Laboratory Job Number: 0901074			
Reviewer Name: Hector Coronado		Prep Batch Number(s): 33870, 33881, 33903, 33907, 33956, R72102, R72145			
ER#1	DESCRIPTION				
1	Batch 33870, Low Level Semivolatile, Butyl benzyl phthalate was detected above the MQL in th				
	Blank. The associated results are flagg	ged with "B" qualified.			
2	Batch 33903, Metals, (sample 0901053	3-04C), MS/MSD is an unrelated sample.			
	Batch 33870, Low Level Semivolatile,	, (sample 0901020-01A), MS/MSD is an unrelated sample.			
	Batch R72145, Volatile Organic, (sample 0901020-08A), MS/MSD is an unrelated sample.				
3	Batch 33903, Metals, (sample 0901053	3-04C), MS/MSD RPD is an unrelated sample.			
	Batch 33870, Low Level Semivolatile, (sample 0901020-01A), MS/MSD RPD is an unrelated sample.				

¹ ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

Date: 16-Jan-09

Client:

SKA Consulting, L.P.

Project:

7007-0001-Big Thicket

Work Order:

0901074

Work Order Sample Summary

Lab Samp ID	Client Sample ID	<u>Matrix</u>	Tag Number	Collection Date	Date Received	<u>Hold</u>
0901074-01	Big Thicket Backfill	Soil		1/7/2009 12:10	1/7/2009 15:40	
0901074-02	Trip Blank	Water		1/7/2009 12:10	1/7/2009 15:40	

Client: SKA Consulting, L.P.

Project: 7007-0001-Big Thicket Sample ID: Big Thicket Backfill Collection Date: 1/7/2009 12:10 PM Date: 16-Jan-09

Work Order: 0901074 Lab ID: 0901074-01 Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TEXAS TPH		Meth	od:TX1005		Prep: TX10	05PR / 1/8/09	Analyst: KMB
nC6 to nC12	U		18	55	mg/Kg-dry	1	1/10/2009
>nC12 to nC28	U		18	55	mg/Kg-dry	1	1/10/2009
>nC28 to nC35	U		18	55	mg/Kg-dry	1	1/10/2009
Total Petroleum Hydrocarbon	U		18	55	mg/Kg-dry	1	1/10/2009
Surr: 2-Fluorobiphenyl	109			70-130	%REC	1	1/10/2009
Surr: Trifluoromethyl benzene	109			70-130	%REC	1	1/10/2009
MERCURY		Meth	od: SW7471A		Prep: SW74	471A / 1/14/09	Analyst: JCJ
Mercury	0.0148	J	0.0016	0.0156	mg/Kg-dry	1	1/14/2009
METALS		Meth	od: SW6020		Prep: SW30	050A / 1/9/09	Analyst: SKS
Arsenic	0.792		0.14	0.544	mg/Kg-dry	1	1/9/2009
Barium	19.5		0.076	0.544	mg/Kg-dry	1	1/9/2009
Cadmium	U		0.033	0.544	mg/Kg-dry	1	1/9/2009
Chromium	3.36		0.076	0.544	mg/Kg-dry	1	1/9/2009
Lead	4.28		0.098	0.544	mg/Kg-dry	1	1/9/2009
Selenium	0.600		0.21	0.544	mg/Kg-dry	1	1/9/2009
Silver	U		0.022	0.544	mg/Kg-dry	1	1/9/2009
LOW-LEVEL SEMIVOLATILES		Meth	od: SW8270		Prep: SW35	541 / 1/8/09	Analyst: LG
1,2,4-Trichlorobenzene	U		0.0026	0.0073	mg/Kg-dry	1	1/8/2009
1,2-Dichlorobenzene	U		0.0030	0.0073	mg/Kg-dry	1	1/8/2009
1,3-Dichlorobenzene	U		0.0031	0.0073	mg/Kg-dry	1	1/8/2009
1,4-Dichlorobenzene	U		0.0022	0.0073	mg/Kg-dry	1	1/8/2009
2,4,5-Trichlorophenol	U		0.0031	0.0073	mg/Kg-dry	1	1/8/2009
2,4,6-Trichlorophenol	U		0.0038	0.0073	mg/Kg-dry	1	1/8/2009
2,4-Dichlorophenol	U		0.0021	0.0073	mg/Kg-dry	1	1/8/2009
2,4-Dimethylphenol	U		0.0042	0.0073	mg/Kg-dry	1	1/8/2009
2,4-Dinitrophenol	U		0.0080	0.037	mg/Kg-dry	1	1/8/2009
2,4-Dinitrotoluene	U		0.0073	0.0073	mg/Kg-dry	1	1/8/2009
2,6-Dinitrotoluene	U		0.0036	0.0073	mg/Kg-dry	1	1/8/2009
2-Chloronaphthalene	U		0.0041	0.0073	mg/Kg-dry	1	1/8/2009
2-Chlorophenol	U		0.0031	0.0073	mg/Kg-dry	1	1/8/2009
2-Methylnaphthalene	U		0.0014	0.0073	mg/Kg-dry	1	1/8/2009
2-Methylphenol	U		0.0032	0.0073	mg/Kg-dry	1	1/8/2009
2-Nitroaniline	U		0.0073	0.0073	mg/Kg-dry	1	1/8/2009
2-Nitrophenol	U		0.0039	0.0073	mg/Kg-dry	1	1/8/2009
3&4-Methylphenol	U		0.0031	0.0073	mg/Kg-dry	1	1/8/2009
3,3'-Dichlorobenzidine	U		0.0034	0.0073	mg/Kg-dry	1	1/8/2009
3-Nitroaniline	U		0.0029	0.0073	mg/Kg-dry	1	1/8/2009

Qualifiers:

- U Analyzed for but Not Detected
- J Analyte detected below quantitation limits
- B Analyte detected in the associated Method Blank
- * Value exceeds Maximum Contaminant Level
- a Not accredited

- S Spike Recovery outside accepted recovery limits
- P Dual Column results RPD > 40%
- E Value above quantitation range
- H Analyzed outside of Hold Time
- n Not offered for accreditation

AR Page 1 of 5

Client:

SKA Consulting, L.P.

Project:

7007-0001-Big Thicket

Sample ID:

Big Thicket Backfill Collection Date: 1/7/2009 12:10 PM

Date: 16-Jan-09

Work Order: 0901074

Lab ID: 0901074-01

Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
4,6-Dinitro-2-methylphenol	U		0.0041	0.0073	mg/Kg-dry	1	1/8/2009
4-Bromophenyl phenyl ether	U		0.0073	0.0073	mg/Kg-dry	1	1/8/2009
4-Chloro-3-methylphenol	U		0.0073	0.0073	mg/Kg-dry	1	1/8/2009
4-Chloroaniline	U		0.0012	0.0073	mg/Kg-dry	1	1/8/2009
4-Chlorophenyl phenyl ether	U		0.0023	0.0073	mg/Kg-dry	1	1/8/2009
4-Nitroaniline	U		0.0040	0.0073	mg/Kg-dry	1	1/8/2009
4-Nitrophenol	U		0.0026	0.037	mg/Kg-dry	1	1/8/2009
Acenaphthene	U		0.0023	0.0073	mg/Kg-dry	1	1/8/2009
Acenaphthylene	U		0.0016	0.0073	mg/Kg-dry	1	1/8/2009
Aniline	U		0.0012	0.0073	mg/Kg-dry	1	1/8/2009
Anthracene	U		0.0024	0.0073	mg/Kg-dry	1	1/8/2009
Benz(a)anthracene	U		0.0031	0.0073	mg/Kg-dry	1	1/8/2009
Benzo(a)pyrene	U		0.0023	0.0073	mg/Kg-dry	1	1/8/2009
Benzo(b)fluoranthene	U		0.0073	0.0073	mg/Kg-dry	1	1/8/2009
Benzo(g,h,i)perylene	U		0.0024	0.0073	mg/Kg-dry	1	1/8/2009
Benzo(k)fluoranthene	U		0.0043	0.0073	mg/Kg-dry	1	1/8/2009
Benzoic acid	U		0.0073	0.0073	mg/Kg-dry	1	1/8/2009
Bis(2-chloroethoxy)methane	U		0.0027	0.0073	mg/Kg-dry	1	1/8/2009
Bis(2-chloroethyl)ether	U		0.0028	0.0073	mg/Kg-dry	1	1/8/2009
Bis(2-chloroisopropyl)ether	U		0.0024	0.0073	mg/Kg-dry	1	1/8/2009
Bis(2-ethylhexyl)phthalate	0.0059	J	0.0033	0.0073	mg/Kg-dry	1	1/8/2009
Butyl benzyl phthalate	0.022	В	0.0026	0.0073	mg/Kg-dry	1	1/8/2009
Chrysene	U		0.0031	0.0073	mg/Kg-dry	1	1/8/2009
Di-n-butyl phthalate	0.0066	J	0.0028	0.0073	mg/Kg-dry	1	1/8/2009
Di-n-octyl phthalate	U		0.0026	0.0073	mg/Kg-dry	1	1/8/2009
Dibenz(a,h)anthracene	U		0.0023	0.0073	mg/Kg-dry	1	1/8/2009
Dibenzofuran	U		0.0018	0.0073	mg/Kg-dry	1	1/8/2009
Diethyl phthalate	U		0.0073	0.0073	mg/Kg-dry	1	1/8/2009
Dimethyl phthalate	U		0.0027	0.0073	mg/Kg-dry	1	1/8/2009
Fluoranthene	U		0.0022	0.0073	mg/Kg-dry	1	1/8/2009
Fluorene	U		0.0013	0.0073	mg/Kg-dry	1	1/8/2009
Hexachlorobenzene	U		0.0073	0.0073	mg/Kg-dry	1	1/8/2009
Hexachlorobutadiene	U		0.0031	0.0073	mg/Kg-dry	1	1/8/2009
Hexachlorocyclopentadiene	U		0.0073	0.0073	mg/Kg-dry	1	1/8/2009
Hexachloroethane	U		0.0033	0.0073	mg/Kg-dry	1	1/8/2009
Indeno(1,2,3-cd)pyrene	U		0.0040	0.0073	mg/Kg-dry	1	1/8/2009
Isophorone	U		0.0033	0.0073	mg/Kg-dry	1	1/8/2009
N-Nitrosodi-n-propylamine	U		0.0038	0.0073	mg/Kg-dry	1	1/8/2009
N-Nitrosodiphenylamine	U		0.0022	0.0073	mg/Kg-dry	1	1/8/2009
Naphthalene	U		0.0016	0.0073	mg/Kg-dry	1	1/8/2009

Qualifiers:

- U Analyzed for but Not Detected
- J Analyte detected below quantitation limits
- B Analyte detected in the associated Method Blank
- * Value exceeds Maximum Contaminant Level
- a Not accredited

- S Spike Recovery outside accepted recovery limits
- P Dual Column results RPD > 40%
- E Value above quantitation range
- H Analyzed outside of Hold Time
- n Not offered for accreditation

Client:

SKA Consulting, L.P.

Project:

7007-0001-Big Thicket Big Thicket Backfill

Sample ID:

Collection Date: 1/7/2009 12:10 PM

Date: 16-Jan-09

Work Order: 0901074

Lab ID: 0901074-01

Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Nitrobenzene	U		0.0073	0.0073	mg/Kg-dry	1	1/8/2009
Pentachlorophenol	U		0.0026	0.0073	mg/Kg-dry	1	1/8/2009
Phenanthrene	U		0.0033	0.0073	mg/Kg-dry	1	1/8/2009
Phenol	U		0.0039	0.0073	mg/Kg-dry	1	1/8/2009
Pyrene	U		0.0014	0.0073	mg/Kg-dry	1	1/8/2009
Pyridine	U		0.0042	0.0073	mg/Kg-dry	1	1/8/2009
Surr: 2,4,6-Tribromophenol	84.4			36-126	%REC	1	1/8/2009
Surr: 2-Fluorobiphenyl	82.3			43-125	%REC	1	1/8/2009
Surr: 2-Fluorophenol	95.1			37-125	%REC	1	1/8/2009
Surr: 4-Terphenyl-d14	88.6			32-125	%REC	1	1/8/2009
Surr: Nitrobenzene-d5	81.6			37-125	%REC	1	1/8/2009
Surr: Phenol-d6	87.2			40-125	%REC	1	1/8/2009
VOLATILES		Meth	nod: SW8260				Analyst: DKG
1,1,1,2-Tetrachloroethane	U		0.00067	0.0056	mg/Kg-dry	1	1/12/2009
1,1,1-Trichloroethane	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
1,1,2,2-Tetrachloroethane	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
1,1,2-Trichloroethane	U		0.00089	0.0056	mg/Kg-dry	1	1/12/2009
1.1-Dichloroethane	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
1,1-Dichloroethene	U		0.00089	0.0056	mg/Kg-dry	1	1/12/2009
1,1-Dichloropropene	U		0.0010	0.0056	mg/Kg-dry	1	1/12/2009
1,2,3-Trichlorobenzene	U		0.00067	0.0056	mg/Kg-dry	1	1/12/2009
1,2,3-Trichloropropane	U		0.00078	0.0056	mg/Kg-dry	1	1/12/2009
1,2,4-Trichlorobenzene	U		0.00078	0.0056	mg/Kg-dry	1	1/12/2009
1,2,4-Trimethylbenzene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
1,2-Dibromo-3-chloropropane	U		0.0021	0.0056	mg/Kg-dry	. 1	1/12/2009
1.2-Dichlorobenzene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
1,2-Dichloroethane	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
1,2-Dichloropropane	U		0.00078	0.0056	mg/Kg-dry	1	1/12/2009
1,3,5-Trimethylbenzene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
1.3-Dichlorobenzene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
1,3-Dichloropropane	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
1,4-Dichlorobenzene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
2,2-Dichloropropane	U		0.00067	0.0056	mg/Kg-dry	1	1/12/2009
2-Butanone	U		0.0021	0.011	mg/Kg-dry	1	1/12/2009
2-Chlorotoluene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
2-Hexanone	U		0.0012	0.011	mg/Kg-dry	1	1/12/2009
4-Chlorotoluene	U		0.00067	0.0056	mg/Kg-dry	1	1/12/2009
4-Isopropyltoluene	Ü		0.00067	0.0056	mg/Kg-dry	1	1/12/2009
4-Methyl-2-pentanone	U		0.0011	0.011	mg/Kg-dry	1	1/12/2009

Qualifiers:

- U Analyzed for but Not Detected
- J Analyte detected below quantitation limits
- B Analyte detected in the associated Method Blank
- * Value exceeds Maximum Contaminant Level
- a Not accredited

- S Spike Recovery outside accepted recovery limits
- P Dual Column results RPD > 40%
- E Value above quantitation range
- H Analyzed outside of Hold Time
- n Not offered for accreditation

Client: SKA Consulting, L.P.

Project: 7007-0001-Big Thicket Sample ID: Big Thicket Backfill Collection Date: 1/7/2009 12:10 PM _____

Date: 16-Jan-09

Work Order: 0901074 Lab ID: 0901074-01

Matrix: SOIL

analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyze
Acetone	U	4	0.0056	0.022	mg/Kg-dry	1	1/12/2009
Benzene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Bromobenzene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Bromochloromethane	U		0.00078	0.0056	mg/Kg-dry	1	1/12/2009
Bromodichloromethane	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Bromoform	U		0.00089	0.0056	mg/Kg-dry	1	1/12/2009
Bromomethane	U		0.0011	0.011	mg/Kg-dry	1	1/12/2009
Carbon tetrachloride	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Chlorobenzene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Chloroethane	U		0.0011	0.011	mg/Kg-dry	1	1/12/2009
Chloroform	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Chloromethane	U		0.0011	0.011	mg/Kg-dry	1	1/12/2009
cis-1,2-Dichloroethene	U		0.00067	0.0056	mg/Kg-dry	1	1/12/2009
cis-1,3-Dichloropropene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Dibromochloromethane	U		0.00067	0.0056	mg/Kg-dry	1	1/12/2009
Dibromomethane	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Dichlorodifluoromethane	U		0.00089	0.0056	mg/Kg-dry	1	1/12/2009
Ethylbenzene	0.00064	J	0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Hexachlorobutadiene	U		0.00067	0.0056	mg/Kg-dry	1	1/12/2009
Isopropylbenzene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
m,p-Xylene	0.0021	J	0.0011	0.011	mg/Kg-dry	1	1/12/2009
Methyl tert-butyl ether	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Methylene chloride	0.0022	J	0.0016	0.011	mg/Kg-dry	1	1/12/2009
n-Butylbenzene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
n-Propylbenzene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Naphthalene	0.0015	J	0.00056	0.0056	mg/Kg-dry	1	1/12/2009
o-Xylene	0.00070	J	0.00067	0.0056	mg/Kg-dry	1	1/12/2009
sec-Butylbenzene	U		0.00067	0.0056	mg/Kg-dry	1	1/12/2009
Styrene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
tert-Butylbenzene	U		0.00067	0.0056	mg/Kg-dry	1	1/12/2009
Tetrachloroethene	U		0.00067	0.0056	mg/Kg-dry	1	1/12/2009
Toluene	0.00078	J	0.00056	0.0056	mg/Kg-dry	1	1/12/2009
trans-1,2-Dichloroethene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
trans-1,3-Dichloropropene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Trichloroethene	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Trichlorofluoromethane	U		0.00056	0.0056	mg/Kg-dry	1	1/12/2009
Vinyl chloride	U		0.0011	0.0022	mg/Kg-dry	1	1/12/2009
Surr: 1,2-Dichloroethane-d4	101			70-128	%REC	1	1/12/2009
Surr: 4-Bromofluorobenzene	98.5			73-126	%REC	1	1/12/2009
Surr: Dibromofluoromethane	97.1			71-128	%REC	1	1/12/2009

Qualifiers:

- U Analyzed for but Not Detected
- J Analyte detected below quantitation limits
- B Analyte detected in the associated Method Blank
- * Value exceeds Maximum Contaminant Level
- a Not accredited

- S Spike Recovery outside accepted recovery limits
- P Dual Column results RPD > 40%
- E Value above quantitation range
- H Analyzed outside of Hold Time
- n Not offered for accreditation

Client:

SKA Consulting, L.P.

Project:

7007-0001-Big Thicket

Sample ID:

Big Thicket Backfill Collection Date: 1/7/2009 12:10 PM

Date: 16-Jan-09

Work Order: 0901074

Lab ID: 0901074-01

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Toluene-d8	98.6			73-127	%REC	1	1/12/2009
ANIONS		Meth	od:E300		Prep: E300	/ 1/9/09	Analyst: IGF
Chloride	11.8		2.2	5.53	mg/Kg-dry	1	1/12/2009
Surr: Selenate (surr)	94.1			85-115	%REC	1	1/12/2009
MOISTURE		Meth	od:E160.3				Analyst: TDW
Percent Moisture	9.96	n	0.010	0.0100	wt%	1	1/9/2009

U - Analyzed for but Not Detected

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

^{* -} Value exceeds Maximum Contaminant Level

a - Not accredited

S - Spike Recovery outside accepted recovery limits

P - Dual Column results RPD > 40%

E - Value above quantitation range

H - Analyzed outside of Hold Time

Date: 16-Jan-09

WorkOrder:

0901074

Test Code:

300_S

Test Number: Test Name: E300 Anions METHOD DETECTION / REPORTING LIMITS

Matrix: Solid

Units: mg/Kg

Type	Analyte	CAS	MDL	Unadjusted MQL
А	Chloride	16887-00-6	2	5
S	Surr: Selenate (surr)	10102-23-5	1	1

Date: 16-Jan-09

 WorkOrder:
 0901074

 Test Code:
 8260_S

 Test Number:
 SW8260

METHOD DETECTION / REPORTING LIMITS

Test Name: Volatiles Matrix: Solid Units: mg/Kg

			70000000000		
Туре	Analyte	CAS	MDL	Unadjusted MQL	
Α	1,1,1,2-Tetrachloroethane	630-20-6	0.0006	0.005	
A	1,1,1-Trichloroethane	71-55-6	0.0005	0.005	
Α	1,1,2,2-Tetrachloroethane	79-34-5	0.0005	0.005	
Α	1,1,2-Trichloroethane	79-00-5	0.0008	0.005	
Α	1,1-Dichloroethane	75-34-3	0.0005	0.005	
Α	1,1-Dichloroethene	75-35-4	0.0008	0.005	
Α	1,1-Dichloropropene	563-58-6	0.0009	0.005	
Α	1,2,3-Trichlorobenzene	87-61-6	0.0006	0.005	
Α	1,2,3-Trichloropropane	96-18-4	0.0007	0.005	
Α	1,2,4-Trichlorobenzene	120-82-1	0.0007	0.005	
Α	1,2,4-Trimethylbenzene	95-63-6	0.0005	0.005	
A	1,2-Dibromo-3-chloropropane	96-12-8	0.0019	0.005	
Α	1,2-Dichlorobenzene	95-50-1	0.0005	0.005	
A	1,2-Dichloroethane	107-06-2	0.0005	0.005	
Α	1,2-Dichloropropane	78-87-5	0.0007	0.005	
Α	1,3,5-Trimethylbenzene	108-67-8	0.0005	0.005	
Α	1,3-Dichlorobenzene	541-73-1	0.0005	0.005	
A	1,3-Dichloropropane	142-28-9	0.0005	0.005	
Α	1,4-Dichlorobenzene	106-46-7	0.0005	0.005	
Α	2,2-Dichloropropane	594-20-7	0.0006	0.005	
Α	2-Butanone	78-93-3	0.0019	0.01	
Α	2-Chlorotoluene	95-49-8	0.0005	0.005	
Α	2-Hexanone	591-78-6	0.0011	0.01	
Α	4-Chlorotoluene	106-43-4	0.0006	0.005	
Α	4-Isopropyltoluene	99-87-6	0.0006	0.005	
Α	4-Methyl-2-pentanone	108-10-1	0.001	0.01	
Α	Acetone	67-64-1	0.005	0.02	
Α	Benzene	71-43-2	0.0005	0.005	
Α	Bromobenzene	108-86-1	0.0005	0.005	
Α	Bromochloromethane	74-97-5	0.0007	0.005	
Α	Bromodichloromethane	75-27-4	0.0005	0.005	
Α	Bromoform	75-25-2	0.0008	0.005	
Α	Bromomethane	74-83-9	0.001	0.01	
Α	Carbon tetrachloride	56-23-5	0.0005	0.005	
Α	Chlorobenzene	108-90-7	0.0005	0.005	
Α	Chloroethane	75-00-3	0.001	0.01	
Α	Chloroform	67-66-3	0.0005	0.005	
A	Chloromethane	74-87-3	0.001	0.01	
A	cis-1,2-Dichloroethene	156-59-2	0.0006	0.005	
Α	cis-1,3-Dichloropropene	10061-01-5	0.0005	0.005	
Α	Dibromochloromethane	124-48-1	0.0006	0.005	
Α	Dibromomethane	74-95-3	0.0005	0.005	

A	Dichlorodifluoromethane	75-71-8	0.0008	0.005
Α	Ethylbenzene	100-41-4	0.0005	0.005
Α	Hexachlorobutadiene	87-68-3	0.0006	0.005
Α	Isopropylbenzene	98-82-8	0.0005	0.005
Α	m,p-Xylene	136777-61-2	0.001	0.01
Α	Methyl tert-butyl ether	1634-04-4	0.0005	0.005
Α	Methylene chloride	75-09-2	0.0014	0.01
Α	n-Butylbenzene	104-51-8	0.0005	0.005
Α	n-Propylbenzene	103-65-1	0.0005	0.005
Α	Naphthalene	91-20-3	0.0005	0.005
Α	o-Xylene	95-47-6	0.0006	0.005
Α	sec-Butylbenzene	135-98-8	0.0006	0.005
Α	Styrene	100-42-5	0.0005	0.005
Α	tert-Butylbenzene	98-06-6	0.0006	0.005
Α	Tetrachloroethene	127-18-4	0.0006	0.005
Α	Toluene	108-88-3	0.0005	0.005
Α	trans-1,2-Dichloroethene	156-60-5	0.0005	0.005
Α	trans-1,3-Dichloropropene	10061-02-6	0.0005	0.005
Α	Trichloroethene	79-01-6	0.0005	0.005
Α	Trichlorofluoromethane	75-69-4	0.0005	0.005
Α	Vinyl chloride	75-01-4	0.001	0.002
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	0
S	Surr: 4-Bromofluorobenzene	460-00-4	0	0
S	Surr: Dibromofluoromethane	1868-53-7	0	0
S	Surr: Toluene-d8	2037-26-5	0	0

Date: 16-Jan-09

Date: 16-Jan-09

WorkOrder:

0901074

Test Code:

8270_LOW_S

Test Number:

SW8270

Test Name:

Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Solid Units: mg/Kg

Low Level Seniivolatiles		Matrix. Bond			
Type	Analyte	CAS	MDL	Unadjusted MQL	
Α	1,2,4-Trichlorobenzene	120-82-1	0.0023	0.0066	
Α	1,2-Dichlorobenzene	95-50-1	0.0027	0.0066	
Α	1,3-Dichlorobenzene	541-73-1	0.0028	0.0066	
Α	1,4-Dichlorobenzene	106-46-7	0.002	0.0066	
Α	2,4,5-Trichlorophenol	95-95-4	0.0028	0.0066	
Α	2,4,6-Trichlorophenol	88-06-2	0.0034	0.0066	
Α	2,4-Dichlorophenol	120-83-2	0.0019	0.0066	
Α	2,4-Dimethylphenol	105-67-9	0.0038	0.0066	
Α	2,4-Dinitrophenol	51-28-5	0.0072	0.033	
Α	2,4-Dinitrotoluene	121-14-2	0.0066	0.0066	
Α	2,6-Dinitrotoluene	606-20-2	0.0032	0.0066	
Α	2-Chloronaphthalene	91-58-7	0.0037	0.0066	
Α	2-Chlorophenol	95-57-8	0.0028	0.0066	
Α	2-Methylnaphthalene	91-57-6	0.0013	0.0066	
A	2-Methylphenol	95-48-7	0.0029	0.0066	
Α	2-Nitroaniline	88-74-4	0.0066	0.0066	
Α	2-Nitrophenol	88-75-5	0.0035	0.0066	
Α	3&4-Methylphenol	106-44-5	0.0028	0.0066	
A	3,3'-Dichlorobenzidine	91-94-1	0.0031	0.0066	
Α	3-Nitroaniline	99-09-2	0.0026	0.0066	
A	4,6-Dinitro-2-methylphenol	534-52-1	0.0037	0.0066	
A	4-Bromophenyl phenyl ether	101-55-3	0.0066	0.0066	
Α	4-Chloro-3-methylphenol	59-50-7	0.0066	0.0066	
Α	4-Chloroaniline	106-47-8	0.0011	0.0066	
Α	4-Chlorophenyl phenyl ether	7005-72-3	0.0021	0.0066	
Α	4-Nitroaniline	100-01-6	0.0036	0.0066	
Α	4-Nitrophenol	100-02-7	0.0023	0.033	
Α	Acenaphthene	83-32-9	0.0021	0.0066	
Α	Acenaphthylene	208-96-8	0.0014	0.0066	
Α	Aniline	62-53-3	0.0011	0.0066	
Α	Anthracene	120-12-7	0.0022	0.0066	
Α	Benz(a)anthracene	56-55-3	0.0028	0.0066	
Α	Benzo(a)pyrene	50-32-8	0.0021	0.0066	
Α	Benzo(b)fluoranthene	205-99-2	0.0066	0.0066	
Α	Benzo(g,h,i)perylene	191-24-2	0.0022	0.0066	
Α	Benzo(k)fluoranthene	207-08-9	0.0039	0.0066	
Α	Benzoic acid	65-85-0	0.0066	0.0066	
Α	Bis(2-chloroethoxy)methane	111-91-1	0.0024	0.0066	
A	Bis(2-chloroethyl)ether	111-44-4	0.0025	0.0066	
A	Bis(2-chloroisopropyl)ether	108-60-1	0.0022	0.0066	
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.003	0.0066	
A	Butyl benzyl phthalate	85-68-7	0.0023	0.0066	
	Zuty: conzy: pinamiute				

A	Chrysene	218-01-9	0.0028	0.0066
Α	Di-n-butyl phthalate	84-74-2	0.0025	0.0066
Α	Di-n-octyl phthalate	117-84-0	0.0023	0.0066
Α	Dibenz(a,h)anthracene	53-70-3	0.0021	0.0066
Α	Dibenzofuran	132-64-9	0.0016	0.0066
Α	Diethyl phthalate	84-66-2	0.0066	0.0066
Α	Dimethyl phthalate	131-11-3	0.0024	0.0066
Α	Fluoranthene	206-44-0	0.002	0.0066
Α	Fluorene	86-73-7	0.0012	0.0066
Α	Hexachlorobenzene	118-74-1	0.0066	0.0066
Α	Hexachlorobutadiene	87-68-3	0.0028	0.0066
Α	Hexachlorocyclopentadiene	77-47-4	0.0066	0.0066
Α	Hexachloroethane	67-72-1	0.003	0.0066
Α	Indeno(1,2,3-cd)pyrene	193-39-5	0.0036	0.0066
Α	Isophorone	78-59-1	0.003	0.0066
Α	N-Nitrosodi-n-propylamine	621-64-7	0.0034	0.0066
Α	N-Nitrosodiphenylamine	86-30-6	0.002	0.0066
A	Naphthalene	91-20-3	0.0014	0.0066
Α	Nitrobenzene	98-95-3	0.0066	0.0066
Α	Pentachlorophenol	87-86-5	0.0023	0.0066
Α	Phenanthrene	85-01-8	0.003	0.0066
Α	Phenol	108-95-2	0.0035	0.0066
Α	Pyrene	129-00-0	0.0013	0.0066
Α	Pyridine	110-86-1	0.0038	0.0066
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.0066
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.0066
S	Surr: 2-Fluorophenol	367-12-4	0	0.0066
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.0066
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.0066
S	Surr: Phenol-d6	13127-88-3	0	0.0066

Date: 16-Jan-09

Date: 16-Jan-09

WorkOrder:

0901074

Test Code:

HG_S

Test Number:

A Mercury

SW7471A

Test Name:

Mercury

METHOD DETECTION / REPORTING LIMITS

Matrix: Solid

Units: mg/Kg

MDL Unadjusted MQL

Type Analyte

7439-97-6

CAS

0.0014

0.0133

Date: 16-Jan-09

WorkOrder:

0901074

Test Code:

ICP_S_Low

Test Number: Test Name: SW6020

Metals

METHOD DETECTION / REPORTING LIMITS

Matrix: Solid

Units: mg/Kg

nalyte	CAS N	MDL	Unadjusted MOL
			,
rsenic	7440-38-2	0.13	0.5
arium	7440-39-3	0.07	0.5
admium	7440-43-9	0.03	0.5
hromium	7440-47-3	0.07	0.5
ead	7439-92-1	0.09	0.5
elenium	7782-49-2	0.19	0.5
ilver	7440-22-4	0.02	0.5
1	arium admium hromium ead elenium	rarium 7440-39-3 radmium 7440-43-9 rhromium 7440-47-3 read 7439-92-1 relenium 7782-49-2	rarium 7440-39-3 0.07 radmium 7440-43-9 0.03 rhromium 7440-47-3 0.07 read 7439-92-1 0.09 relenium 7782-49-2 0.19

Date: 16-Jan-09

WorkOrder:

0901074

Test Code:

MOISTURE

Test Number:

E160.3

Test Name:

Moisture

METHOD DETECTION / REPORTING LIMITS

Matrix: Solid

Units: wt%

TypeAnalyteCASMDLUnadjusted MQLAPercent MoistureMOIST0.010.01

Date: 16-Jan-09

WorkOrder:

0901074

Test Code:

TX1005_S_REV3

Test Number:

TX1005

Test Name:

Texas TPH

METHOD DETECTION / REPORTING LIMITS

Matrix: Solid

Units: mg/Kg

Туре	Analyte	CAS	MDL	Unadjusted MQL
Α	>nC12 to nC28	TPHDRO	16	50
Α	>nC28 to nC35	10W40MOTO	16	50
Α	nC6 to nC12	TPHGRO	16	50
M	Total Petroleum Hydrocarbon	TPH	16	50
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0
S	Surr: Trifluoromethyl benzene	98-08-8	0	0

Client:

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

Date: 16-Jan-09

QC BATCH REPORT

Batch ID: 33881 Instrumen	nt ID FID-8		Metho	d: TX1005						
MBLK Sample ID: FBLKS1-09	0108-33881				Units:	mg/Kg	Analysi	s Date: 1/	10/2009 0	4:07 AM
Client ID:	Run I	D: FID-8_ 0	090108A		SeqNo:	1576972	Prep Date: 1/8/2009		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%R	Control EC Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	U	50								
>nC12 to nC28	U	50								
>nC28 to nC35	U	50								
Total Petroleum Hydrocarbon	U	50								
Surr: 2-Fluorobiphenyl	27.96	0	25		0 1	12 70-130	0			
Surr: Trifluoromethyl benzene	26.43	0	25		0 1	06 70-130	0			
LCS Sample ID: FLCSS1-09	0108-33881				Units:	mg/Kg	Analysi	s Date: 1/	10/2009 0	4:42 AM
Client ID:	Run I	D: FID-8_ 0	090108A		SeqNo:	1576973	Prep Date: 1/8/2	2009	DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%R	Control EC Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	299	50	250		0 1	20 75-125	0			
>nC12 to nC28	305.5	50	250		0 1	22 75-125	0			
Surr: 2-Fluorobiphenyl	29.74	0	25		0 1	19 70-130	0			
Surr: Trifluoromethyl benzene	27.53	0	25		0 1	10 70-130	0			
LCSD Sample ID: FLCSDS1-0	90108-33881		- Committee		Units:	mg/Kg	Analysi	s Date: 1/	10/2009 0	5:17 AM
Client ID:	Run I	D: FID-8_ 0	90108A		SeqNo:	1576974	Prep Date: 1/8/2	2009	DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%R	Control EC Limit	RPD Ref Value	%RPD	RPD Limit	Qual
					,					
nC6 to nC12	287.3	50	250			15 75-125	299	3.99	20	
nC6 to nC12 >nC12 to nC28	287.3 300.2	50 50	250 250		0 1	15 75-125 20 75-125		3.99 1.76	20 20	
					0 1 0 1		305.5			
>nC12 to nC28	300.2	50	250		0 1 0 1 0 1	20 75-125	305.5	1.76	20	
>nC12 to nC28 Surr: 2-Fluorobiphenyl	300.2 28.13 27.06	50	250 25		0 1 0 1 0 1	20 75-125 13 70-130	305.5 29.74 27.53	1.76 5.57	20 20 20	6:27 AM
>nC12 to nC28 Surr: 2-Fluorobiphenyl Surr: Trifluoromethyl benzene	300.2 28.13 27.06	50	250 25 25		0 1 0 1 0 1 0 1 Units:	20 75-125 13 70-130 08 70-130	305.5 29.74 27.53	1.76 5.57 1.73 s Date: 1/	20 20 20	6:27 AM
>nC12 to nC28 Surr: 2-Fluorobiphenyl Surr: Trifluoromethyl benzene MS Sample ID: 0901058-01	300.2 28.13 27.06	50 0 0	250 25 25		0 1 0 1 0 1 0 1 Units:	20 75-125 13 70-130 08 70-130 mg/Kg 1576976	305.5 29.74 27.53 Analysi Prep Date: 1/8/2	1.76 5.57 1.73 s Date: 1/	20 20 20 10/2009 0	6:27 AM
>nC12 to nC28 Surr: 2-Fluorobiphenyl Surr: Trifluoromethyl benzene MS Sample ID: 0901058-01 Client ID: Analyte	300.2 28.13 27.06 BMS Run II	50 0 0 D: FID-8_0 MQL	250 25 25 25 290108A SPK Val	SPK Ref Value	0 1 0 1 0 1 0 1 Units: SeqNo:	20 75-125 13 70-130 08 70-130 mg/Kg 1576976 Control EC Limit	305.5 29.74 27.53 Analysi Prep Date: 1/8/2 RPD Ref Value	1.76 5.57 1.73 s Date: 1/2	20 20 20 10/2009 0 DF: 1	
>nC12 to nC28 Surr: 2-Fluorobiphenyl Surr: Trifluoromethyl benzene MS Sample ID: 0901058-01 Client ID: Analyte nC6 to nC12	300.2 28.13 27.06 BMS Run II	50 0 0 D: FID-8_0 MQL 50	250 25 25 290108A SPK Val 248.3	SPK Ref Value	0 1 0 1 0 1 0 1 Units: SeqNo:	20 75-125 13 70-130 08 70-130 mg/Kg 1576976 Control EC Limit	305.5 29.74 27.53 Analysi Prep Date: 1/8/2 RPD Ref Value	1.76 5.57 1.73 s Date: 1/2	20 20 20 10/2009 0 DF: 1	
>nC12 to nC28 Surr: 2-Fluorobiphenyl Surr: Trifluoromethyl benzene MS Sample ID: 0901058-01 Client ID: Analyte	300.2 28.13 27.06 BMS Run II	50 0 0 D: FID-8_0 MQL	250 25 25 25 290108A SPK Val	SPK Ref Value	0 1 0 1 0 1 0 1 Units: SeqNo: %R 0 96	20 75-125 13 70-130 08 70-130 mg/Kg 1576976 Control EC Limit	305.5 29.74 27.53 Analysi Prep Date: 1/8/2 RPD Ref Value 0 0	1.76 5.57 1.73 s Date: 1/2	20 20 20 10/2009 0 DF: 1	

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

QC BATCH REPORT

Batch ID: 3	3881 Instrument	t ID FID-8		Metho	d: TX100	5						
MSD	Sample ID: 0901058-01	BMSD				L	Inits: mg/	Kg	Analysi	s Date: 1/	10/2009 0	7:01 AM
Client ID:		Run II	: FID-8_0	90108A		Se	qNo: 157 6	6977	Prep Date: 1/8/2	2009	DF: 1	
Analyte		Result	MQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC1	2	226.7	50	249		0	91	75-125	240.5	5.91	20	
>nC12 to n	C28	231.9	50	249		0	93.1	75-125	259.9	11.4	20	
Surr: 2-F	Fluorobiphenyl	25.68	0	24.9		0	103	70-130	28.59	10.7	20	
Surr: Trit	fluoromethyl benzene	27.17	0	24.9		0	109	70-130	28.45	4.62	20	

The following samples were analyzed in this batch:

0901074-01B

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

SKA Consulting, L.P.

Silver

QC BATCH REPORT Work Order: 0901074 7007-0001-Big Thicket Project: Batch ID: 33903 Instrument ID ICP7500 Method: SW6020 Analysis Date: 1/9/2009 09:21 PM MBLK Sample ID: MBLKS1-010909-33903 Units: mg/Kg Client ID: Run ID: ICP7500_090109A SeqNo: 1577030 Prep Date: 1/9/2009 DF: 1 RPD SPK Ref RPD Ref Control Value Limit Value Limit %RPD Result MQL SPK Val %REC Qual Analyte U Arsenic 0.50 0.08307 0.50 Barium Cadmium 0.50 0.0733 Chromium 0.50 J Lead U 0.50 U 0.50 Selenium Silver U 0.50 LCS Sample ID: MLCSS1-010909-33903 Units: mg/Kg Analysis Date: 1/9/2009 09:27 PM Run ID: ICP7500_090109A Prep Date: 1/9/2009 DF: 1 Client ID: SeqNo: 1577033 RPD SPK Ref RPD Ref Control Value Value Limit Limit %RPD Qual Analyte Result MQL SPK Val %REC Arsenic 9.759 0.50 10 0 97.6 80-120 0 Barium 9.305 0.50 10 0 93 80-120 0 0 Cadmium 9.155 0.50 10 0 91.6 80-120 0 0 Chromium 9.643 0.50 10 96.4 80-120 Lead 8.898 0.50 10 0 89 80-120 0 9.382 0.50 10 0 93.8 80-120 0 Selenium

MS	Sample ID: 0901053-04CMS				ı	Jnits: mg/ l	Kg	Analys	sis Date: 1	1/9/2009 10	:15 PM
Client ID:		Run	ID: ICP7500	_090109A	Se	eqNo: 157 7	7046	Prep Date: 1/9	2009	DF: 1	
Analyte		Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic		9.78	0.49	9.804	1.957	79.8	75-125	C)		
Barium		27.59	0.49	9.804	16.75	110	75-125	C)		
Cadmium		6.863	0.49	9.804	0.03694	69.6	75-125	C)		S
Chromium		14.76	0.49	9.804	6.515	84.2	75-125	C)		
Lead		13.29	0.49	9.804	4.184	92.9	75-125	C)		
Selenium		6.137	0.49	9.804	0.4375	58.1	75-125	C)		S
Silver		5.966	0.49	9.804	0.01715	60.7	75-125	C)		S

10

0

81.1

80-120

0.50

8.111

0

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

Batch ID: 33903 Instrument ID ICP7500 Method: SW6020 MSD Sample ID: 0901053-04CMSD Units: ma/Ka Analysis Date: 1/9/2009 10:45 PM Client ID: Run ID: ICP7500_090109A SeqNo: 1577051 Prep Date: 1/9/2009 DF: 1 RPD SPK Ref RPD Ref Control Value Limit Value Limit SPK Val %REC %RPD Qual Analyte Result MQL Arsenic 9.583 0.49 9.804 1.957 77.8 75-125 9.78 2.04 25 36.72 9.804 28.4 Barium 0.49 16.75 204 75-125 27.59 25 SR 7.015 9.804 0.03694 75-125 2.19 25 Cadmium 0.49 71.2 6.863 S 15.44 9.804 75-125 4.48 25 Chromium 0.49 6.515 91 14.76 Lead 11.9 0.49 9.804 4.184 78.7 75-125 13.29 11.1 25 Selenium 6.856 0.49 9.804 0.4375 65.5 75-125 6.137 11.1 25 S Silver 6.158 0.01715 75-125 5.966 3.17 25 S 0.49 9.804 62.6 DUP Sample ID: 0901053-04CDUP Units: mg/Kg Analysis Date: 1/12/2009 03:33 PM Client ID: Run ID: ICP7500_090112A SeqNo: 1577445 Prep Date: 1/9/2009 DF: 1 RPD SPK Ref RPD Ref Control Limit Value Value Limit SPK Val %REC %RPD Qual Analyte Result MQL Barium 19.29 0.49 0 0 0 0-0 16.75 14.1 25 0.05428 0 0 0.03694 0 25 J Cadmium 0.49 0 0-0 5.084 0.49 0 0 0 0-0 4.184 19.4 25 Lead Silver 0 0 25 U 0.49 0 0-0 0 0 DUP Sample ID: 0901053-04CDUP Units: mg/Kg Analysis Date: 1/13/2009 02:25 PM Client ID: Run ID: ICP7500_090113A SeqNo: 1578883 Prep Date: 1/9/2009 DF: 1 SPK Ref RPD Ref **RPD** Control Value Value Limit Limit Result MQL SPK Val %REC %RPD Qual Analyte 0.3098 0.49 0 0 0-0 0 J Arsenic 0 0.5382 0 0.49 0 0 0 Chromium 0-0

The following samples were analyzed in this batch:

Selenium

0901074-01E

0

0

0

0-0

0.49

U

QC BATCH REPORT

0

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

MBLK Client ID: Analyte Mercury	Sample ID: GBLKS1-0114	Run	ID: MERCU	JRY_090114	ŀF	Units: µg/l	_	Analys	is Date: 1/	14/2009 0	6:32 PM
analyte		Result		JRY_090114	lF.	CogNo: 457					
			MOI			Seq140. 137	9416	Prep Date: 1/14	/2009	DF: 1	
Mercury			IVIQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
		U	13								
.cs	Sample ID: GLCSS1-01140	09-33956				Units: µg/l	⟨g	Analys	is Date: 1/	14/2009 0	6:34 PM
Client ID:		Run	ID: MERC	JRY_090114	lF.	SeqNo: 157	9417	Prep Date: 1/14	/2009	DF: 1	
nalyte		Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury		344.7	13	333.3		0 103	85-115	0			
//S	Sample ID: 0901053-01CM	S				Units: µg/l	√g	Analys	is Date: 1/	14/2009 0	6:43 PM
Client ID:		Run	ID: MERCI	JRY_090114	ŀF	SeqNo: 157	9420	Prep Date: 1/14	/2009	DF: 1	
nalyte		Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury		349.8	14	348.4	2.58	87 99.7	85-115	0			
//SD	Sample ID: 0901053-01CM	SD				Units: µg/l	(g	Analys	is Date: 1/	14/2009 0	6:45 PM
Client ID:		Run	ID: MERCU	JRY_090114	F	SeqNo: 157	9421	Prep Date: 1/14	/2009	DF: 1	
ınalyte		Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury		360.3	14	348.4	2.58	87 103	85-115	349.8	2.94	20	
UP	Sample ID: 0901053-01CD	UP				Units: µg/l	√ g	Analys	is Date: 1/	14/2009 0	6:41 PM
lient ID:		Run	D: MERCU	JRY_090114	F	SeqNo: 157	9419	Prep Date: 1/14	/2009	DF: 1	
nalyte		Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury		7.818	14	0		0 0		2.587	0	20	J
he following	ng samples were analyzed i	n this batch:	09	901074-01E							

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

QC BATCH REPORT Work Order: 0901074 Project: 7007-0001-Big Thicket Batch ID: 33870 Instrument ID SV-4 Method: SW8270 MBLK Sample ID: SBLKS2-090108-33870 Units: µg/Kg Analysis Date: 1/8/2009 03:50 PM Client ID: Run ID: SV-4_090108A SeqNo: 1577313 Prep Date: 1/8/2009 DF: 1 RPD RPD Ref SPK Ref Value Limit Value Limit SPK Val %REC %RPD Qual Analyte Result MQL 1,2,4-Trichlorobenzene U 6.6 1,2-Dichlorobenzene U 6.6 U 1,3-Dichlorobenzene 6.6 1,4-Dichlorobenzene U 6.6 2,4,5-Trichlorophenol U 6.6 2,4,6-Trichlorophenol U 6.6 2,4-Dichlorophenol U 6.6 2,4-Dimethylphenol U 6.6 U 2,4-Dinitrophenol 33 2.4-Dinitrotoluene U 6.6 U 2,6-Dinitrotoluene 6.6 2-Chloronaphthalene U 6.6 2-Chlorophenol U 6.6 2-Methylnaphthalene U 6.6 2-Methylphenol U 6.6 2-Nitroaniline U 6.6 U 2-Nitrophenol 6.6 3&4-Methylphenol U 6.6 3,3'-Dichlorobenzidine U 6.6 3-Nitroaniline U 6.6 4,6-Dinitro-2-methylphenol U 6.6 4-Bromophenyl phenyl ether U 6.6 U 4-Chloro-3-methylphenol 6.6 4-Chloroaniline U 6.6 4-Chlorophenyl phenyl ether U 6.6 4-Nitroaniline U 6.6 4-Nitrophenol U 33 Acenaphthene U 6.6 U Acenaphthylene 6.6 U Aniline 6.6 Anthracene U 6.6 Benz(a)anthracene U 6.6 U Benzo(a)pyrene 6.6 Benzo(b)fluoranthene U 6.6 Benzo(g,h,i)perylene U 6.6 Benzo(k)fluoranthene U 6.6 Benzoic acid U 6.6 U Bis(2-chloroethoxy)methane 6.6 Bis(2-chloroethyl)ether U 6.6 Bis(2-chloroisopropyl)ether U 6.6 ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in assoc. Method Blank

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

Batch ID: 33870	Instrument ID SV-4		Method:	SW8270				
Bis(2-ethylhexyl)phthalate	U	6.6						
Butyl benzyl phthalate	11.01	6.6						
Chrysene	U	6.6						
Di-n-butyl phthalate	U	6.6						
Di-n-octyl phthalate	U	6.6						
Dibenz(a,h)anthracene	U	6.6						
Dibenzofuran	U	6.6						
Diethyl phthalate	U	6.6						
Dimethyl phthalate	U	6.6						
Fluoranthene	U	6.6						
Fluorene	U	6.6						
Hexachlorobenzene	U	6.6						
Hexachlorobutadiene	U	6.6						
Hexachlorocyclopentadiene	U	6.6						
Hexachloroethane	U	6.6						
Indeno(1,2,3-cd)pyrene	U	6.6						
Isophorone	U	6.6						
N-Nitrosodi-n-propylamine	U	6.6						
N-Nitrosodiphenylamine	U	6.6						
Naphthalene	U	6.6						
Nitrobenzene	U	6.6						
Pentachlorophenol	U	6.6						
Phenanthrene	U	6.6						
Phenol	U	6.6						
Pyrene	U	6.6						
Pyridine	U	6.6						
Surr: 2,4,6-Tribromopher	nol 119.4	6.6	166.7	0	71.7	36-126	0	
Surr: 2-Fluorobiphenyl	158.9	6.6	166.7	0	95.3	43-125	0	
Surr: 2-Fluorophenol	163.8	6.6	166.7	0	98.3	37-125	0	
Surr: 4-Terphenyl-d14	149.3	6.6	166.7	0	89.6	32-125	0	
Surr: Nitrobenzene-d5	144.7	6.6	166.7	0	86.8	37-125	0	
Surr: Phenol-d6	149.7	6.6	166.7	0	89.8	40-125	0	

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

QC BATCH REPORT

LCS Sample ID: SLC	SS2-090108-33870				U	Inits: µg/K	(g	Analys	is Date: 1	8/2009 04	:12 PN
Client ID:	Run I	D: SV-4_0	90108A		Se	qNo: 157 7	315	Prep Date: 1/8/	2009	DF: 1	
				SPK Ref			Control	RPD Ref		RPD	
Analyte	Result	MQL	SPK Val	Value		%REC	Limit	Value	%RPD	Limit	Qua
1,2,4-Trichlorobenzene	152.6	6.6	166.7		0	91.5	50-120	C			
1,2-Dichlorobenzene	150.3	6.6	166.7		0	90.2	50-120	C	ķ.		
1,3-Dichlorobenzene	149.5	6.6	166.7		0	89.7	50-120	C	E		
1,4-Dichlorobenzene	143.7	6.6	166.7		0	86.2	50-120	C	1		
2,4,5-Trichlorophenol	160.5	6.6	166.7		0	96.3	45-127	C	1		
2,4,6-Trichlorophenol	158.7	6.6	166.7		0	95.2	45-130	C)		
2,4-Dichlorophenol	154.9	6.6	166.7		0	92.9	45-125	C	1		
2,4-Dimethylphenol	125.5	6.6	166.7		0	75.3	45-120	C			
2,4-Dinitrophenol	119.9	33	166.7		0	71.9	10-126	C			
2,4-Dinitrotoluene	185.2	6.6	166.7		0	111	50-130	C	1		
2,6-Dinitrotoluene	161.7	6.6	166.7		0	97	50-125	C	1		
2-Chloronaphthalene	167.6	6.6	166.7		0	101	50-145	C)		
2-Chlorophenol	141.4	6.6	166.7		0	84.8	45-120	C	1		
2-Methylnaphthalene	161	6.6	166.7		0	96.6	50-120	C			
2-Methylphenol	149.8	6.6	166.7		0	89.9	45-120	C	1		
2-Nitroaniline	197.1	6.6	166.7		0	118	45-138	C)		
2-Nitrophenol	148.9	6.6	166.7		0	89.4	45-125	C			
3&4-Methylphenol	160.5	6.6	166.7		0	96.3	45-120	C	V		
3,3'-Dichlorobenzidine	80.08	6.6	166.7		0	48	15-120	C	1		
3-Nitroaniline	135.1	6.6	166.7		0	81	40-120	C	1		
4,6-Dinitro-2-methylphenol	129.4	6.6	166.7		0	77.6	15-135	C	1		
4-Bromophenyl phenyl ether	158.1	6.6	166.7		0	94.9	50-125	C			
4-Chloro-3-methylphenol	157.4	6.6	166.7		0	94.4	45-130	C	0		
4-Chloroaniline	94.07	6.6	166.7		0	56.4	20-120	C			
4-Chlorophenyl phenyl ether	161.7	6.6	166.7		0	97	50-120	C	V.		
4-Nitroaniline	148.6	6.6	166.7		0 .	89.2	50-127	C)		
4-Nitrophenol	157.6	33	166.7		0	94.5	40-147	C)		
Acenaphthene	157.8	6.6	166.7		0	94.7	50-120	C)		
Acenaphthylene	115.3	6.6	166.7		0	69.2	50-120	C)		
Aniline	59	6.6	166.7		0	35.4	10-135	C			
Anthracene	169.2	6.6	166.7		0	101	50-123	C)		
Benz(a)anthracene	163	6.6	166.7		0	97.8	50-131	C)		
Benzo(a)pyrene	171.6	6.6	166.7		0	103	50-130	C)		
Benzo(b)fluoranthene	147.7	6.6	166.7	-	0	88.6	50-137	C	P)		
Benzo(g,h,i)perylene	178.6	6.6	166.7		0	107	50-130	C			
Benzo(k)fluoranthene	186.6	6.6	166.7		0	112	50-143	C)		
Benzoic acid	138.1	6.6	166.7		0	82.8	10-120	C	1		
Bis(2-chloroethoxy)methane	152.4	6.6	166.7		0	91.4	50-120	C)		
Bis(2-chloroethyl)ether	137.6	6.6	166.7		0	82.5	45-127	C	U		
Bis(2-chloroisopropyl)ether	139.2	6.6	166.7		0	83.5	50-120	C			

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

Batch ID: 33870	Instrument ID SV-4		Method:	SW8270				
Bis(2-ethylhexyl)phthalate	172.1	6.6	166.7	0	103	21-148	0	
Butyl benzyl phthalate	168.4	6.6	166.7	0	101	50-136	0	В
Chrysene	172.9	6.6	166.7	0	104	50-130	0	
Di-n-butyl phthalate	171.3	6.6	166.7	0	103	50-140	0	
Di-n-octyl phthalate	171.9	6.6	166.7	0	103	50-140	0	
Dibenz(a,h)anthracene	187.4	6.6	166.7	0	112	50-130	0	
Dibenzofuran	168	6.6	166.7	0	101	50-125	0	
Diethyl phthalate	169.8	6.6	166.7	0	102	50-125	0	
Dimethyl phthalate	167.7	6.6	166.7	0	101	50-125	0	
Fluoranthene	176.7	6.6	166.7	0	106	50-131	0	
Fluorene	169.3	6.6	166.7	0	102	50-125	0	
Hexachlorobenzene	159.3	6.6	166.7	0	95.6	50-124	0	
Hexachlorobutadiene	147.5	6.6	166.7	0	88.5	50-125	0	
Hexachlorocyclopentadiene	140.8	6.6	166.7	0	84.5	45-135	0	
Hexachloroethane	139.6	6.6	166.7	0	83.8	45-125	0	
Indeno(1,2,3-cd)pyrene	159.8	6.6	166.7	0	95.9	45-139	0	
Isophorone	173	6.6	166.7	0	104	45-130	0	
N-Nitrosodi-n-propylamine	147.7	6.6	166.7	0	88.6	45-120	0	
N-Nitrosodiphenylamine	166.1	6.6	166.7	0	99.7	50-130	0	
Naphthalene	153.4	6.6	166.7	0	92.1	50-125	0	
Nitrobenzene	147.3	6.6	166.7	0	88.4	50-125	0	
Pentachlorophenol	158.3	6.6	166.7	0	95	23-136	0	
Phenanthrene	167.3	6.6	166.7	0	100	50-125	0	
Phenol	160.3	6.6	166.7	0	96.2	45-130	0	
Pyrene	170.2	6.6	166.7	0	102	45-130	0	
Pyridine	117.4	6.6	166.7	0	70.4	15-120	0	
Surr: 2,4,6-Tribromophen	ol 144.6	6.6	166.7	0	86.8	36-126	0	
Surr: 2-Fluorobiphenyl	141.7	6.6	166.7	0	85	43-125	0	
Surr: 2-Fluorophenol	145.3	6.6	166.7	0	87.2	37-125	0	
Surr: 4-Terphenyl-d14	143.6	6.6	166.7	0	86.2	32-125	0	
Surr: Nitrobenzene-d5	134.5	6.6	166.7	0	80.7	37-125	0	
Surr: Phenol-d6	142.2	6.6	166.7	0	85.3	40-125	0	N

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

Method: SW8270 Batch ID: 33870 Instrument ID SV-4 Analysis Date: 1/8/2009 04:56 PM MS Sample ID: 0901020-01AMS Units: µg/Kg SeqNo: 1577319 Prep Date: 1/8/2009 Client ID: Run ID: SV-4 090108A DF: 1 RPD SPK Ref RPD Ref Control Value Limit Value Limit %RPD Result MQL SPK Val %REC Qual Analyte 0 125.3 0 H 1,2,4-Trichlorobenzene 6.6 166.5 75.2 50-120 116.4 6.6 166.5 0 69.9 50-120 0 Н 1,2-Dichlorobenzene 1,3-Dichlorobenzene 102.5 6.6 166.5 0 61.5 50-120 0 Н 0 1,4-Dichlorobenzene 102.9 6.6 166.5 n 61.8 50-120 Н 154.6 166.5 92.8 45-127 0 Н 2.4.5-Trichlorophenol 6.6 0 0 0 2,4,6-Trichlorophenol 147.7 6.6 166.5 88.7 45-130 Н 2,4-Dichlorophenol 148.4 6.6 166.5 0 89.1 45-125 0 Н 2,4-Dimethylphenol 151.2 6.6 166.5 0 90.8 45-120 0 Н 40.45 2,4-Dinitrophenol 33 166.5 0 24.3 10-126 0 Н 2,4-Dinitrotoluene 171.7 6.6 166.5 0 103 50-130 0 Н 0 157.2 6.6 166.5 0 94.4 50-125 Н 2,6-Dinitrotoluene 2-Chloronaphthalene 155.8 6.6 166.5 0 93.6 50-145 0 H 0 2-Chlorophenol 146.1 6.6 166.5 0 87.8 45-120 Н 2-Methylnaphthalene 146.9 166.5 0 88.2 50-120 0 Н 6.6 2-Methylphenol 156.4 6.6 166.5 0 93.9 45-120 0 Н 0 0 2-Nitroaniline 147.2 6.6 166.5 88.4 45-138 Н 131.5 166.5 0 79 45-125 0 Н 2-Nitrophenol 6.6 3&4-Methylphenol 152.3 6.6 166.5 0 45-120 0 H 91.4 0 3.3'-Dichlorobenzidine 167.1 6.6 166.5 0 100 15-120 Н 0 0 3-Nitroaniline 164.3 6.6 166.5 98.7 40-120 Н 80.28 166.5 0 48.2 15-135 0 Н 4,6-Dinitro-2-methylphenol 66 4-Bromophenyl phenyl ether 148.5 6.6 166.5 0 89.2 50-125 0 Н 0 0 Н 4-Chloro-3-methylphenol 161.8 6.6 166.5 97.2 45-130 4-Chloroaniline 126.6 6.6 166.5 n 76 20-120 0 Н 0 0 50-120 Н 4-Chlorophenyl phenyl ether 153.8 6.6 166.5 92.3 4-Nitroaniline 168.7 6.6 166.5 0 101 50-127 0 Н 4-Nitrophenol 127.5 33 166.5 0 76.6 40-147 0 H 0 0 Acenaphthene 149 6.6 166.5 89.5 50-120 Н Acenaphthylene 129.7 6.6 166.5 0 77.9 50-120 0 Н 0 6.6 166.5 0 50.6 10-135 Н Aniline 84.2 0 0 Н Anthracene 161.2 6.6 166.5 96.8 50-123 0 Benz(a)anthracene 166.5 6.6 166.5 0 100 50-131 Н Benzo(a)pyrene 171.9 6.6 166.5 0 103 50-130 0 H Benzo(b)fluoranthene 169.1 6.6 166.5 0 102 50-137 0 Н 0 Н 175.2 166.5 0 105 50-130 Benzo(g,h,i)perylene 6.6 Benzo(k)fluoranthene 190.9 6.6 166.5 0 115 50-143 0 Н Benzoic acid 9.596 6.6 166.5 5.608 2.4 10-120 0 SH Bis(2-chloroethoxy)methane 139.1 6.6 166.5 0 83.6 50-120 0 Н 0 Н Bis(2-chloroethyl)ether 125.2 6.6 166.5 0 75.2 45-127

ND - Not Detected at the Reporting Limit

Bis(2-chloroisopropyl)ether

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

125.9

6.6

S - Spike Recovery outside accepted recovery limits

0

75.6

50-120

R - RPD outside accepted recovery limits

166.5

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

OC BATCH REPORT

U - Analyzed for but not detected

0

E - Value above quantitation range

Н

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

Batch ID: 33870	Instrument ID SV-4		Method:	SW8270				
Bis(2-ethylhexyl)phthalate	192.1	6.6	166.5	6.542	111	21-148	0	Н
Butyl benzyl phthalate	195.7	6.6	166.5	13.41	109	50-136	0	BH
Chrysene	175.6	6.6	166.5	0	105	50-130	0	Н
Di-n-butyl phthalate	185.9	6.6	166.5	7.861	107	50-140	0	Н
Di-n-octyl phthalate	181.9	6.6	166.5	0	109	50-140	0	Н
Dibenz(a,h)anthracene	170.9	6.6	166.5	0	103	50-130	0	Н
Dibenzofuran	154	6.6	166.5	0	92.5	50-125	0	Н
Diethyl phthalate	164.2	6.6	166.5	0	98.6	50-125	0	H
Dimethyl phthalate	161.3	6.6	166.5	0	96.9	50-125	0	Н
Fluoranthene	173.4	6.6	166.5	0	104	50-131	0	Н
Fluorene	158.3	6.6	166.5	0	95.1	50-125	0	Н
Hexachlorobenzene	145.5	6.6	166.5	0	87.4	50-124	0	Н
Hexachlorobutadiene	113.5	6.6	166.5	0	68.2	50-125	0	Н
Hexachlorocyclopentadiene	e U	6.6	166.5	0	0	45-135	0	SH
Hexachloroethane	96.77	6.6	166.5	0	58.1	45-125	0	Н
Indeno(1,2,3-cd)pyrene	148.6	6.6	166.5	0	89.3	45-139	0	Н
Isophorone	167.5	6.6	166.5	0	101	45-130	0	Н
N-Nitrosodi-n-propylamine	143.2	6.6	166.5	0	86	45-120	0	Н
N-Nitrosodiphenylamine	165.3	6.6	166.5	0	99.3	50-130	0	Н
Naphthalene	134	6.6	166.5	0	80.5	50-125	0	Н
Nitrobenzene	135	6.6	166.5	0	81.1	50-125	0	Н
Pentachlorophenol	142.3	6.6	166.5	0	85.5	23-136	0	Н
Phenanthrene	157.9	6.6	166.5	0	94.9	50-125	0	Н
Phenol	162.5	6.6	166.5	0	97.6	45-130	0	Н
Pyrene	165.7	6.6	166.5	0	99.5	45-130	0	Н
Pyridine	74.96	6.6	166.5	0	45	15-120	0	Н
Surr: 2,4,6-Tribromopher	nol 140.9	6.6	166.5	0	84.6	36-126	0	
Surr: 2-Fluorobiphenyl	131.5	6.6	166.5	0	79	43-125	0	
Surr: 2-Fluorophenol	145.6	6.6	166.5	0	87.5	37-125	0	
Surr: 4-Terphenyl-d14	141.1	6.6	166.5	0	84.8	32-125	0	
Surr: Nitrobenzene-d5	122.2	6.6	166.5	0	73.4	37-125	0	
Surr: Phenol-d6	142.2	6.6	166.5	0	85.4	40-125	0	

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

Work Order: 0901074

Project: 7007-0001-Big Thicket

QC BATCH REPORT

MSD	Sample ID: 0901	020-01AMSD				L	Jnits: µg/k	(g	Analysi	s Date: 1/8	8/2009 05	:17 PM
Client ID:		Run II	D: SV-4_0	90108A		Se	qNo: 157 7	7322	Prep Date: 1/8/2	2009	DF: 1	
Analyte		Result	MQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlo	probenzene	141.5	6.6	166.6		0	84.9	50-120	125.3	12.2	30	Н
1,2-Dichloro		146.1	6.6	166.6		0	87.7	50-120	116.4	22.7	30	Н
1,3-Dichloro	benzene	137.2	6.6	166.6		0	82.4	50-120	102.5	29	30	Н
1,4-Dichloro	benzene	134.5	6.6	166.6		0	80.7	50-120	102.9	26.6	30	Н
2,4,5-Trichlo	prophenol	151.8	6.6	166.6		0	91.1	45-127	154.6	1.81	30	Н
2,4,6-Trichlo	prophenol	146.4	6.6	166.6		0	87.9	45-130	147.7	0.889	30	Н
2,4-Dichloro	phenol	147.6	6.6	166.6		0	88.6	45-125	148.4	0.495	30	Н
2,4-Dimethyl	Iphenol	144.7	6.6	166.6		0	86.9	45-120	151.2	4.4	30	Н
2,4-Dinitroph	nenol	121.9	33	166.6		0	73.2	10-126	40.45	100	30	RH
2,4-Dinitroto	luene	168.7	6.6	166.6		0	101	50-130	171.7	1.77	30	Н
2,6-Dinitroto	luene	151.8	6.6	166.6		0	91.1	50-125	157.2	3.49	30	Н
2-Chloronap	hthalene	149.4	6.6	166.6		0	89.7	50-145	155.8	4.2	30	Н
2-Chlorophe	nol	149.5	6.6	166.6		0	89.8	45-120	146.1	2.27	30	Н
2-Methylnap	hthalene	153.9	6.6	166.6		0	92.4	50-120	146.9	4.67	30	Н
2-Methylphe	nol	154.2	6.6	166.6		0	92.6	45-120	156.4	1.38	30	Н
2-Nitroaniline	9	142.9	6.6	166.6		0	85.8	45-138	147.2	2.94	30	Н
2-Nitropheno	ol	135.1	6.6	166.6		0	81.1	45-125	131.5	2.66	30	Н
3&4-Methylp	henol	153.8	6.6	166.6		0	92.4	45-120	152.3	1.02	30	Н
3,3'-Dichlord	benzidine	109.1	6.6	166.6		0	65.5	15-120	167.1	42	30	RH
3-Nitroaniline	е	132.2	6.6	166.6		0	79.4	40-120	164.3	21.7	30	Н
4,6-Dinitro-2	-methylphenol	135.6	6.6	166.6		0	81.4	15-135	80.28	51.2	30	RH
4-Bromopher	nyl phenyl ether	155	6.6	166.6		0	93.1	50-125	148.5	4.29	30	Н
4-Chloro-3-n	nethylphenol	152.2	6.6	166.6		0	91.4	45-130	161.8	6.13	30	Н
4-Chloroanili	ne	115.5	6.6	166.6		0	69.3	20-120	126.6	9.21	30	Н
4-Chloropher	nyl phenyl ether	144.8	6.6	166.6		0	86.9	50-120	153.8	6.03	30	Н
4-Nitroaniline	Э	146.2	6.6	166.6		0	87.8	50-127	168.7	14.3	30	Н
1-Nitropheno	ol	163.6	33	166.6		0	98.2	40-147	127.5	24.8	30	Н
Acenaphther	ne	148.4	6.6	166.6		0	89.1	50-120	149	0.37	30	Н
Acenaphthyl	ene	94.32	6.6	166.6		0	56.6	50-120	129.7	31.6	30	RH
Aniline		80.71	6.6	166.6		0	48.5	10-135	84.2	4.24	30	Н
Anthracene		171.1	6.6	166.6		0	103	50-123	161.2	5.94	30	Н
Benz(a)anthr	racene	163.8	6.6	166.6		0	98.4	50-131	166.5	1.64	30	H
Benzo(a)pyre	ene	179.8	6.6	166.6		0	108	50-130	171.9	4.53	30	Н
Benzo(b)fluo	ranthene	192.8	6.6	166.6		0	116	50-137	169.1	13.1	30	Н
Benzo(g,h,i)p	perylene	180.5	6.6	166.6		0	108	50-130	175.2	2.98	30	Н
Benzo(k)fluo	ranthene	199.1	6.6	166.6		0	120	50-143	190.9	4.18	30	Н
Benzoic acid		180.5	6.6	166.6	5.60	80	105	10-120	9.596	180	30	RH
Bis(2-chloroe	ethoxy)methane	142.2	6.6	166.6		0	85.4	50-120	139.1	2.21	30	Н
Bis(2-chloroe	ethyl)ether	139.1	6.6	166.6		0	83.5	45-127	125.2	10.5	30	Н
3is(2-chloroi	sopropyl)ether	140.6	6.6	166.6		0	84.4	50-120	125.9	11	30	Н

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

QC BATCH REPORT

Batch ID: 33870	Instrument ID SV-4		Method:	SW8270						
Bis(2-ethylhexyl)phthalate	190.4	6.6	166.6	6.542	110	21-148	192.1	0.855	30	Н
Butyl benzyl phthalate	194.5	6.6	166.6	13.41	109	50-136	195.7	0.622	30	BH
Chrysene	172	6.6	166.6	0	103	50-130	175.6	2.08	30	Н
Di-n-butyl phthalate	185.9	6.6	166.6	7.861	107	50-140	185.9	0.0033	30	Н
Di-n-octyl phthalate	201.3	6.6	166.6	0	121	50-140	181.9	10.1	30	Н
Dibenz(a,h)anthracene	190.7	6.6	166.6	0	114	50-130	170.9	10.9	30	Н
Dibenzofuran	152.8	6.6	166.6	0	91.7	50-125	154	0.795	30	Н
Diethyl phthalate	155.8	6.6	166.6	0	93.5	50-125	164.2	5.25	30	Н
Dimethyl phthalate	154	6.6	166.6	0	92.5	50-125	161.3	4.58	30	Н
Fluoranthene	177.1	6.6	166.6	0	106	50-131	173.4	2.12	30	Н
Fluorene	155.8	6.6	166.6	0	93.5	50-125	158.3	1.61	30	Н
Hexachlorobenzene	148.1	6.6	166.6	0	88.9	50-124	145.5	1.76	30	Н
Hexachlorobutadiene	140.7	6.6	166.6	0	84.5	50-125	113.5	21.4	30	Н
Hexachlorocyclopentadiene	31.18	6.6	166.6	0	18.7	45-135	4.529	149	30	SRH
Hexachloroethane	139.1	6.6	166.6	0	83.5	45-125	96.77	35.9	30	RH
Indeno(1,2,3-cd)pyrene	151.7	6.6	166.6	0	91.1	45-139	148.6	2.05	30	Н
Isophorone	166.8	6.6	166.6	0	100	45-130	167.5	0.401	30	Н
N-Nitrosodi-n-propylamine	145.8	6.6	166.6	0	87.5	45-120	143.2	1.77	30	Н
N-Nitrosodiphenylamine	165	6.6	166.6	0	99.1	50-130	165.3	0.172	30	Н
Naphthalene	144.1	6.6	166.6	0	86.5	50-125	134	7.26	30	Н
Nitrobenzene	142.9	6.6	166.6	0	85.8	50-125	135	5.7	30	Н
Pentachlorophenol	168.6	6.6	166.6	0	101	23-136	142.3	16.9	30	Н
Phenanthrene	162.3	6.6	166.6	0	97.5	50-125	157.9	2.73	30	Н
Phenol	164.7	6.6	166.6	0	98.9	45-130	162.5	1.32	30	Н
Pyrene	173.8	6.6	166.6	0	104	45-130	165.7	4.72	30	Н
Pyridine	86.76	6.6	166.6	0	52.1	15-120	74.96	14.6	30	Н
Surr: 2,4,6-Tribromophen	131.2	6.6	166.6	0	78.8	36-126	140.9	7.09	30	
Surr: 2-Fluorobiphenyl	133.9	6.6	166.6	0	80.4	43-125	131.5	1.84	30	
Surr: 2-Fluorophenol	149.2	6.6	166.6	0	89.6	37-125	145.6	2.44	30	
Surr: 4-Terphenyl-d14	144.8	6.6	166.6	0	86.9	32-125	141.1	2.54	30	
Surr: Nitrobenzene-d5	129	6.6	166.6	0	77.4	37-125	122.2	5.38	30	
Surr: Phenol-d6	139.6	6.6	166.6	0	83.8	40-125	142.2	1.89	30	

The following samples were analyzed in this batch:

0901074-01F

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

MBLK Sample ID: VBLKS-01	1209-R72145				Units: µg/k	(a	Analy	sis Date: 1	/12/2009 1	0:54 AN
Client ID:		D: VOA3 _	090112A		SeqNo: 157		Prep Date:		DF: 1	
				SPK Ref Value	12	Control Limit	RPD Ref Value	0/ DDD	RPD Limit	Qual
Analyte	Result	MQL	SPK Val	value	%REC	Liiiii	value	%RPD		Quai
1,1,1,2-Tetrachloroethane	U	5.0								
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,1-Dichloropropene	U	5.0								
1,2,3-Trichlorobenzene	U	5.0								
1,2,3-Trichloropropane	U	5.0								
1,2,4-Trichlorobenzene	U	5.0								
1,2,4-Trimethylbenzene	U	5.0								
1,2-Dibromo-3-chloropropane	U	5.0								
1,2-Dichlorobenzene	U	5.0								
1,2-Dichloroethane	U	5.0								
1,2-Dichloropropane	U	5.0								
1,3,5-Trimethylbenzene	U	5.0								
1,3-Dichlorobenzene	U	5.0								
1,3-Dichloropropane	U	5.0								
1,4-Dichlorobenzene	U	5.0								
2,2-Dichloropropane	U	5.0								
2-Butanone	U	10								
2-Chlorotoluene	U	5.0								
2-Hexanone	U	10								
4-Chlorotoluene	U	5.0								
4-Isopropyltoluene	U	5.0								
4-Methyl-2-pentanone	U	10		7						
Acetone	10.11	20								J
Benzene	U	5.0								
Bromobenzene	U	5.0								
Bromochloromethane	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	10								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	10								
Chloroform	U	5.0								
Chloromethane	U	10								
cis-1,2-Dichloroethene	U	5.0								
cis-1,3-Dichloropropene	U	5.0			.,					
ND - Not Detected at the Reporting Limit		S - Si	pike Recovery	outside ac	cepted recovery	y limits	B - Analyte of	letected in as	ssoc. Metho	d Blank
J - Analyte detected below quantitation li			PD outside a				U - Analyzed			
- Analyte detected below quantitation in) - Referenced analyte value is > 4 times					nt difference >	40%	E - Value ab			

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

Batch ID: R72145	Instrument ID VOA3		Method:	SW8260				
Dibromochloromethane	U	5.0						
Dibromomethane	U	5.0						
Dichlorodifluoromethane	U	5.0						
Ethylbenzene	U	5.0						
Hexachlorobutadiene	U	5.0						
Isopropylbenzene	U	5.0						
m,p-Xylene	U	10						
Methyl tert-butyl ether	U	5.0						
Methylene chloride	U	10						
n-Butylbenzene	U	5.0						
n-Propylbenzene	U	5.0						
Naphthalene	U	5.0						
o-Xylene	U	5.0						
sec-Butylbenzene	U	5.0						
Styrene	U	5.0						
tert-Butylbenzene	U	5.0						
Tetrachloroethene	U	5.0						
Toluene	U	5.0						
trans-1,2-Dichloroethene	U	5.0						
trans-1,3-Dichloropropene	U	5.0						
Trichloroethene	U	5.0						
Trichlorofluoromethane	U	5.0						
Vinyl chloride	U	2.0						
Surr: 1,2-Dichloroethane	-d4 46.11	0	50	0	92.2	70-128	0	
Surr: 4-Bromofluorobenz	ene 48.11	0	50	0	96.2	73-126	0	
Surr: Dibromofluorometh	ane 47.76	0	50	0	95.5	71-128	0	
Surr: Toluene-d8	47.95	0	50	0	95.9	73-127	0	

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

Client: SKA Consulting, L.P.

Work Order: 0901074

Project: 7007-0001-Big Thicket

QC BATCH REPORT

Batch ID: R72145	Instrument ID VOA3		Metho	d: SW8260							
LCS Sample ID: V	LCSS-011209-R72145				Units	ε: μg/K	g	Anal	ysis Date:	1/12/2009	10:00 AM
Client ID:	Run	ID: VOA3_	090112A	5	SeqNo	o: 1577	176	Prep Date:		DF: 1	
				SPK Ref			Control	RPD Ref		RPD	
Analyte	Result	MQL	SPK Val	Value	%	REC	Limit	Value	%RPD	Limit	Qual
1,1,1,2-Tetrachloroethane	46.11	5.0	50	0) !	92.2	79-121		0		
1,1,1-Trichloroethane	51.64	5.0	50	0		103	79-124		0		
1,1,2,2-Tetrachloroethane	46.55	5.0	50	0		93.1	75-123		0		
1,1,2-Trichloroethane	47.5	5.0	50	0)	95	79-120		0		
1,1-Dichloroethane	53.17	5.0	50	0)	106	75-124		0		
1,1-Dichloroethene	55.04	5.0	50	0)	110	80-122		0		
1,1-Dichloropropene	48.59	5.0	50	0		97.2	80-122		0		
1,2,3-Trichlorobenzene	44.11	5.0	50	0) (88.2	74-126		0		
1,2,3-Trichloropropane	47.19	5.0	50	0		94.4	71-125		0		
1,2,4-Trichlorobenzene	44.95	5.0	50	0		89.9	74-128		0		
1,2,4-Trimethylbenzene	50.6	5.0	50	0		101	79-123		0		
1,2-Dibromo-3-chloropropai		5.0	50	0		91.1	66-129		0		
1,2-Dichlorobenzene	43.8	5.0	50	0		87.6	79-120		0		
1,2-Dichloroethane	48.43	5.0	50	0		96.9	73-121		0		
1,2-Dichloropropane	49.82	5.0	50	0		99.6	76-120		0		
1,3,5-Trimethylbenzene	50.62	5.0	50	0		101	80-123		0		
1,3-Dichlorobenzene	44.83	5.0	50	0		89.7	79-120		0		
1,3-Dichloropropane	47.65	5.0	50	0		95.3	79-120		0		
1,4-Dichlorobenzene	44.58	5.0	50	0		89.2	77-120		0		
2,2-Dichloropropane	54.36	5.0	50	0		109	75-125		0		
2-Butanone	101.5	10	100	0		101	65-130		0		
2-Chlorotoluene	49.56	5.0	50	0		99.1	79-120		0		
2-Hexanone	100.2	10	100	0		100	65-133		0		
4-Chlorotoluene	49.14	5.0	50	0		98.3	80-120		0		
4-Isopropyltoluene	50.35	5.0	50	0		101	80-125		0		
4-Methyl-2-pentanone	97.58	10	100	0		97.6	69-130		0		
Acetone	100.4	20	100	0		100	53-142		0		
Benzene	50.5	5.0	50	0		101	79-120		0		
Bromobenzene	45.48	5.0	50	0		91	80-120		0		
Bromochloromethane	50.5	5.0	50	0		101	78-121		0		
Bromodichloromethane	48.15	5.0	50	0		96.3	79-121		0		
Bromoform	44.38	5.0	50	0		88.8	74-122		0		
Bromomethane	51.64	10	50	0		103	68-131		0		
Carbon tetrachloride	50.5	5.0	50	0		101	74-126		0		
Chlorobenzene	47	5.0	50	0		94	79-120		0		
Chloroethane	53.88	10	50	0		108	76-126		0		
Chloroform	51.48	5.0	50	0		103	78-120		0		
Chloromethane	49.03	10	50	0		98.1	69-129		0		
cis-1,2-Dichloroethene	52.69	5.0	50	0		105	80-120		0		
cis-1,3-Dichloropropene	48.63	5.0	50	0		97.3	77-123		0		

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

QC Page: 16 of 23

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

Batch ID: R72145	Instrument ID VOA3		Method:	SW8260			
Dibromochloromethane	45.92	5.0	50	0	91.8	78-122	0
Dibromomethane	49.05	5.0	50	0	98.1	78-120	0
Dichlorodifluoromethane	46.99	5.0	50	0	94	57-140	0
Ethylbenzene	49.6	5.0	50	0	99.2	80-122	0
Hexachlorobutadiene	45.21	5.0	50	0	90.4	75-128	0
Isopropylbenzene	49.31	5.0	50	0	98.6	72-127	0
m,p-Xylene	97.61	10	100	0	97.6	79-122	0
Methyl tert-butyl ether	53.36	5.0	50	0	107	76-121	0
Methylene chloride	50.32	10	50	0	101	70-123	0
n-Butylbenzene	53.47	5.0	50	0	107	77-126	0
n-Propylbenzene	51.36	5.0	50	0	103	79-123	0
Naphthalene	47.99	5.0	50	0	96	71-128	0
o-Xylene	48.69	5.0	50	0	97.4	80-123	0
sec-Butylbenzene	51.48	5.0	50	0	103	80-123	0
Styrene	48.39	5.0	50	0	96.8	78-124	0
tert-Butylbenzene	49.18	5.0	50	0	98.4	79-124	0
Tetrachloroethene	47.9	5.0	50	0	95.8	80-121	0
Toluene	49.8	5.0	50	0	99.6	79-120	0
trans-1,2-Dichloroethene	53.22	5.0	50	0	106	79-122	0
trans-1,3-Dichloropropene	47.42	5.0	50	0	94.8	77-120	0
Trichloroethene	48.54	5.0	50	0	97.1	80-121	0
Trichlorofluoromethane	53.75	5.0	50	0	107	75-126	0
Vinyl chloride	52.41	2.0	50	0	105	76-126	0
Surr: 1,2-Dichloroethane-	d4 53.75	0	50	0	107	70-128	0
Surr: 4-Bromofluorobenze	ene 51.4	0	50	0	103	73-126	0
Surr: Dibromofluorometha	ne 51.79	0	50	0	104	71-128	0
Surr: Toluene-d8	49.84	0	50	0	99.7	73-127	0

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

Batch ID: R72145

0901074

Project:

7007-0001-Big Thicket

Instrument ID VOA3

Method: SW8260

MS Sample ID: 090	01020-08AMS				L	Inits: µg/k	(g	Analys	is Date: 1	/12/2009 (02:04 PN
Client ID:	Run I	D: VOA3 _	090112A		Se	qNo: 1577	7218	Prep Date: 1/12	2/2009	DF: 1	
				SPK Ref			Control	RPD Ref		RPD	
Analyte	Result	MQL	SPK Val	Value		%REC	Limit	Value	%RPD	Limit	Qual
1,1,1,2-Tetrachloroethane	41.14	5.0	50		0	82.3	79-121	0			
1,1,1-Trichloroethane	40.87	5.0	50		0	81.7	79-124	0			
1,1,2,2-Tetrachloroethane	35.63	5.0	50		0	71.3	75-123	0			S
1,1,2-Trichloroethane	38.39	5.0	50		0	76.8	79-120	0			S
1,1-Dichloroethane	38.64	5.0	50		0	77.3	75-124	0			
1,1-Dichloroethene	41.18	5.0	50		0	82.4	80-122	0			
1,1-Dichloropropene	38.27	5.0	50		0	76.5	80-122	0			S
1,2,3-Trichlorobenzene	22.63	5.0	50		0	45.3	74-126	0			S
1,2,3-Trichloropropane	37.53	5.0	50		0	75.1	71-125	0			
1,2,4-Trichlorobenzene	10.09	5.0	50		0	20.2	74-128	0			S
1,2,4-Trimethylbenzene	32.96	5.0	50		0	65.9	79-123	0			S
1,2-Dibromo-3-chloropropane	40.64	5.0	50		0	81.3	66-129	0			
1,2-Dichlorobenzene	33.56	5.0	50		0	67.1	79-120	0			S
1,2-Dichloroethane	39.27	5.0	50		0	78.5	73-121	0			
1,2-Dichloropropane	39.43	5.0	50		0	78.9	76-120	0			130
1,3,5-Trimethylbenzene	32.95	5.0	50		0	65.9	80-123	0			S
1,3-Dichlorobenzene	33.5	5.0	50		0	67	79-120	0			S
1,3-Dichloropropane	38.85	5.0	50		0	77.7	79-120	0			S
1,4-Dichlorobenzene	33.75	5.0	50		0	67.5	77-120	0			S
2,2-Dichloropropane	40.87	5.0	50		0	81.7	75-125	0			
2-Butanone	72.76	10	100		0	72.8	65-130	0			
2-Chlorotoluene	33.62	5.0	50		0	67.2	79-120	0			S
2-Hexanone	71.76	10	100		0	71.8	65-133	0			
4-Chlorotoluene	33.19	5.0	50		0	66.4	80-120	0			S
1-Isopropyltoluene	28.75	5.0	50		0	57.5	80-125	0			S
4-Methyl-2-pentanone	75.44	10	100		0	75.4	69-130	0			
Acetone	194.4	20	100		0	194	53-142	0			S
Benzene	40.13	5.0	50		0	80.3	79-120	0			
Bromobenzene	37.63	5.0	50		0	75.3	80-120	0			S
Bromochloromethane	41.19	5.0	50		0	82.4	78-121	0			
Bromodichloromethane	39.69	5.0	50		0	79.4	79-121	0			
Bromoform	U	5.0	50		0	0	74-122	0			S
Bromomethane	37.87	10	50		0	75.7	68-131	0			
Carbon tetrachloride	44.34	5.0	50		0	88.7	74-126	0			200
Chlorobenzene	39.34	5.0	50		0	78.7	79-120	0			S
Chloroethane	38.04	10	50		0	76.1	76-126	0			
Chloroform	39.8	5.0	50		0	79.6	78-120	0			
Chloromethane	33.29	10	50		0	66.6	69-129	0			S
cis-1,2-Dichloroethene	39.43	5.0	50		0	78.9	80-120	0			S
cis-1,3-Dichloropropene	39.84	5.0	50		0	79.7	77-123	0			

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference >40%

B - Analyte detected in assoc. Method Blank

QC BATCH REPORT

U - Analyzed for but not detected

E - Value above quantitation range

QC Page: 18 of 23

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

Batch ID: R72145	Instrument ID VOA3		Method:	SW8260				
Dibromochloromethane	41.18	5.0	50	0	82.4	78-122	0	
Dibromomethane	41.11	5.0	50	0	82.2	78-120	0	
Dichlorodifluoromethane	38.91	5.0	50	0	77.8	57-140	0	
Ethylbenzene	39.84	5.0	50	0	79.7	80-122	0	S
Hexachlorobutadiene	0.6561	5.0	50	0	1.31	75-128	0	JS
Isopropylbenzene	36.2	5.0	50	0	72.4	72-127	0	
m,p-Xylene	77.17	10	100	0	77.2	79-122	0	S
Methyl tert-butyl ether	37.85	5.0	50	0	75.7	76-121	0	S
Methylene chloride	40.74	10	50	1.189	79.1	70-123	0	
n-Butylbenzene	25.1	5.0	50	0	50.2	77-126	0	S
n-Propylbenzene	32.05	5.0	50	0	64.1	79-123	0	S
Naphthalene	30.3	5.0	50	0	60.6	71-128	0	S
o-Xylene	38.83	5.0	50	0	77.7	80-123	0	S
sec-Butylbenzene	28.09	5.0	50	0	56.2	80-123	0	S
Styrene	39.39	5.0	50	0	78.8	78-124	0	
tert-Butylbenzene	31.05	5.0	50	0	62.1	79-124	0	S
Tetrachloroethene	U	5.0	50	0	0	80-121	0	S
Toluene	40.06	5.0	50	0	80.1	79-120	0	
trans-1,2-Dichloroethene	39.97	5.0	50	0	79.9	79-122	0	
trans-1,3-Dichloropropene	39.68	5.0	50	0	79.4	77-120	0	
Trichloroethene	44.33	5.0	50	0	88.7	80-121	0	
Trichlorofluoromethane	41.19	5.0	50	0	82.4	75-126	0	
Vinyl chloride	39.19	2.0	50	0	78.4	76-126	0	
Surr: 1,2-Dichloroethane-	d4 44.82	0	50	0	89.6	70-128	0	
Surr: 4-Bromofluorobenze	ene 49.07	0	50	0	98.1	73-126	0	
Surr: Dibromofluorometha	ane 46.81	0	50	0	93.6	71-128	0	
Surr: Toluene-d8	46.83	0	50	0	93.7	73-127	0	

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

QC BATCH REPORT

Client:

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

Batch ID: R72145 Instrum	ent ID VOA3)						
MSD Sample ID: 0901020-	08AMSD				U	Inits: µg/K	(g	Analysi	s Date: 1/	12/2009 0	2:32 PM
Client ID:	Run I	D: VOA3_ (090112A		Se	qNo: 157 7	7219	Prep Date: 1/12	/2009	DF: 1	
				SPK Ref			Control	RPD Ref		RPD	
Analyte	Result	MQL	SPK Val	Value		%REC	Limit	Value	%RPD	Limit	Qual
1,1,1,2-Tetrachloroethane	42.56	5.0	50		0	85.1	79-121	41.14	3.4	30	
1,1,1-Trichloroethane	40.47	5.0	50		0	80.9	79-124	40.87	0.969	30	
1,1,2,2-Tetrachloroethane	39	5.0	50	(0	78	75-123	35.63	9.03	30	
1,1,2-Trichloroethane	40.74	5.0	50		0	81.5	79-120	38.39	5.93	30	
1,1-Dichloroethane	39.34	5.0	50		0	78.7	75-124	38.64	1.8	30	
1,1-Dichloroethene	41.71	5.0	50		0	83.4	80-122	41.18	1.29	30	
1,1-Dichloropropene	38.83	5.0	50		0	77.7	80-122	38.27	1.44	30	S
1,2,3-Trichlorobenzene	4.292	5.0	50	(0	8.58	74-126	22.63	0	30	JS
1,2,3-Trichloropropane	39.27	5.0	50		0	78.5	71-125	37.53	4.53	30	
1,2,4-Trichlorobenzene	U	5.0	50	(0	0	74-128	10.09	0	30	S
1,2,4-Trimethylbenzene	32.63	5.0	50		0	65.3	79-123	32.96	0.978	30	S
1,2-Dibromo-3-chloropropane	43.95	5.0	50		0	87.9	66-129	40.64	7.83	30	
1,2-Dichlorobenzene	34.42	5.0	50	(0	68.8	79-120	33.56	2.52	30	S
1,2-Dichloroethane	41.61	5.0	50		0	83.2	73-121	39.27	5.78	30	
1,2-Dichloropropane	41.22	5.0	50		0	82.4	76-120	39.43	4.44	30	
1,3,5-Trimethylbenzene	33.15	5.0	50		0	66.3	80-123	32.95	0.6	30	S
1,3-Dichlorobenzene	34.25	5.0	50	(0	68.5	79-120	33.5	2.22	30	S
1,3-Dichloropropane	41.14	5.0	50	(0	82.3	79-120	38.85	5.73	30	
1,4-Dichlorobenzene	34.31	5.0	50	(0	68.6	77-120	33.75	1.66	30	S
2,2-Dichloropropane	40.99	5.0	50		0	82	75-125	40.87	0.285	30	
2-Butanone	77.93	10	100	(0	77.9	65-130	72.76	6.86	30	
2-Chlorotoluene	34.47	5.0	50	(0	68.9	79-120	33.62	2.5	30	S
2-Hexanone	79.91	10	100	(0	79.9	65-133	71.76	10.8	30	
4-Chlorotoluene	33.71	5.0	50	(0	67.4	80-120	33.19	1.54	30	S
4-Isopropyltoluene	27.34	5.0	50	(0	54.7	80-125	28.75	5.01	30	S
4-Methyl-2-pentanone	87.28	10	100	(0	87.3	69-130	75.44	14.6	30	
Acetone	199.3	20	100	(0	199	53-142	194.4	2.53	30	S
Benzene	40.86	5.0	50	(0	81.7	79-120	40.13	1.79	30	
Bromobenzene	39.86	5.0	50	(0	79.7	80-120	37.63	5.77	30	S
Bromochloromethane	42.66	5.0	50	(0	85.3	78-121	41.19	3.51	30	
Bromodichloromethane	42.15	5.0	50	(0	84.3	79-121	39.69	6	30	
Bromoform	U	5.0	50	(0	0	74-122	0	0	30	S
Bromomethane	35.13	10	50	(0	70.3	68-131	37.87	7.51	30	
Carbon tetrachloride	44.83	5.0	50	(0	89.7	74-126	44.34	1.09	30	
Chlorobenzene	40.93	5.0	50	(0	81.9	79-120	39.34	3.95	30	
Chloroethane	39.37	10	50	(0	78.7	76-126	38.04	3.42	30	
Chloroform	39.86	5.0	50		0	79.7	78-120	39.8	0.161	30	
Chloromethane	35.04	10	50	(0	70.1	69-129	33.29	5.11	30	
cis-1,2-Dichloroethene	40.63	5.0	50		0	81.3	80-120	39.43	3	30	
cis-1,3-Dichloropropene	41.76	5.0	50		0	83.5	77-123	39.84	4.7	30	

ND - Not Detected at the Reporting Limit

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

J - Analyte detected below quantitation limits

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

QC BATCH REPORT

Batch ID: R72145	Instrument ID VOA3		Method:	SW8260						
Dibromochloromethane	44.02	5.0	50	0	88	78-122	41.18	6.66	30	
Dibromomethane	44.47	5.0	50	0	88.9	78-120	41.11	7.85	30	
Dichlorodifluoromethane	37.69	5.0	50	0	75.4	57-140	38.91	3.17	30	
Ethylbenzene	40.5	5.0	50	0	81	80-122	39.84	1.66	30	
Hexachlorobutadiene	U	5.0	50	0	0	75-128	0.6561	0	30	S
Isopropylbenzene	36.84	5.0	50	0	73.7	72-127	36.2	1.77	30	
m,p-Xylene	77.9	10	100	0	77.9	79-122	77.17	0.945	30	S
Methyl tert-butyl ether	40.6	5.0	50	0	81.2	76-121	37.85	7.03	30	
Methylene chloride	34.3	10	50	1.189	66.2	70-123	40.74	17.1	30	S
n-Butylbenzene	23.27	5.0	50	0	46.5	77-126	25.1	7.55	30	S
n-Propylbenzene	32.34	5.0	50	0	64.7	79-123	32.05	0.894	30	S
Naphthalene	33.04	5.0	50	0	66.1	71-128	30.3	8.65	30	S
o-Xylene	39.43	5.0	50	0	78.9	80-123	38.83	1.51	30	S
sec-Butylbenzene	28.21	5.0	50	0	56.4	80-123	28.09	0.434	30	S
Styrene	39.63	5.0	50	0	79.3	78-124	39.39	0.622	30	
tert-Butylbenzene	31.57	5.0	50	0	63.1	79-124	31.05	1.66	30	S
Tetrachloroethene	U	5.0	50	0	0	80-121	0	0	30	S
Toluene	41.15	5.0	50	0	82.3	79-120	40.06	2.69	30	
trans-1,2-Dichloroethene	40.52	5.0	50	0	81	79-122	39.97	1.35	30	
trans-1,3-Dichloropropene	41.56	5.0	50	0	83.1	77-120	39.68	4.62	30	
Trichloroethene	45.46	5.0	50	0	90.9	80-121	44.33	2.51	30	
Trichlorofluoromethane	41.65	5.0	50	0	83.3	75-126	41.19	1.11	30	
Vinyl chloride	40.36	2.0	50	0	80.7	76-126	39.19	2.95	30	
Surr: 1,2-Dichloroethane-	d4 42.9	0	50	0	85.8	70-128	44.82	4.38	30	
Surr: 4-Bromofluorobenze	ne 49.11	0	50	0	98.2	73-126	49.07	0.0828	30	
Surr: Dibromofluorometha	ne 46.42	0	50	0	92.8	71-128	46.81	0.846	30	
Surr: Toluene-d8	47.5	0	50	0	95	73-127	46.83	1.42	30	

The following samples were analyzed in this batch:

0901074-01A

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

0901074

Chloride

Surr: Selenate (surr)

7007-0001-Big Thicket

Project: Batch ID: 33907 Instrument ID ICS3000 Method: E300 MBLK Sample ID: WBLKS1-010909-33907 Units: ma/Ka Analysis Date: 1/12/2009 12:13 PM Client ID: Run ID: ICS3000_090111A SeqNo: 1577801 Prep Date: 1/9/2009 DF: 1 RPD SPK Ref RPD Ref Control Value Limit Value Limit SPK Val %REC %RPD Qual Result MQL Analyte Chloride 2.94 J 5.0 0 0 Surr: Selenate (surr) 47.36 1.0 50 94.7 85-115 LCS Sample ID: WLCSS1-010909-33907 Units: ma/Ka Analysis Date: 1/12/2009 12:36 PM SeqNo: 1577802 Run ID: ICS3000_090111A Prep Date: 1/9/2009 DF: 1 Client ID: RPD SPK Ref Control RPD Ref Value Limit Value Limit SPK Val %REC %RPD Qual Analyte Result MQL Chloride 194.9 5.0 200 0 97.5 90-110 0 0 85-115 0 Surr: Selenate (surr) 47.95 50 95.9 1.0 Sample ID: 0901074-01AMS Units: ma/Ka Analysis Date: 1/12/2009 02:53 PM MS SeqNo: 1577807 Prep Date: 1/9/2009 DF: 1 Client ID: Big Thicket Backfill Run ID: ICS3000_090111A RPD SPK Ref Control RPD Ref Value Value Limit Limit Qual Result MQL SPK Val %REC %RPD Analyte 116.4 10.66 75-125 0 Chloride 5.0 99.5 106 0 80-120 Surr: Selenate (surr) 48.31 1.0 49.75 97.1 0 Sample ID: 0901074-01CDUP Analysis Date: 1/12/2009 02:31 PM DUP Units: mg/Kg Client ID: Big Thicket Backfill Run ID: ICS3000_090111A SeqNo: 1577806 Prep Date: 1/9/2009 DF: 1 RPD SPK Ref RPD Ref Control Value Value Limit Limit %REC %RPD Qual MQL SPK Val Result Analyte

I ne	following	samples	were	analy	zed i	n	this	batch:	

10.78

45.18

0901074-01C

0

49.75

0

0

0

90.8

0-0

85-115

10.66

46.84

1.11

3.59

20

20

5.0

1.0

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

SKA Consulting, L.P.

Work Order:

0901074

Project:

7007-0001-Big Thicket

QC BATCH REPORT

Batch ID: R7	72102	Instrument ID Ba	lance1		Method	d: E160.3							
DUP	Sample ID: 0	901115-01CDUP					U	nits: wt%		Analysi	s Date: 1/	9/2009 10	:00 AM
Client ID:			Run	ID: BALAN	CE1_09010	9A	Sec	qNo: 157 6	321	Prep Date:		DF: 1	
Analyte		Ì	Result	MQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Mois	sture		30.51	0.010	0		0	0	0-0	31.84	4.26	20	

The following samples were analyzed in this batch:

0901074-01D

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

ALS

A ALS Laboratory Group

10450 Standliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887

Chain of Custody Form

Page of I

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49124-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

	rearrant ALS Project Manager:	LACTOR OF THE SALS WORK Order #: (HOO)
Customer Information	Project Information	Parameter/Method Request for Analysis
PurchasesOrders	Troject Names 7007-0001-Big Thicket	A; VOC (8260) Select
A CONTROL OF THE PROPERTY OF T	Project Number.	B; TPH (TX1005)
Company Name SKA Consulting, L.P.	Bill To Company: SKA Consulting, L.P.	5.2 SVOC (8270) Select
Send Heport To	Trent McDaniel	D. Total Metals (6020/7000) RCRA 8
SAFPERSON STATES AND S	Properties of the state of the	F Anions (1056) Chloride
A CONTRACT OF STATE O	Addresses Addresses Suite 605	F Moisture
City/State/Zip: Houston, TX 77042	City/State/Zip Houston, TX 77042	()
2 7 7 2 7 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	100 to 10	**************************************
244.02.02.02.02.02.02.02.02.02.02.02.02.02.	2. A CONTROL OF THE TOTAL (713) 256-0996	E C
****Mail Address**	- Wall Address	P
Sample Description . Factor	teres last Dates and the time of the Matrix of the Press of Bottless	1
Big Thicket Bock Fich	117/09 1210 Soil Neat 6	X X X X X
(A) (1)		
in the second		
9		
12.50		
88		
(0°)		
Samplet(s) Please Print & Sign	Property Shipment Method	では、これには、
Dark	Received by:	Notes: 5 day T.A.T.
Relinquished by: O Date:	Time: And Manager (1769)	# 8.Cooled-tips of Cooled-Tomps OC: Package: (Office One Box Below) #33 ままままま *** *** *** *** *** *** *** ***
Account of the property of t	在京海中上	を
Preservative Keys vel-HGI seg-HNO3 seg 35H2804 sest	4-NaOH : 5-Na2S-0-6-6-NaHSO4-8-6-0-0-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6	等語母 後年 武汉 中日 八八郎 即分祭兵 衛右衛

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

Copyright 2008 by ALS Laboratory Group.

Sample Receipt Checklist

Client Name: SKA				Date/Ti	Date/Time Received: 1/7/2009 15:40		
Work Order Number 0901074				Receive	ed by: RNG		
Checklist completed by Signature	/ 17.07 Date)		Review	red by Minitals	J7/09	
Matrix: water 50 0	Carrier name:	Clien	<u>l</u>				
Shipping container/cooler in good condition?		Yes	✓	No	Not Present		
Custody seats intact on shipping container/coole	ι?	Yes		No	Not Present 🗸		
Custody seals intact on sample bottles?		Yes		No	Not Present 🗸		
Chain of custody present?		Yes	~	No			
Chain of custody signed when relinquished and received?			~	No			
Chain of custody agrees with sample labels?		Yes	~	No			
Samples in proper container/bottle?		Yes	✓	No			
Sample containers intact?		Yes	✓	No			
Sufficient sample volume for indicated test?		Yes	~	No			
All samples received within holding time?		Yes	~	No '			
Container/Temp Blank temperature in compliance?		Yes	~	No			
Temperature(s)/Thermometer(s):		<u>2.7c</u>		002			
Cooler(s)/Kil(s):		1618					
Water - VOA vials have zero headspace?		Yes	~	No	No VOA vials submitted		
Water - pH acceptable upon receipt?		Yes		No	N/A ✓		
	Adjusted?			Checked by			
Login Notes: <u>Trip blank not on COClogged in without analysis.</u>							
Client contacted:	Date contacted:				Person contacted		
Contacted by:	Regarding:						
Comments:	9						

Corrective Action