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JUN 26 2009

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## **REMEDIATION SUMMARY**

#### AND

## SITE CLOSURE REQUEST

Fairway Resources Operating, LLC

South Red Lake II Unit #43

Eddy County, New Mexico UNIT "K" (NE/SW), Section 36, Township 17S, Range 27E Latitude 32.7877800° North, Longitude 104.2350200° West

2RP-188

Prepared For:

Fairway Resources Operating, LLC 538 Silicon Drive, Suite 101 Southlake, Texas 76092

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May 2009

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Project Manager

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#### INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Consulting, LLC (Basin), on behalf of Fairway Resources Operating, LLC (Fairway), has prepared this Remediation Summary and Site Closure Request for the release site known as South Red Lake II Unit #43. The legal description of the release site is NE¼ SW¼ (Unit Letter "K"), Section 36, Township 17 South, Range 27 East, in Eddy County, New Mexico. The property is owned by the State of New Mexico (SLO). The release site GPS coordinates are 32.7877800° North and 104.2350200° West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site Map. The Release Notification and Corrective Action is included as Appendix C.

On June 16, 2008, a leak was discovered in a steel nipple at the South Red Lake II Unit #43 wellhead flowline connection. The Release Notification and Corrective Action (Form C-141) indicates twenty-five (25) barrels (BBL) of a mixture of produced water and crude oil were released as a result of the nipple failure. The C-141 indicates twenty (20) BBL of the mixture of produced water and crude oil were recovered during initial response activities using a vacuum truck. The release net loss was reported at five (5) BBL of the mixture. The area affected by the release measures approximately 20 feet in width and 270 feet in length and included portion of the well pad and the adjacent lease road.

#### NMOCD SITE CLASSIFICATION

As described in Section 3A of the Guidelines for Remediation of Leaks, Spills and Releases (NMOCD, 1993), the following characteristics are used to determine the site soil ranking criteria, which influences the site-specific cleanup standards applicable for this site. The depth to groundwater is between 50 - 100 feet from the base of the impacted zone, resulting in ten (10) points being assigned to the site as a result of this criterion.

The water well database, maintained by the New Mexico Office of the State Engineer (NMOSE), was accessed to determine the location and type of nearby registered water wells in the area. The database indicated there are no water wells less than 1,000 feet from the release, resulting in zero (0) points being assigned to this site as a result of this criterion.

There are no surface water bodies located within 1,000 feet of the site. Based on the New Mexico Oil Conservation Division (NMOCD) ranking system zero (0) points will be assigned to the site as a result of the criterion. The Guidelines indicate the South Red Lake II Unit #43 release site has a ranking score of ten (10). Based on this score, the soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene 10 mg/Kg (ppm)
- BTEX -50 mg/Kg (ppm)
- TPH 1,000 mg/Kg (ppm)

The NMOCD chlorides clean up level concentrations are site specific.

#### SUMMARY OF RECENT FIELD ACTIVITIES

On June 19, 2008, a backhoe was mobilized to the release site to assess the extent of the impacted soil and remove highly saturated soil from the site. Approximately thirty (30) cubic yards (cy) of crude oil and produced water saturated soil was scraped from the flowpath to a depth of approximately eight (8) inches below ground surface (bgs) and transported to an NMOCD approved disposal site.

Following the removal of the saturated soil, three (3) investigation trenches (T-1, T-2 and T-3) were excavated along the release flowpath to assess the vertical extent of the release. Please reference Figure 2 (Site Map) for locations of the investigation trenches.

Investigation Trench T-1 was located on the well pad and was excavated to a depth of approximately two and one half (2.5) feet bgs. A soil sample (T-1 @ 2.5') was collected from the floor of the trench and submitted to the laboratory for determination of the benzene, toluene, ethyl-benzene and xylene (BTEX) concentrations, total petroleum hydrocarbon (TPH) concentration and chloride concentration by methods 8021b, 8015M, and EPA 300, respectively. The analytical results indicated benzene and BTEX concentrations were less than the laboratory method detection limit (MDL) of 0.0012 mg/Kg and 0.0024 mg/Kg, respectively. The TPH concentration of soil sample T-1 @ 2.5' was 183.1 mg/Kg and the chloride concentration was 7,650 mg/Kg. Following the collection of the soil sample the investigation trench was backfilled. A summary of the laboratory results is provided as Table 1, Concentrations of Benzene, BTEX, TPH and Chloride in Soil. Laboratory reports are provided as Appendix A.

Investigation Trench T-2 was located off the well pad on the caliche road adjacent to the well pad and was excavated to a depth of approximately two (2) feet bgs. A soil sample (T-2 @ 2') was collected from the floor of the trench and submitted to the laboratory and analyzed for concentrations of benzene, BTEX, TPH and chloride. The analytical results indicated benzene and BTEX concentrations were less than the laboratory MDL of 0.0012 mg/Kg and 0.0024 mg/Kg, respectively. The TPH concentration of soil sample T-2 @ 2' was less than the laboratory MDL of 17.7 mg/Kg and chloride concentration was 215 mg/Kg. Following the collection of the soil sample the investigation trench was backfilled.

Investigation Trench T-3 was located on the caliche road and was excavated to a depth of approximately four (4) feet bgs. A soil sample (T-3 @ 4') was collected from the floor of the trench and submitted to the laboratory and analyzed for concentrations of benzene, BTEX, TPH and chloride. The analytical results indicated benzene and BTEX concentrations were less than the laboratory MDL of 0.006 mg/Kg and 0.012 mg/Kg, respectively. The TPH concentration of soil sample T-2 @ 2' was less than the laboratory MDL of 18 mg/Kg and the chloride concentration was 639 mg/Kg. Following the collection of the soil sample the investigation trench was backfilled.

In August 2008, a *Soil Investigation Summary and Site Closure Proposal*, dated August 2008 was submitted to the NMOCD – Artesia District Office. The report summarized recent field activities and proposed a strategy designed to provide an NMOCD approved site closure. The

proposed activities were verbally approved by the NMOCD - Artesia District Office and the activities commenced.

Initial excavation activities began on the east side of the South Red Lake II Unit #43 pump jack. Impacted soil was stockpiled on-site pending transportation to Lea Land Landfill located in rural Lea County, New Mexico. During excavation activities on the east side of the pump jack, an area of significantly greater impact was observed on the east sidewall of the east side excavation. This area of impact did not appear to be associated with the South Red Lake II Unit #43 release. The area of significantly greater impact appeared to be associated with a well site located directly east of the South Red Lake II Unit #43 pump jack and sharing the common well pad. Representatives of the NMOCD – Artesia District Office were consulted, observed the east sidewall and concurred with Basin's observations. The NMOCD – Artesia District Office approved the installation of a liner along the east sidewall of the east side excavation. The 20 mil poly-ethylene liner installed on the east sidewall is designed to isolate the significantly greater impacted soil located on the east sidewall from remediation activities conducted at the South Lake II Unit #43 well site.

Following the excavation of the east side area of impact, excavation activities commenced in the larger area of impact located on the west side of the well pad and adjacent lease road. Excavation began on the south end of the impacted area and progressed to the north and west of the release to a depth of approximately six (6) feet bgs. Excavated soil was added to the previously stockpiled soil.

On September 24, 2008, fourteen (14) sidewall soil samples (EW-1, WW-1, EW-2, WW-2, EW-3, WW-3, EW-4, WW-4, NW-5, SW-5, NW-6, SW-6, NW-8 and SW-8) were collected and submitted to the laboratory for benzene, BTEX, TPH and chloride analysis. The analytical results for benzene indicated all fourteen (14) soil samples exhibited concentrations less than the laboratory MDL ranging from less than 0.001 mg/Kg to less than 0.0012 mg/Kg. The analytical results for BTEX indicated all fourteen (14) soil samples exhibited concentrations less than the laboratory MDL ranging from less than 0.0021 mg/Kg to less than 0.0024 mg/Kg. The analytical results for TPH indicated twelve (12) of the fourteen (14) soil samples exhibited concentrations less than the laboratory MDL ranging from less than 15.5 mg/Kg to less than 17.8 mg/Kg. Soil samples EW-4 and NW-6 exhibited TPH concentrations of 19.1 mg/Kg and 16.2 mg/Kg, respectively. Chloride concentrations ranged from less than the laboratory MDL in soil samples EW-1, EW-3, WW-3 and NW-5 to 9,780 in soil sample NW-8.

On September 24, 2008, five (5) excavation floor soil samples (Floor-4, Floor-5, Floor-6, Floor-7 and Floor-8) were collected and submitted to the laboratory for benzene, BTEX, TPH and chloride analysis. The analytical results for benzene indicated all five (5) soil samples exhibited concentrations less than the laboratory MDL ranging from less than 0.001 mg/Kg to less than 0.0013 mg/Kg. The analytical results for BTEX indicated all five (5) soil samples exhibited concentrations less than the laboratory MDL ranging from less than 0.0022 mg/Kg to less than 0.0027 mg/Kg. The analytical results for TPH indicated all five (5) soil samples exhibited concentrations less than the laboratory MDL ranging from less than 17.0 mg/Kg to less than 20.2 mg/Kg. Chloride concentrations ranged from 1,320 mg/Kg in soil sample Floor-4 to 4,580 in soil sample Floor-5.

Following the sampling event, a period of heavy rain was experienced in southeast New Mexico. During the rain event, Fairway experienced a non-reportable release from the South Red Lake II Unit #43 wellhead. The heavy rain, combined with the non-reportable release, filled the existing excavation to capacity. Following the rain event, crude oil staining was observed on the sidewalls and floor of the excavation, invalidating the analytical results of the August 24, 2008 sampling event and requiring additional excavation and confirmation soil sampling.

Additional excavation activities commenced when the soil within the excavation dried sufficiently for work to continue. Approximately one (1) to three (3) feet of additional soil was excavated from the excavation floor and sidewalls and stockpiled on-site. A total of approximately 2,830 cubic yards of impacted soil was transported to Lea Land Landfill (WM-01-035) for disposal.

On December 29, 2008, ten (10) sidewall soil samples (EW #10, SW #10, NW #5A, SW #5A, NW #6A, SW #6A, NW #8A, SW #8A, NW #9, and SW #9) were collected and submitted to the laboratory for TPH and chloride analysis. The analytical results for TPH indicated all ten (10) of the soil samples exhibited concentrations less than the laboratory MDL ranging from less than 15.5 mg/Kg to less than 24.0 mg/Kg. Chloride concentrations ranged from 8.03 mg/Kg in soil sample SW #8A to 1,610 mg/Kg in soil sample SW #5A.

On December 29, 2008, five (5) excavation floor soil samples (Floor #10, Floor #5A, Floor #6A, Floor #8A, and Floor #9) were collected and submitted to the laboratory for TPH and chloride analysis. The analytical results for TPH indicated all five (5) soil samples exhibited concentrations less than the laboratory MDL ranging from less than 16.9 mg/Kg to less than 24.0 mg/Kg. Chloride concentrations ranged from less than the laboratory MDL of 5.79 mg/Kg in soil sample Floor #6A to 1,360 in soil sample Floor #10.

On December 30, 2008, eight (8) sidewall soil samples (EW #1A, WW #1A, EW #2A, WW #2A, EW #3A, WW #3A, EW #4A, and WW #4A) were collected and submitted to the laboratory for TPH and chloride analysis. The analytical results for TPH indicated seven (7) of the soil samples exhibited concentrations less than the laboratory MDL ranging from less than 17.0 mg/Kg to less than 17.9 mg/Kg. Soil sample EW #2 exhibited, Chloride concentrations ranged from 8.03 mg/Kg in soil sample SW #8A to 1,610 mg/Kg in soil sample SW #5A.

On December 30, 2008, five (5) excavation floor soil samples (Floor #1A, Floor #2A, Floor #3A, Floor #4A, and Floor #7A) were collected and submitted to the laboratory for TPH and chloride analysis. The analytical results for TPH indicated three (3) soil samples (Floor #2A, Floor #4A and Floor 7A) exhibited concentrations less than the laboratory MDL ranging from less than 16.9 mg/Kg to less than 17.6 mg/Kg. The analytical results for TPH indicated soil samples Floor #1A and Floor #3A exhibited concentrations of 83 mg/Kg and 3,282 mg/Kg, respectively. Chloride concentrations ranged from 363 mg/Kg in soil sample Floor #7A to 4,690 mg/Kg in soil sample Floor #3A

On January 7, 2009, representatives of Basin met with an NMOCD-Artesia District Office representative at the release site. Basin presented the analytical results of the December 2009 sampling event on behalf of Fairway and requested and received NMOCD approval to install a

polyethylene liner on the floor of the excavation and east sidewall. Following the installation of the liner the excavation was backfilled with local purchased native caliche to approximately two (2) feet bgs. The upper two (2) feet of the excavation was backfilled with caliche on the well pad and road and with over excavated soil deemed suitable by analysis. The affected area was contoured to fit the surrounding topography where contouring was appropriate and areas not on the well pad or in the road will be reseeded when weather conditions are optimal for sustained growth. Photographs of the liner installation and general site photographs are provided as Appendix B.

#### SITE CLOSURE REQUEST

Basin recommends Fairway provide the NMOCD – Artesia District Office a copy of this Remediation Summary and Site Closure Request and request the NMOCD grant a risk-based site closure to the South Red Lake II Unit #43 release.

#### **LIMITATIONS**

Basin Environmental Consulting, LLC has prepared this Remediation Summary and Site Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin Environmental Consulting, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Consulting, LLC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Fairway Resources Operating, LLC. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Consulting, LLC and/or Fairway Resources Operating, LLC.

#### **DISTRIBUTION:**

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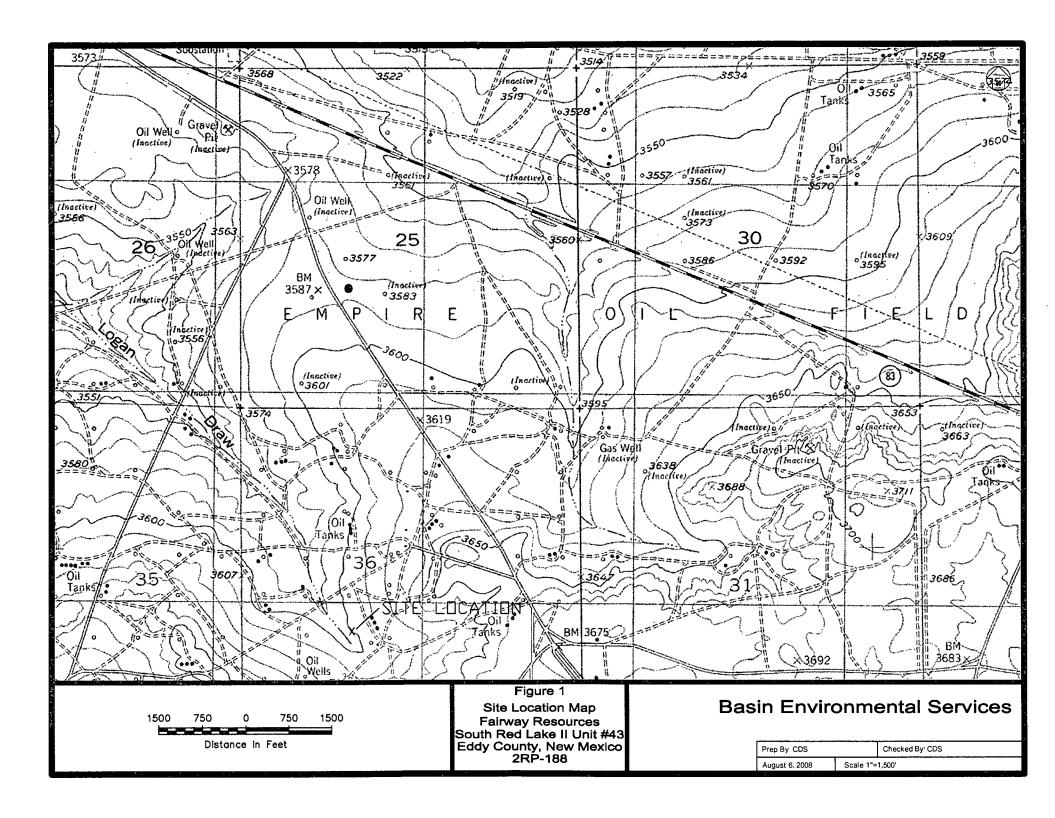
Copy 3: Curt D. Stanley

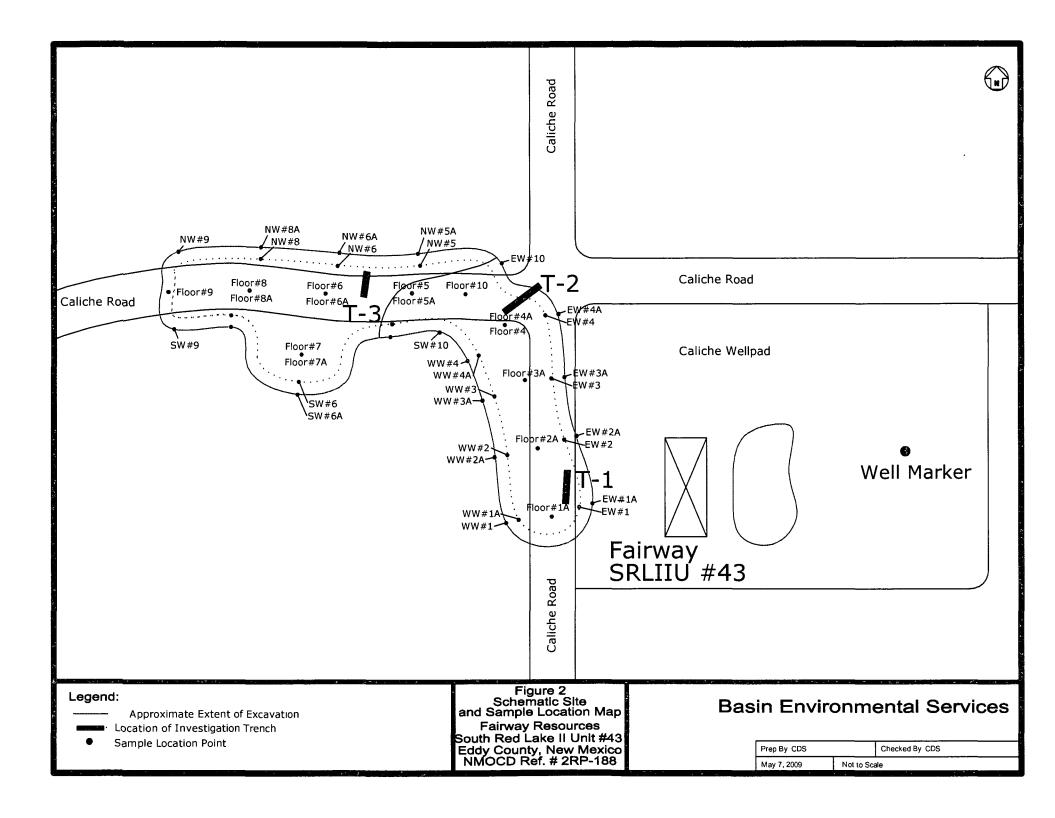
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Tables

Table 1

#### CONCENTRATIONS of Benzene, BTEX, TPH and CHLORIDE IN SOIL Fairway Resources - South Red Lake II Unit #43 EDDY COUNTY, NEW MEXICO 2RP-188

All measurments recorded in mg/Kg

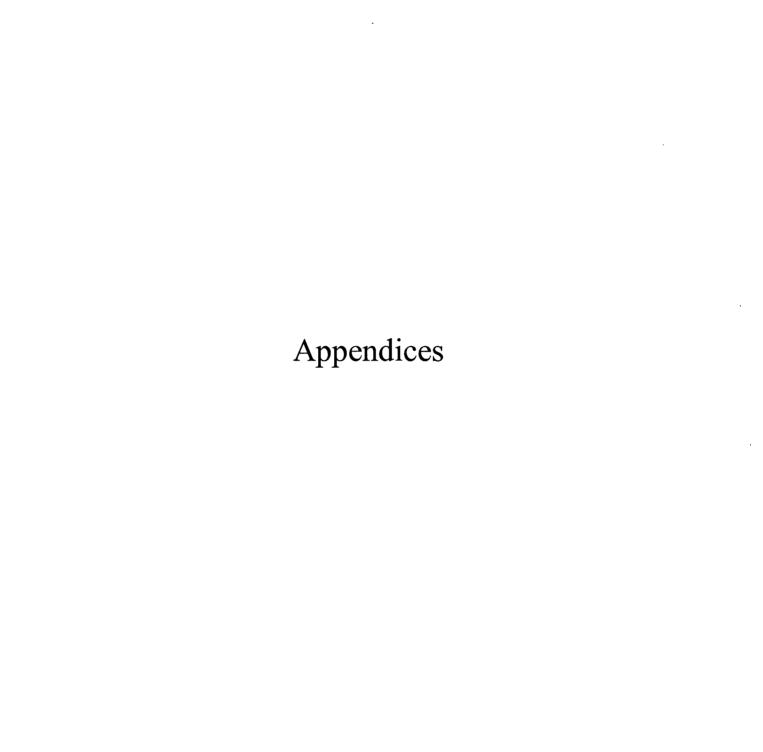
SAMPLE   DATE   DATE									s recorded in 6-8021B, 503				Methods, EP	A SW 846-8015N	1	EPA 300
B681908   F2 @ Z   Zefeb bgs   Pi-Shu   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0112   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   < 0,0012   <	DATE	LOCATION	DEPTH	STATUS	(mg/Kg)	mg/Kg)	ETHYL- BENZENE (mg/Kg)	m,p- XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TOTAL XYLENE (mg/Kg)	(mg/Kg)	C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub>	TOTAL TPH C <sub>6</sub> -C <sub>35</sub>	Chloride (mg/Kg)
																7,650
1982/408   EW-1   5 feet bgs   Excavated   40,0012   40,0023   40,0012   40,0023   40,0023   41,74   41,74			<del></del>													215
99924008 EW-1																639
99924008   WW-1   S feet pgs   Excavaled   400011   400022   400011   400022   400012   40102   400022   4167   4174	/ / / /															2000年
19974008   W-V   2																<115
9992400   WW-2																26 9
			<del></del>													40 4
9992400   WW-3   5 feet bgs   Excavated   CO.011   CO.023   CO.021   CO.023   CO.023   CO.023   CO.023   CT.0																50 3
1992/408   Floor-4																<11 8
1992/408   EW-4   5   feet pgs   Excavated   0   0012   < 0   0023   < 0   0012   < 0   0023   < 0   0023   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0   < 0																<5 65
99/24/08   WW-4														<170		1,320
99/24/08   Floor-5										<0 0023	<0 0023	<173	19.1	<17.3	191	1,070
992408   NW-5											<0 0022	<16 9	<169	<169	<169	148
19924/08   Floor-6   6   feet bgs   Exeavated   <0 0011   <0 0023   <0 0011   <0 0023   <0 0011   <0 0023   <0 0023   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1   <17 1											<0 0023	<172	<17.2	<17.2	<17 2	4,580
99/24/08   SW-5   5   5   5   5   5   5   5   5   5										< 0 0021	<0 0021	<155		<15.5	<15.5	<103
99/24/08   NW-6					<0 0011	<0 0023	< 0 0011	< 0.0023	< 0 0011	<0.0023	<0 0023	<171	<17.1	<17.1	<17.1	1,680
SW-8										<0 0022	<0.0022	<162	<16 2	<16 2	<16.2	1,710
Section   Sect			5 feet bgs	Excavated	<0 0010	<0 0021	< 0 0010	<0.0021	<0 0010	<0 0021	<0 0021	<156	16 2	<15 6	16.2	78 1
Section   Continue			5 feet bgs	Excavated	<0 0011	<0.0023	< 0 0011	<0 0023	< 0 0011	< 0 0023	<0 0023	<169	<169	<16 9	<16.9	390
S9/24/08   NW-8				Excavated	<0 0011	<0.0023	<0 0011	<0.0023	<0.0011	< 0.0023	<0.0023	<17 1	<17 1	<17.1	<17 1	4,250
SW-84    S   Seet bgs   Excavated   C.0.0011   C.0.0023   C.0.0011   C.0.0023   C.0.0013   C.0.0023   C.0.00	09/24/08	Floor-8	6 feet bgs	Excavated	<0 0013	<0.0027	< 0 0013	<0 0027	<0 0013	<0 0027	<0.0027	<20 2	<20 2	<20.2	<20 2	<13.5
12/29/08 EW #10			5 feet bgs	Excavated	<0 0011	<0.0022	< 0 0011	<0 0022	< 0.0011	<0 0022	<0.0022	<164	<164	<16.4	<164	9,780
12/29/08   Floor #10   7 feet bgs   In-Situ   -   -   -   -   -   -   -   -   -			5 feet bgs	Excavated	<0.0011	<0 0023	< 0 0011	<0 0023	< 0.0011	<0 0023	<0 0023	<170	<17 0	<17 0	<17 0	113
12/29/08   EW #10				子类深层	2. 种物性的	17. STE	FART ST.	MEST WEST	100 - 1	(大)() - (4)()	<b>連合の対抗的 さ</b>	4 54 56	建制的铁厂	, " Lin 4 "	6.00	THE PERSON NAMED IN
12/29/08   SW #10			7 feet bgs	In-Situ		-		-		-	-	<171	<17 1	<17.1	<171	1,360
12/29/08   NW #5A			5 feet bgs	In-Situ	-	-		-	-	-	-	<17 2	<17 2	<17.2	<17 2	934
12/29/08   Floor #5A   8   feet bgs   In-Situ			5 feet bgs	In-Situ	-	-		-	-	-		<164	<16 4	<16.4	<16 4	389
12/29/08   SW #5A   5 feet bgs   In-Situ	12/29/08	NW #5A	5 feet bgs	In-Situ	-	-		-	-	-	-	<15.5	<15.5	<15.5	<15.5	326
12/29/08   NW #6A   5 feet bgs   In-Situ			8 feet bgs	In-Situ	-	-	-	-	-	-	-	<174	<17 4	<17.4	<174	179
12/29/08   Floor #6A   8   feet bgs   In-Situ	12/29/08	SW #5A	5 feet bgs	In-Situ	-	-	-	<del>-</del>	-	-		<178	<178	<17.8	<178	1,610
12/29/08   SW #6A   5 feet bgs   In-Situ	12/29/08	NW #6A	5 feet bgs	In-Situ	-	-	-	-	-	-	•	<165	<16.5	<16.5	<165	90
12/29/08   NW #8A   5 feet bgs   In-Situ	12/29/08	Floor #6A	8 feet bgs	In-Situ	-	-	_	-	-	-	-	<174	<17.4	<17 4	<174	<5.79
12/29/08   Floor #8A   8 feet bgs   In-Situ	12/29/08	SW #6A	5 feet bgs	In-Situ	-	-	-	-	-	-	-	<175	<175	<17.5	<175	18.9
12/29/08 SW #8A	12/29/08	NW #8A	5 feet bgs	In-Situ	-	-		-	-	-	-	<170	<17 0			46.5
12/29/08   NW #9   5 feet bgs   In-Situ	12/29/08	Floor #8A	8 feet bgs	In-Situ	-	-	-	-	-	-	-	<169	<169	<16.9	<16.9	77.5
12/29/08   Floor #9   8 feet bgs   In-Situ	12/29/08	SW #8A	5 feet bgs	In-Situ	-	-	-	-	-	-	-	<16.5	<165	<16.5	<16.5	8.03
12/29/08   Floor #9   8   feet bgs   In-Situ   -     -	12/29/08	NW #9	5 feet bgs	In-Situ	-	-	-	-	-	-	-		<169			40 8
12/29/08 SW #9 5 feet bgs In-Situ	12/29/08	Floor #9	8 feet bgs	In-Situ	-	-	-	-	-	-	-					49 1
12/30/08 EW #1A	12/29/08	SW #9	5 feet bgs	In-Situ	-	-		-	-	-	-					13.2
12/30/08   EW #1A   5 feet bgs   In-Situ	13 Jan 2 .	h'#: 1'85 ('E'			540 2 Z	18 M. M	12 1 13 25 1	1. 5-16 - 3 45	N. 102.36	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STATE AND					180 5 m 340
12/30/08     WW #1A     5 feet bgs     In-Situ     -	12/30/08	EW #1A	5 feet bgs		-	-		-	-	-						2,160
12/30/08     Floor #1A     7 feet bgs     In-Situ     - <td></td> <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>692</td>					-	-	-	-	-	-	-					692
12/30/08 EW #2A 5 feet bgs In-Situ 354 1450 206 2,010 12/30/08 WW #2A 5 feet bgs In-Situ					-	-		-	-	-						2,160
12/30/08     WW #2A     5 feet bgs     In-Situ     -					-	-	-	-	-	-	-					4,620
12/30/08         Floor #2A         7 feet bgs         In-Situ         - <t< td=""><td></td><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td></td><td></td><td></td><td></td><td>4,010</td></t<>						-	-	-	-	-	-					4,010
12/30/08 EW #3A 5 feet bgs In-Situ					-	-	-	-	-							3,940
12/30/08 WW #3A 5 feet bgs In-Situ <17.5 <17.5 <17.5 <17.5						-		-	-							3,910
																4,770
1⊿30/00  F1001#3A       feet bus       -5 10   -   -   -   -   -   -   -     59   2310   313   3.282		Floor #3A	7 feet bgs	In-Situ	-	-	-	-	-	-	-	659	2310	313	3,282	4,690
12/30/08 EW #4A 5 feet bgs In-Situ <17.9 <17.9 <17.9						_					-					335

#### Table 1

# CONCENTRATIONS of Benzene, BTEX, TPH and CHLORIDE IN SOIL Fairway Resources - South Red Lake II Unit #43 EDDY COUNTY, NEW MEXICO 2RP-188

All measurments recorded in mg/Kg

				Methods: EPA SW 846-8021B, 5030						Methods. EPA SW 846-8015M				EPA 300	
SAMPLE DATE	SAMPLE LOCATION	SAMPLE DEPTH	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE mg/Kg)	ETHYL- BENZENE (mg/Kg)	m,p- XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TOTAL XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>8</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)	TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	Chloride (mg/Kg)
12/30/08	WW #4A	5 feet bgs	In-Situ	-	-	-	-	- "		-	<170	<17 0	<17 0	<17 0	444
12/30/08	Floor #4A	7 feet bgs	In-Situ	-	-	-	-	-	-	-	<169	<16 9	<16.9	<16.9	1,280
12/30/08	Floor #7A	8 feet bgs	In-Situ	-	-	-	-		-	-	<174	<17 4	<17 4	<17.4	363
12/30/08	Backfill	-	In-Situ	-	-	,	-	-	-	-	<171	<17 1	<17 1	<171	369
Land Santa Con	「大学ない」ではませば	Parts of	7 MEANS	(goera)	N. 21. 18 Ch	3 1 2 1 1 XX	参をみごかい	大学をかずる	き、さらの西	X 1000 1000 1000 1000 1000 1000 1000 10	· M. HUM!		wat start 12 t	1. 2. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	Z-0
NMOCD	REGULATORY STA	ANDARD		10						50				1,000	500



Appendix A Laboratory Reports

# **Analytical Report 306371**

for

## **Basin Enivronmental Services**

**Project Manager: Curt Stanley** 

South Red Lake II Unit # 43
Same

27-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Norcross(Atlanta), GA E87429

South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta





27-JUN-08

Project Manager: Curt Stanley Basin Enivronmental Services

P.O. Box 301

Lovington, NM 88260

Reference: XENCO Report No: 306371

South Red Lake II Unit # 43 Project Address: Artesia, NM

#### **Curt Stanley:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 306371. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 306371 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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# **Sample Cross Reference 306371**



## Basin Enivronmental Services, Lovington, NM

South Red Lake II Unit # 43

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 @ 2.5	S	Jun-19-08 15:00		306371-001
T-2 @ 2'	S	Jun-19-08 15:10		306371-002
T-3 @ 4'	S	Jun-19-08 15:20		306371-003



## Certificate of Analysis Summary 306371

### Basin Enivronmental Services, Lovington, NM

Project Name: South Red Lake II Unit # 43

Project Id: Same
Contact: Curt Stanley

Project Location: Artesia, NM

Date Received in Lab: Mon Jun-23-08 08:35 am

Report Date: 27-JUN-08

Project Manager: Brent Barron, II

							r roject istanager	DIGIT Dation, II	
Lab Id:	306371-0	01	306371-0	02	306371-0	003			
Field Id:	T-1 @ 2.	.5	T-2 @ 2	!'	T-3 @	4'			
Depth:									1
Matrix:	SOIL	1	SOIL		SOIL				
Sampled:	Jun-19-08 1	5:00	Jun-19-08 1	5 10	Jun-19-08	15:20			
Extracted	Jun-23-08 1	5:00	Jun-23-08 I	5:00	Jun-24-08	12:00			
1		1							
1 1		- 1		- 1					
Unity RL.				. 1					
								<del></del>	
		1						<del></del>	
	ND	0 0012	ND	0.0012	ND	0.0060			
	ND		ND		ND	-			
	ND		ND		ND		· · · · · · · · · · · · · · · · · · ·		
Extracted:									
Analyzed:	Jun-24-08 1	0:52	Jun-24-08 1	0:52	Jun-24-08	10 52			
Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL.			
`	7650	238	215	5 90	639	24.0			
Extracted:	***************************************								
Analyzed:	Jun-23-08 1	7.00	Jun-23-08 1	7.00	Jun-23-08	17:00			
Units/RL:	%	RL	%	RL	%	RL			
	159		15.3		167				
Extracted:	Jun-24-08 C	18:48	Jun-24-08 0	8:48	Jun-24-08	08:48			
Analyzed:	Jun-26-08 1	4:10	Jun-26-08 1	4.48	Jun-26-08	15.35			
		1				RL			
	20.3	178	ND	177	ND	18.0			
	133	178	ND	17.7	ND	18.0			
	29 8	178	ND	17.7	ND	18.0			
	183.1		ND		ND				
	Field Id: Depth: Matrix: Sampled: Extracted: Analyzed: Units/RL:  Extracted: Analyzed: Units/RL:  Extracted: Analyzed: Units/RL:	Field Id: T-1 @ 2.  Depth:  Matrix: SOIL.  Sampled: Jun-19-08 1  Extracted: Jun-23-08 1  Analyzed: Jun-24-08 0  ND N	Field Id: T-1 @ 2.5  Depth:  Matrix: SOIL  Sampled: Jun-19-08 15:00  Extracted: Jun-23-08 15:00  Analyzed: Jun-24-08 00:08  MD 0.0012  ND 0.0012  ND 0.0012  ND 0.0012  ND ND  ND  Extracted: Analyzed: Jun-24-08 10:52  Units/RL: mg/kg RL  7650 238  Extracted: Analyzed: Jun-23-08 17:00  Units/RL: % RL  159  Extracted: Jun-24-08 08:48  Analyzed: Jun-26-08 14:10  Units/RL: mg/kg RL  20.3 17 8  133 17 8  29 8 17 8	Field Id:         T-1 @ 2.5         T-2 @ 2           Depth:         Matrix:         SOIL         SOIL           Sampled:         Jun-19-08 15:00         Jun-19-08 1           Extracted:         Jun-23-08 15:00         Jun-23-08 1           Analyzed:         Jun-24-08 00:08         Jun-24-08 0           Units/RL:         mg/kg         RL         mg/kg           ND         0.0012         ND           ND         0.0024         ND           ND         ND         ND           ND         ND         ND           Extracted:         Analyzed:         Jun-24-08 10:52         Jun-24-08 1           Units/RL:         mg/kg         RL         mg/kg           Extracted:         Analyzed:         Jun-23-08 1         mg/kg           Units/RL:         %         RL         %           Extracted:         Jun-24-08 08:48         Jun-23-08 1           Analyzed:         Jun-24-08 08:48         Jun-24-08 08           Analyzed:         Jun-26-08 14:10         Jun-26-08 1           Units/RL:         mg/kg         RL         mg/kg           Lost of the properties of the	Field Id:	Field Id:         T-1 @ 2.5         T-2 @ 2'         T-3 @           Depth:         Matrix:         SOIL         Jun-24-08         Jun-24-08         Jun-24-08         Jun-24-08         Jun-24-08         Jun-24-08         Jun-24-08         MD         MD <th< th=""><th>  Field Id:</th><th>  Lab Id:   306371-001   306371-002   306371-003     Field Id:   T-1 @ 2.5   T-2 @ 2'   T-3 @ 4'     Depth:   Matrix:   SOIL   SOIL   SOIL   SOIL     Sampled:   Jun-19-08 15:00   Jun-19-08 15 10   Jun-19-08 15:20     Extracted:   Jun-23-08 15·00   Jun-23-08 15·00   Jun-24-08 12:00     Analyzed:   Jun-24-08 00·08   Jun-24-08 00·32   Jun-24-08 16·15     Units/RL:   mg/kg   RL   mg/kg   RL   mg/kg   RL     ND 0.0012   ND 0.0012   ND 0.0060     ND 0.0024   ND 0.0024   ND 0.0020     ND 0.0012   ND 0.0012   ND 0.0060     ND 0.0012   ND 0.0012   ND 0.0060     ND 0.0012   ND 0.0012   ND 0.0060     ND ND   ND   ND     ND ND   ND   ND</th><th>  Field Id:</th></th<>	Field Id:	Lab Id:   306371-001   306371-002   306371-003     Field Id:   T-1 @ 2.5   T-2 @ 2'   T-3 @ 4'     Depth:   Matrix:   SOIL   SOIL   SOIL   SOIL     Sampled:   Jun-19-08 15:00   Jun-19-08 15 10   Jun-19-08 15:20     Extracted:   Jun-23-08 15·00   Jun-23-08 15·00   Jun-24-08 12:00     Analyzed:   Jun-24-08 00·08   Jun-24-08 00·32   Jun-24-08 16·15     Units/RL:   mg/kg   RL   mg/kg   RL   mg/kg   RL     ND 0.0012   ND 0.0012   ND 0.0060     ND 0.0024   ND 0.0024   ND 0.0020     ND 0.0012   ND 0.0012   ND 0.0060     ND 0.0012   ND 0.0012   ND 0.0060     ND 0.0012   ND 0.0012   ND 0.0060     ND ND   ND   ND     ND ND   ND   ND	Field Id:

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories XENCO Laboratories assumes no responsibility and makes no warrarnty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron
Odessa Laboratory Director

# XENCO Laboratories

## Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL(PQL) and above the SQL(MDL).
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- \* Outside XENCO'S scope of NELAC Accreditation

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(281) 589-0692 (281) 589-0695 11381 Meadowglen Lane Suite L Houston, Tx 77082-2647 9701 Harry Hines Blvd, Dallas, TX 75220 (214) 902 0300 (214) 351-9139 (210) 509-3334 (210) 509-3335 5332 Blackberry Drive, Suite 104, San Antonio, TX 78238 2505 N. Falkenburg Rd., Tampa, FL 33619 (813) 620-2000 (813) 620-2033 5757 NW 158th St, Miamı Lakes, FL 33014 (305) 823-8500 (305) 823-8555 6017 Financial Dr., Norcross, GA 30071 (770) 449-8800 (770) 449-5477







Work Order #: 306371

Project ID: Same

Lab Batch #: 726318

Sample: 306371-001 / SMP

1 Batch:

Matrix: Soil

SURROGATE RECOVERY STUDY							
Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		[D]					
0.0336	0.0300	112	80-120				
0.0319	0.0300	106	80-120				
	Amount Found [A]	Amount True Found Amount [A] [B]  0.0336 0.0300	Amount   True   Recovery   [A]   [B]   %R   [D]	Found   Amount   Recovery   Limits   %R			

Lab Batch #: 726318

Sample: 306371-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes	, ,		[D]					
1,4-Difluorobenzene	0.0332	0.0300	111	80-120				
4-Bromofluorobenzene	0.0309	0.0300	103	80-120				

Lab Batch #: 726318

**Sample:** 511084-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B  Analytes 4-Difluorobenzene	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes		ĺ	[D]					
1,4-Dıfluorobenzene	0.0306	0.0300	102	80-120				
4-Bromofluorobenzene	0.0355	0.0300	118	80-120				

Lab Batch #: 726318

Sample: 511084-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Dıfluorobenzene	0.0343	0.0300	114	80-120				
4-Bromofluorobenzene	0.0316	0.0300	105	80-120				

Lab Batch #: 726318

Sample: 511084-1-BSD/BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
Analytes  1.4-Difluorobenzene	0.0269	0.0300	90	80~120				
4-Bromofluorobenzene	0.0320	0.0300	107	80-120				

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

<sup>\*\*\*</sup> Poor recoveries due to dilution





Project Name: South Red Lake II Unit # 43

Work Order #: 306371 Project ID: Same

Lab Batch #: 726328 Sample: 306371-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes	İ		{ <b>D</b> }	i				
1,4-Difluorobenzene	0.0347	0.0300	116	80-120				
4-Bromofluorobenzene	0.0307	0.0300	102	80-120				

Lab Batch #: 726328 Sample: 511084-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg SURROGATE RECOVERY STUDY True Control BTEX by EPA 8021B Amount Found Amount Recovery Limits Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0270 0.0300 90 80-120 4-Bromofluorobenzene 0.0323 0.0300 108 80-120

Lab Batch #: 726328 Sample: 511084-1-BLK / BLK Batch: 1 Matrix: Solid

SURROGATE RECOVERY STUDY Units: mg/kg Amount True Control BTEX by EPA 8021B Amount Recovery Limits Flags Found [B] %R %R [D]**Analytes** 1,4-Difluorobenzene 0.0349 0.0300 116 80-120 4-Bromofluorobenzene 0.0299 0.0300 100 80-120

Lab Batch #: 726328 Sample: 511084-1-BSD / BSD Batch: 1 Matrix: Solid

SURROGATE RECOVERY STUDY Units: mg/kg Amount BTEX by EPA 8021B Recovery Flags Limits Found Amount [B] %R %R [A] [D] Analytes 1,4-Difluorobenzene 0.0282 0.0300 94 80-120 4-Bromofluorobenzene 0.0318 0.0300 106 80-120

Lab Batch #: 726418 Sample: 306327-001 S/MS Batch: 1 Matrix: Soil

Units: mg/kg SURROGATE RECOVERY STUDY TPH by SW8015 Mod Amount True Control Limits Found Amount Recovery Flags [A] [B] %R %R [D] Analytes 1-Chlorooctane 83 83.3 100 70-135 o-Terphenyl 47.2 50.0 94 70-135

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43



Work Order #: 306371

Project ID: Same

Lab Batch #: 726418

Sample: 306327-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1-Chlorooctane	83.8	100	84	70-135				
o-Terphenyl	48 2	50.0	96	70-135				

Lab Batch #: 726418

Sample: 306371-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1-Chlorooctane	73.4	100	73	70-135				
o-Terphenyl	41.8	50.0	84	70-135				

Lab Batch #: 726418

Sample: 306371-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes	1	]	[D]	)	)			
I-Chlorooctane	72.6	100	73	70-135				
o-Terphenyl	41.7	50.0	83	70-135				

Lab Batch #: 726418

**Sample:** 306371-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1-Chlorooctane	70.4	100	70	70-135				
o-Terphenyl	40.8	50.0	82	70-135				

Lab Batch #: 726418

Sample: 511165-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
I-Chlorooctanc	79.4	100	79	70-135				
o-Terphenyl	44.3	50.0	89	70-135				

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43



Work Order #: 306371

Project ID: Same

Lab Batch #: 726418

Sample: 511165-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

1103-1-DLK/DLK Bate

SURROGATE RECOVERY STUDY

SURROGATE RECOVERT STUDI					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	11-1	[2]	[D]	, , , ,	
1-Chlorooctane	73 0	100	73	70-135	· <u></u>
o-Terphenyl	41.3	50 0	83	70-135	

Lab Batch #: 726418

**Sample:** 511165-1-BSD / BSD

Batch: 1 Matrix: Solid

SURROGATE RECOVERY STUDY							
Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
80 0	100	80	70-135				
44.1	50.0	88	70-135				
	Amount Found [A]	Amount   True	Amount   True   Recovery   [A]   [B]   %R   [D]     80 0   100   80	Amount   True   Recovery   Limits   %R   [D]			

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



# **Blank Spike Recovery**



Project Name: South Red Lake II Unit # 43

Work Order #: 306371 Project ID: Same

Lab Batch #: 726343Sample: 726343-1-BKSMatrix: SolidDate Analyzed: 06/24/2008Date Prepared: 06/24/2008Analyst: LATCOR

Reporting Units: mg/kg Batch #: BLANK/BLANK SPIKE RECOVERY STUDY Blank Blank Blank **Inorganic Anions by EPA 300** Spike Result Added Spike Limits Flags %R [B] Result %R [A] **Analytes** [D][C] 114 Chloride ND 10.0 11.4 75-125



## **BS / BSD Recoveries**



Project Name: South Red Lake II Unit # 43

RLANK/RLANK SPIKE / RLANK SPIKE DUPLICATE RECOVERY STUDY

Work Order #: 306371

Analyst: BRB **Date Prepared:** 06/23/2008

Project ID: Same **Date Analyzed: 06/23/2008** 

Matrix: Solid

**Lab Batch ID:** 726318

Sample: 511084-1-BKS

Sample: 511084-1-BKS

Batch #: 1

Units:	mg/kg

Units: mg/kg	BEANK/BEANK STIKE / BEANK STIKE DOTEICATE RECOVERT STODI										
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Benzene	ND	0.1000	0.1165	117	0.1	0 0984	98	17	70-130	35	
Toluene	ND	0.1000	0.1152	115	0.1	0.0961	96	18	70-130	35	
Ethylbenzene	ND	0 1000	0.1269	127	01	0.1060	106	18	71-129	35	
m,p-Xylcnes	ND	0.2000	0.2584	129	0.2	0 2165	108	18	70-135	35	
o-Xylene	ND	0.1000	0.1255	126	0.1	0.1044	104	18	71-133	35	

Analyst: BRB

Lab Batch ID: 726328

**Date Prepared:** 06/24/2008

Batch #: 1

**Date Analyzed: 06/24/2008** 

Matrix: Solid

Units: mg/kg

#### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY BTEX by EPA 8021B Blank Spike Blank Blank Blank Blk. Spk Control Control Spike Spike RPD Flag Sample Result Added Spike Spike Dup. Limits Limits Added [A] Result %R Duplicate %R % %R %RPD [D] Result [F] [B] [C] [E] [**G**] **Analytes** Benzene ND 0.1000 0.0998 100 0.1 0.1047 105 5 70-130 35 Toluene 99 0.1 104 5 70-130 35 ND 0.1000 0.0987 0.1035 Ethylbenzene 117 35 ND 0.1000 0.1111 111 0.1 0.1166 5 71-129 m,p-Xylenes ND 0.2000 0.2237 112 0.2 0.2348 117 5 70-135 35 o-Xylene 71-133 0.1138 114 5 ND 0 1000 0 1083 108 0.1 35

Relative Percent Difference RPD = 200\*|(D-F)/(D+F)|Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes



# **BS / BSD Recoveries**



Project Name: South Red Lake II Unit # 43

Work Order #: 306371

Analyst: ASA

Lab Batch ID: 726418

**Date Prepared:** 06/24/2008

Batch #: 1

Project ID: Same

**Date Analyzed:** 06/25/2008

Matrix: Solid

...

Sample: 511165-1-BKS

Units: mg/kg	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result [C]	Blank Spike %R {D}	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	_		[0]	[2]	[2]	resur (r)	[0]				
C6-C12 Gasoline Range Hydrocarbons	ND	1000	840	84	1000	838	84	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	838	84	1000	832	83	1	70-135	35	

Relative Percent Difference RPD = 200\*|(D-F)/(D+F)|
Blank Spike Recovery [D] = 100\*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]
All results are based on MDL and Validated for QC Purposes



## Form 3 - MS Recoveries

Project Name: South Red Lake II Unit # 43



Work Order #: 306371

Lab Batch #: 726343

**Date Analyzed:** 06/24/2008 **QC- Sample ID:** 306370-001 S

Project ID: Same

**Date Prepared:** 06/24/2008

Analyst: LATCOR

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATRIX / MATRIX SPIKE RECOVERY STUDY							
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag		
Chloride	2140	2040	5140	147	75-125	Х		



## Form 3 - MS / MSD Recoveries

nelad

Project Name: South Red Lake II Unit # 43

Work Order #: 306371

Project ID: Same

Lab Batch ID: 726418

726418

**QC- Sample ID:** 306327-001 S

Batch #: 1 Matrix: Soil

**Date Analyzed:** 06/26/2008

**Date Prepared:** 06/24/2008

Analyst: ASA

rrepared. 00/24/2000 Analyst. Ash

Reporting Units: mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Sample		Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1300	1090	84	1300	1090	84	0	70-135	0	
C12-C28 Diesel Range Hydrocarbons	ND	1300	1120	86	1300	1110	85	1	70-135	1	



# **Sample Duplicate Recovery**



Project Name: South Red Lake II Unit # 43

Work Order #: 306371

Project ID: Same Lab Batch #: 726343 **Date Prepared:** 06/24/2008 Analyst: LATCOR **Date Analyzed:** 06/24/2008

**QC- Sample ID:** 306370-001 D Batch #: Matrix: Soil

Reporting Units: mg/kg	SAMPLE / SAMPLE DUPLICATE RECOVERY							
Inorganic Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag			
Analyte		1601						
Chloride	2140	2300	7	20				

Lab Batch #: 726229

**Date Prepared:** 06/23/2008 **Date Analyzed:** 06/23/2008 Analyst: JLG Batch #: QC- Sample ID: 306371-001 D Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY Reporting Units: %

Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	15.9	16.2	2	20	

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17	

Environmental Lab of T	exas		CHAIN 12600 West I 20 Ea	OF CUSTODY RECO	Phone	432-563-1800
Project Manager CUITS	TANCEL		Odessa, Texas 797	765 Project	SOUTH	4)2563-1713 4 REPLAICE
Company Name BASINS	NUISENME	MAL		Pr Pr	oject# SAn	^E
Company Address P.O. Bay				Proje	ethos ARTO	ESIA NM
` .	tou NM				PO #	
Telephone No 575-44	1-22441	Fax No		Report For	mat Standard	TRRP NPDES
Sampler Signature:	2	e-mail	dstanley	@ hasine	NU Cem	_
(lab use only)			1	F	Analy2	
ORDER#: 30/371			Preservation & # of Co	ontainers Matrix 3	TOTAL	
FIELD CODE  OI T-1@ Z.5  OC J-2@ 41	Beginning Depth Ending Depth  Ending Depth  Ending Depth  Ending Depth	7 7 7 Time Sampled	Total # of Contents	Morry (Albace)  However States (Albace)  However States (Albace)  However States (Albace)	TPH TX - 1005	Summonation 417.2 ACTUARDS ALILY A 1900 RELEASE ACTUARDS ALILY A 1900 ROBERT AT PUBLISHED STANDARD ACT
			<del>                                     </del>			<del></del>
			╂╂╁┼┼	<del>                                     </del>	╁╁╄╄┼	╁╁┼┼┼┼┼┼
Special Instructions:  BLUTOE  Authorized by  Confidence of the Co	Received by Received by			Date Time	Laboratory Commer Sample Containers In VOCs Free of Heads! Labels on formatiners Coustody seals on con Custody seals on con Custody seals on con Sample Hand Deliven by Sampler/Client F by Counter? US	mact? N N N N N N N N N N N N N N N N N N N
Relincoished by Date	Time Received by ELO	7111		Date Time	Temporature Lipon Re	A G G C

#### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In						
client. Basin Env.						
Date/ Time 6.73.08 8:35						
Lab ID# 30637\						
Initials						
Sample Receipt 0	`hacklist					
Sample Necellity	MICKINST		Client Initi	ais		
#1 Temperature of container/ cooler?	Y(B)	No	(a.O °C	7		
#2 Shipping container in good condition?	(es)	No		7		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present	7		
#4 Custody Seals intact on sample bottles/ container?	Yesy	No	Not Present	7		
#5 Chain of Custody present?	Yes	No		_		
#6 Sample instructions complete of Chain of Custody?	(es)	No		7		
#7 Chain of Custody signed when relinquished/ received?	Yes	No		7		
#8 Chain of Custody agrees with sample label(s)?	Yes)	No	iD written on Cont / Lid	$\neg$		
#9 Container label(s) legible and intact?	(es)	No	Not Applicable	-		
#10 Sample matrix/ properties agree with Chain of Custody?	y es	No		_		
#11 Containers supplied by ELOT?	(es)	No		-1		
#12 Samples in proper container/ bottle?	Yes	No	See Below			
#13 Samples properly preserved?	Ves.	No	See Below	$\dashv$		
#14 Sample bottles intact?	Yes	No	OCC DEIGN			
#15 Preservations documented on Chain of Custody?	Yes	No	<del></del>	$\dashv$		
#16 Containers documented on Chain of Custody?	Yes	No	<del></del>			
#17 Sufficient sample amount for indicated test(s)?	Yes	No	Sas Balani	$\dashv$		
#18 All samples received within sufficient hold time?	Yes	No	See Below			
	Yes	No	See Below Not Applicable			
#19 Subcontract of sample(s)?	(res)		1			
#20 VOC samples have zero headspace?	(res/	No_	Not Applicable			
Variance Documentation						
Contacted by:		_	Date/ Time.			
Regarding						
Corrective Action Taken:						
		·		<u></u> _		
Check all that Apply  See attached e-mail/ fax Client understands and wou Cooling process had begun			•			

# **Analytical Report 313348**

for

## **Basin Enivronmental Services**

**Project Manager: Curt Stanley** 

South Red Lake II Unit # 43
Fairway Resources

02-OCT-08





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215 - Odessa/Midland, TX T104704215-08-TX

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

Norcross(Atlanta), GA E87429

South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta

Page 1 of 30





02-OCT-08

Project Manager: Curt Stanley Basin Enivronmental Services

P.O. Box 301

Lovington, NM 88260

Reference: XENCO Report No: 313348

South Red Lake II Unit #43

Project Address: East of Artesia, NM

#### **Curt Stanley:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 313348. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 313348 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



# **Sample Cross Reference 313348**



## Basin Enivronmental Services, Lovington, NM

South Red Lake II Unit # 43

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
EW-1	S	Sep-24-08 10:10		313348-001
WW-1	S	Sep-24-08 10:15		313348-002
EW-2	S	Sep-24-08 10:20		313348-003
WW-2	S	Sep-24-08 10:25		313348-004
EW-3	S	Sep-24-08 10:30		313348-005
WW-3	S	Sep-24-08 10:35		313348-006
Floor-4	S	Sep-24-08 10:40		313348-007
EW-4	S	Sep-24-08 10:45		313348-008
WW-4	S	Sep-24-08 10:50		313348-009
Floor-5	S	Sep-24-08 10:55		313348-010
NW-5	S	Sep-24-08 11:00		313348-011
Floor-6	S	Sep-24-08 11:05		313348-012
SW-5	S	Sep-24-08 11:07		313348-013
NW-6	S	Sep-24-08 11:10		313348-014
SW-6	S	Sep-24-08 11:15		313348-015
Floor-7	S	Sep-24-08 11:20		313348-016
Floor-8	S	Sep-24-08 11:25		313348-017
NW-8	S	Sep-24-08 11:30		313348-018
SW-8	S	Sep-24-08 11:35		313348-019



#### Basin Enivronmental Services, Lovington, NM

Project Name: South Red Lake II Unit # 43

nelad

Project Id: Fairway Resources
Contact: Curt Stanley
Project Location: East of Artesia, NM

**Date Received in Lab:** Fri Sep-26-08 02:00 pm **Report Date:** 02-OCT-08

Project Manager: Brent Barron, II

	<del></del>									brem barron,			
	Lab Id:	313348-0	001	313348-	002	313348-0	03	313348-0	004	313348-0	348-005 31 348-005 31 348-005 31 348-005 31 348-005 31 348-005 Sep- 3-08 10·30 Sep- 3-08 16.05 Sep- 3-08 16.05 Sep- 3-08 16.05 Sep- 3-08 19 21 Sep- 3-08 10·0012 ND 0.0012 ND ND ND ND ND Sep- 3-08 15:13 Sep-	313348-	006
Analysis Daguarted	Field Id:	EW-I		ww-	l	EW-2		WW-2		EW-3		WW-3	3
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-24-08	10.10	Sep-24-08	10:15	Sep-24-08	0 20	Sep-24-08	10 25	Sep-24-08	10.30	Sep-24-08	10 35
Anions by EPA 300/300.1	Extracted:					* "							
Amons by E1 A 300/300.1	Analyzed:	Sep-29-08 08:50		Sep-29-08	08.50	Sep-29-08 (	08·50	Sep-29-08	08·50	Sep-29-08	08 50	Sep-29-08	08 50
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		ND	115	26 9	5.57	40 4	116	50.3	112	ND	118	ND	5 65
BTEX by EPA 8021B	Extracted:	Sep-26-08	16.05	Sep-29-08	17.00	Sep-26-08	6:05	Sep-26-08	16 05	Sep-26-08	16.05	Sep-26-08	16.05
	Analyzed:	Sep-26-08	17:27	Sep-29-08	19 50	Sep-26-08	8:35	Sep-26-08	18 58	Sep-26-08	19 21	Sep-26-08	19 44
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0012	ND	0 0011	ND	0.0012	ND	0.0011	ND	0.0012	ND	0 0011
Toluene		ND	0 0023	ND	0 0022	ND	0.0023	ND	0.0022	ND	0.0024	ND	0 0023
Ethylbenzene		ND	0 0012	ND	0.0011	ND	0.0012	ND	0.0011	ND	0.0012	ND	0 0011
m,p-Xylenes			0 0023		0 0022		0.0023		0.0022			ND	0 0023
o-Xylene		ND	0.0012	ND	0.0011	ND	0.0012	ND	0 0011	ND	0.0012	ND	0 0011
Total Xylenes		ND		ND		ND		ND		ND		ND	
Total BTEX		ND		ND		ND		ND		ND		ND	
Percent Moisture	Extracted:												
	Analyzed:	Sep-29-08	15.13	Sep-29-08	15:13	Sep-29-08	.5·13	Sep-29-08	15·13	Sep-29-08	15:13	Sep-29-08	15:13
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		13 3		10.2		13.7		111		156		115	
TPH By SW8015 Mod	Extracted:	Sep-30-08	16·15	Sep-30-08	16:15	Sep-30-08	6.15	Sep-30-08	16·15	Sep-30-08	16:15	Sep-30-08	16.15
111129 5 *** 0012 1.204	Analyzed:	Oct-01-08	03.23	Oct-01-08	03:51	Oct-01-08 (	14·16	Oct-01-08 (	)4·44	Oct-01-08	05·12	Oct-01-08	05·40
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	173	ND	16.7	ND	17.4	ND	169	ND	17.8	ND	169
C12-C28 Diesel Range Hydrocarbons		ND	173	ND	16.7	ND	17.4	ND	16.9	ND	17.8	ND	169
C28-C35 Oil Range Hydrocarbons		ND	17.3	ND	16.7	ND	174	ND	16.9	ND	17.8	ND	16.9
Total TPH		ND		ND		ND		ND		ND		ND	

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Odessa Laboratory Director



#### Basin Enivronmental Services, Lovington, NM

Project Name: South Red Lake II Unit # 43



Project Id: Fairway Resources

Contact: Curt Stanley
Project Location: East of Artesia, NM

Date Received in Lab: Fri Sep-26-08 02:00 pm

Report Date: 02-OCT-08

Project Manager: Brent Barron, II

								110ject 1.12		Dient Danon,			
	Lab Id:	313348-0	007	313348-0	008	313348-0	009	313348-0	010	313348-0	011	313348-	012
Analysis Requested	Field Id:	Floor-	4	EW-4		WW-4		Floor-	5	NW-5	;	Floor-	6
Anutysis Requested	Depth:									ļ			
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	,
	Sampled:	Sep-24-08	10.40	Sep-24-08	10:45	Sep-24-08 1	10.50	Sep-24-08	10 55	Sep-24-08	11.00	Sep-24-08	11:05
Aniana by EDA 200/200 1	Extracted:	<del></del>		-				<u> </u>				•	
Anions by EPA 300/300.1	Analyzed:	Sep-29-08	08:50	Sep-29-08	08:50	Sep-29-08 (	08-50	Sep-29-08 (	08 50	Sep-29-08	08:50	Sep-29-08	08:50
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL .
Chloride	Chilis RE.	1320	28.4	1070	288	148	112	4580	115	ND	103	1680	28.6
BTEX by EPA 8021B	Extracted:	Sep-26-08	16:05	Sep-26-08	16:05	Sep-26-08 1	16.05	Sep-26-08	16.05	Sep-26-08	-	Sep-26-08	16.47
BIEA DY EFA 6021B	Analyzed:	Sep-26-08	20.07	Sep-26-08	20 30	Sep-26-08 2	20.53	Sep-26-08		Sep-26-08		Sep-27-08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0 0011	ND	0 0012		0.0011		0 0011		0.0010	ND	0 0011
Toluene		ND	0.0023	ND	0.0023	ND	0 0022	ND	0 0023	ND	0 0021	ND	0 0023
Ethylbenzene		ND	0.0011	ND	0.0012	ND	0 0011	ND	0.0011	ND	0.0010	ND	0 0011
m,p-Xylenes		ND	0.0023	ND	0 0023	ND	0 0022	ND	0.0023	ND	0.0021	ND	0 0023
o-Xylene			0.0011	ND	0 0012	ND	0 0011	ND	0.0011	ND	0.0010	ND	0 0011
Total Xylenes		ND		ND		ND		ND		, ND		ND	
Total BTEX		ND		ND		ND		ND		ND		ND	
Percent Moisture	Extracted:												
2 02 00110 1:20 2011 0	Analyzed:	Sep-29-08	15:13	Sep-29-08	15.13	Sep-29-08 1	5.13	Sep-29-08	15 13	Sep-29-08	15:13	Sep-29-08	15.13
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		12		13 2		11.1		127		3.08		12 5	
TPH By SW8015 Mod	Extracted:	Sep-30-08	16:15	Sep-30-08	16:15	Sep-30-08 1	6:15	Sep-30-08	6:15	Sep-30-08	16.15	Sep-30-08	16.15
1111 24 2 7 3 7 7 3 1 1 1 3 2	Analyzed:	Oct-01-08	06.06	Oct-01-08 (	06:33	Oct-01-08 0	7:01	Oct-01-08 (	Oct-01-08 07.30 Oct-01-0		08:24	Oct-01-08	08:51
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	17.0	ND	173	ND	169	ND	172	ND	15.5	ND	17.1
C12-C28 Diesel Range Hydrocarbons		ND	17.0	19.1	173	ND	169	ND	172	ND	15.5	ND	17.1
C28-C35 Oil Range Hydrocarbons		ND	17.0	ND	173	ND	169	ND	172	ND	15.5	ND	17.1
Total TPH		ND		191		ND		ND		ND		ND	

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#### Basin Enivronmental Services, Lovington, NM

Project Name: South Red Lake II Unit # 43



Project Id: Fairway Resources

Contact: Curt Stanley Project Location: East of Artesia, NM Date Received in Lab: Fri Sep-26-08 02:00 pm

Report Date: 02-OCT-08

Project Manager: Brent Barron, II

								r roject ivia	mager:	Brent Barron	, 11		
,	Lab Id:	313348-	013	313348-0	)14	313348-0	015	313348-0	016	313348-	017	313348-	018
Anglusia Daguastad	Field Id:	SW-5	5	NW-6		SW-6		Floor-	7	Floor-	8	NW-	8
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	,	SOIL	_
	Sampled:	Sep-24-08	11:07	Sep-24-08	11.10	Sep-24-08	11:15	Sep-24-08	11 20	Sep-24-08	11:25	Sep-24-08	11.30
Anions by EPA 300/300.1	Extracted:												
Amons by E1 A 300/300.1	Analyzed:	Sep-29-08	08:50	Sep-29-08	08:50	Sep-29-08	08:50	Sep-29-08	08·50	Sep-29-08	08.50	Sep-29-08	08:50
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1710	54.1	78.1	10.4	390	11.3	4250	56 9	ND	13 5	9780	219
BTEX by EPA 8021B	Extracted:	Sep-26-08	16:47	Sep-26-08	16:47	Sep-26-08	16-47	Sep-26-08	16.47	Sep-26-08	16.47	Sep-26-08	16:47
D1221 03 B171 0021D	Analyzed:	Sep-27-08	07 05	Sep-27-08	07:27	Sep-27-08	07·50	Sep-27-08	08:13	Sep-27-08	08:35	Sep-27-08	08 58
·	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0011	ND	0 0013	ND	0 0011
Toluene		ND	0 0022	ND	0 0021		0 0023	ND	0.0023	ND	0.0027	ND	0.0022
Ethylbenzene			0 0011		0 0010		0.0011	ND	0 0011	ND	0.0013	ND	0 0011
m,p-Xylenes		ND	0 0022	ND	0 0021		0.0023	ND	0 0023	ND	0.0027	ND	0.0022
o-Xylene			0 0011		0 0010		0 0011		0 0011		0.0013	ND	0 0011
Total Xylenes		ND		ND		ND		ND		ND		ND	
Total BTEX		ND		ND		ND		ND		ND		ND	
Percent Moisture	Extracted:												
	Analyzed:	Sep-29-08	15.13	Sep-29-08	15.13	Sep-29-08	15.13	Sep-29-08	15 13	Sep-29-08	15.13	Sep-29-08	15.13
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		7 59		3.85		11.4		12 1		25 7		8 62	
TPH By SW8015 Mod	Extracted:	Sep-30-08	16:15	Sep-30-08	16:15	Sep-30-08	16.15	Sep-30-08	16.15	Sep-30-08	16:15	Sep-30-08	16 15
11 11 Dy 5 W 5015 W 50	Analyzed:	Oct-01-08	09.18	Oct-01-08	09:45	Oct-01-08	10 12	Oct-01-08	10 40	Oct-01-08	11.08	Oct-01-08	11 35
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.2	ND	156	ND	169	ND	17.1	ND	202	ND	164
C12-C28 Diesel Range Hydrocarbons		ND	16.2	162	156	ND	169	ND	171	ND	202	ND	164
C28-C35 Oil Range Hydrocarbons		ND	16.2	ND	156	ND	169	ND	171	ND	202	ND	164
Total TPH		ND		16.2		ND		ND		ND		ND	

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#### Basin Enivronmental Services, Lovington, NM

Project Name: South Red Lake II Unit # 43



Project Id: Fairway Resources
Contact: Curt Stanley

Project Location: East of Artesia, NM

Date Received in Lab: Fri Sep-26-08 02:00 pm

Report Date: 02-OCT-08

roject Location: East of Artesia, NM							
			<del></del>		Project Manager:	Brent Barron, II	
	Lab Id:	313348-019					
Analysis Requested	Field Id:	SW-8					
Anatysis Requested	Depth:						
	Matrix:	SOIL					
	Sampled:	Sep-24-08 11·35					
Anions by EPA 300/300.1	Extracted:			<del></del>			
Allions by E1 A 500/500.1	Analyzed:	Sep-29-08 08·50					
	Units/RL:	mg/kg RL					
Chloride		113 11.3					
BTEX by EPA 8021B	Extracted:	Sep-26-08 16 47					
212110, 2111 00212	Analyzed:	Sep-27-08 09·21					
	Units/RL:	mg/kg RL				•	
Benzene		ND 0 0011					
Toluene		ND 0.0023					
Ethylbenzene		ND 0.0011					
m,p-Xylenes		ND 0.0023					
o-Xylene		ND 0 0011					
Total Xylenes		ND					
Total BTEX		ND					
Percent Moisture	Extracted:						
	Analyzed:	Sep-29-08 15 13					
	Units/RL:	% RL					
Percent Moisture		118					
TPH By SW8015 Mod	Extracted:	Sep-30-08 16 15				-	
	Analyzed:	Oct-01-08 12.44					
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 170		,			
C12-C28 Diesel Range Hydrocarbons		ND 170					
C28-C35 Oil Range Hydrocarbons		ND 170					
Total TPH		ND					

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# XENCO Laboratorics

## Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL(PQL) and above the SQL(MDL).
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- \* Outside XENCO'S scope of NELAC Accreditation

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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. Falkenburg Rd., Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477



Project Name: South Red Lake II Unit # 43

Work Orders: 313348, Project ID: Fairway Resources

Units: mg/kg	Su	RROGATE RE	COVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Dıfluorobenzene	0.0376	0.0300	125	80-120	**
4-Bromofluorobenzene	0.0261	0 0300	87	80-120	

Lab Batch #: 735513 Sample: 313348-003 / SMP Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY Units: mg/kg Amount True Control BTEX by EPA 8021B Found Amount Recovery Limits Flags [A] [B] %R %R [D] **Analytes** 1,4-Dıfluorobenzene 0.0359 0.0300 120 80-120 4-Bromofluorobenzene 0.0265 0.0300 88 80-120

Lab Batch #: 735513 Sample: 313348-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg SURROGATE RECOVERY STUDY True BTEX by EPA 8021B Amount Control Found Amount Recovery Limits Flags %R %R [A] [B] [D]**Analytes** 1,4-Dıfluorobenzene 0.0319 0.0300 106 80-120 4-Bromofluorobenzene 0.0274 0.0300 91 80-120

Lab Batch #: 735513 Sample: 313348-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg SURROGATE RECOVERY STUDY BTEX by EPA 8021B Amount True Control Limits Found Amount Recovery Flags %R %R [A][B] [D] **Analytes** 1,4-Difluorobenzene 0.0305 0.0300 102 80-120 4-Bromofluorobenzene 0.0254 0.0300 80-120 85

Lab Batch #: 735513 Sample: 313348-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Dıfluorobenzene	0.0368	0 0300	123	80-120	**
4-Bromofluorobenzene	0.0257	0.0300	86	80-120	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43

Work Orders: 313348,

Project ID: Fairway Resources

Lab Batch #: 735513

Sample: 313348-005 / SMP

Matrix: Soil Batch:

Units: mg/kg	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Dıfluorobenzene	0.0359	0.0300	120	80-120				
4-Bromofluorobenzene	0.0267	0.0300	89	80-120				

Lab Batch #: 735513

**Sample:** 313348-006 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
1,4-Difluorobenzene	0.0363	0.0300	121	80-120	**				
4-Bromofluorobenzene	0.0267	0.0300	89	80-120					

Lab Batch #: 735513

Sample: 313348-007 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes	1	'-'	[D]						
1,4-Dıfluorobenzene	0.0360	0.0300	120	80-120					
4-Bromofluorobenzene	0.0276	0.0300	92	80-120					

Lab Batch #: 735513

Sample: 313348-008 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
1,4-Difluorobenzene	0.0360	0.0300	120	80-120					
4-Bromofluorobenzene	0.0251	0.0300	84	80-120					

Lab Batch #: 735513

Sample: 313348-009 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R, [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0.0367	0.0300	122	80-120	**			
4-Bromofluorobenzene	0.0263	0.0300	88	80-120				

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43

Work Orders: 313348, Project ID: Fairway Resources

Lab Batch #: 735513 Sample: 313348-010 / SMP Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0353	0.0300	118	80-120		
4-Bromofluorobenzene	0 0273	0.0300	91	80-120		

Lab Batch #: 735513 Sample: 313348-011/SMP Batch: 1 Matrix: Soil

Units: mg/kg SURROGATE RECOVERY STUDY True Control BTEX by EPA 8021B Amount Limits Flags Found Amount Recovery %R %R [A] [B] [D] **Analytes** 1.4-Dıfluorobenzene 0 0372 0.0300 124 80-120 4-Bromofluorobenzene 0.0260 0.0300 87 80-120

Lab Batch #: 735513 Sample: 516468-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg SURROGATE RECOVERY STUDY Amount True BTEX by EPA 8021B Limits Flags Found Amount Recovery [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0 0299 0.0300 100 80-120 4-Bromofluorobenzene 0.0280 0.0300 93 80-120

Lab Batch #: 735513 Sample: 516468-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg SURROGATE RECOVERY STUDY Amount BTEX by EPA 8021B Limits Flags Found Amount Recovery [A] [B]%R %R [D]**Analytes** \*\* 1,4-Difluorobenzene 0.0369 0.0300 123 80-120 4-Bromofluorobenzene 0.0259 0.0300 80-120 86

Lab Batch #: 735513 Sample: 516468-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg SURROGATE RECOVERY STUI				STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43

Work Orders: 313348,

Project ID: Fairway Resources

Lab Batch #: 735516

Sample: 313348-012 / SMP

Matrix: Soil Batch:

Units: mg/kg SUR			URROGATE RECOVERY STUDY			
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Dıfluorobenzene	0.0361	0.0300	120	80-120		
4-Bromofluorobenzene	0.0279	0.0300	93	80-120		

Lab Batch #: 735516

Sample: 313348-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Dıfluorobenzene	0.0362	0.0300	121	80-120	**	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120		

Lab Batch #: 735516

Sample: 313348-014 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Dıfluorobenzene	0.0363	0.0300	121	80-120	**	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120		

Lab Batch #: 735516

Sample: 313348-015 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0364	0.0300	121 ,	80-120	**		
4-Bromofluorobenzene	0.0270	0.0300	90	80-120			

Lab Batch #: 735516

Sample: 313348-016 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0355	0.0300	118	80-120			
4-Bromofluorobenzene	0.0273	0.0300	91	80-120			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43

Work Orders: 313348,

Project ID: Fairway Resources

Lab Batch #: 735516

Sample: 313348-017 / SMP

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			{D}			
1,4-Difluorobenzene	0.0362	0.0300	121	80-120	**	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120		

Lab Batch #: 735516

Sample: 313348-018 / SMP

Matrix: Soil Batch: 1

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Dıfluorobenzene	0.0354	0.0300	118	80-120		
4-Bromofluorobenzene	0 0272	0.0300	91	80-120		

Lab Batch #: 735516

Sample: 313348-019 / SMP

Batch: 1

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0360	0 0300	120	80-120			
4-Bromofluorobenzene	0.0277	0.0300	92	80-120			

Lab Batch #: 735516

Sample: 313348-019 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Dıfluorobenzene	0.0309	0.0300	103	80-120			
4-Bromofluorobenzene	0.0280	0.0300	93	80-120			

Lab Batch #: 735516

Sample: 313348-019 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	i		[D]			
1,4-Difluorobenzene	0 0303	0.0300	101	80-120	The state of the s	
4-Bromofluorobenzene	0 0295	0.0300	98	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43

Work Orders: 313348,

Project ID: Fairway Resources

Lab Batch #: 735516

**Sample:** 516467-1-BKS / BKS

Matrix: Solid Batch: 1

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0295	0.0300	98	80-120			
4-Bromofluorobenzene	0.0252	0.0300	84	80-120			

Lab Batch #: 735516

Sample: 516467-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes	(12)	101	[D]	/•••			
1,4-Difluorobenzene	0.0365	0.0300	122	80-120	**		
4-Bromofluorobenzene	0.0255	0.0300	85	80-120			

Lab Batch #: 735516

Sample: 516467-1-BSD / BSD

Matrix: Solid Batch: 1

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0297	0.0300	99	80-120		
4-Bromofluorobenzene	0.0276	0.0300	92	80-120		

Lab Batch #: 735599

Sample: 313348-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	↓ SŪ	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes	,	121	[D]				
1,4-Difluorobenzene	0.0376	0.0300	125	80-120	**		
4-Bromofluorobenzene	0.0283	0.0300	94	80-120			

Lab Batch #: 735599

Sample: 313348-002 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found, [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes		(-)	[D]			
1,4-Difluorobenzene	0.0335	0.0300	112	80-120		
4-Bromofluorobenzene	0.0284	0.0300	95	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution Surrogate Recovery [D] = 100 \* A / B



Project Name: South Red Lake II Unit # 43

Work Orders: 313348,

Project ID: Fairway Resources

Lab Batch #: 735599

Sample: 313348-002 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
I,4-Dıfluorobenzene	0 0390	0.0300	130	80-120	**	
4-Bromofluorobenzene	0 0469	0.0300	156	80-120	**	

Lab Batch #: 735599

**Sample:** 516528-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes	,	(2)	[D]	, , ,			
1,4-Dıfluorobenzene	0.0281	0.0300	94	80-120			
4-Bromofluorobenzene	0 0253	0.0300	84	80-120			

Lab Batch #: 735599

Sample: 516528-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount {B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Dıfluorobenzene	0.0369	0.0300	123	80-120	**	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120		

Lab Batch #: 735599

Sample: 516528-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Dıfluorobenzene	0.0283	0.0300	94	80-120				
4-Bromofluorobenzene	0.0254	0.0300	85	80-120				

Lab Batch #: 735860

Sample: 313348-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	115	001	115	70-135		
o-Terphenyl	57.8	50.0	116	70-135		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43

Work Orders: 313348,

Project ID: Fairway Resources

Lab Batch #: 735860

Sample: 313348-001 S / MS

Batch: Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	130	100	130	70-135		
o-Terphenyl	62 7	50.0	125	70-135		

Lab Batch #: 735860

**Sample:** 313348-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg	St	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	125	100	125	70-135			
o-Terphenyl	59.5	50.0	119	70-135			

Lab Batch #: 735860

Sample: 313348-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes	, , , , , , , , , , , , , , , , , , , ,		151		
1-Chlorooctane	118	100	118	70-135	•
o-Terphenyl	58.7	50.0	117	70-135	

Lab Batch #: 735860

Sample: 313348-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
	110					
1-Chlorooctanc	118	100	118	70-135		
o-Terphenyl	58.6	50.0	117	70-135		

Lab Batch #: 735860

Sample: 313348-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	100	93	70-135	
o-Terphenyl	48 4	50.0	97	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43

Work Orders: 313348,

Project ID: Fairway Resources

Lab Batch #: 735860

Sample: 313348-005 / SMP

Matrix: Soil Batch: 1

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	54.8	50.0	110	70-135	

Lab Batch #: 735860

Sample: 313348-006 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	· Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	1	121	[D]	/ / /		
1-Chlorooctane	108	100	108	70-135		
o-Terphenyl	54.7	50.0	109	70-135		

Lab Batch #: 735860

Sample: 313348-007 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		,-,	[D]				
1-Chlorooctane	115	100	115	70-135			
o-Terphenyl	57.4	50.0	115	70-135			

Lab Batch #: 735860

Sample: 313348-008 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	115	100	115	70-135		
o-Terphenyl	57.0	50.0	114	70-135		

Lab Batch #: 735860

Sample: 313348-009 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]		•		
1-Chlorooctane	110	100	110	70-135			
o-Terphenyl	55.1	50.0	110	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43

Work Orders: 313348,

Project ID: Fairway Resources

Lab Batch #: 735860

Sample: 313348-010 / SMP

Matrix: Soil Batch: 1

Units: mg/kg SURROGATE RECOVERY STUDY				STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	55.9	50.0	112	70-135	

Lab Batch #: 735860

Sample: 313348-011 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	114	100	114	70-135			
o-Terphenyl	56.1	50.0	112	70-135			

Lab Batch #: 735860

Sample: 313348-012 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	112	100	112	70-135		
o-Terphenyl	56.1	50.0	112	70-135		

Lab Batch #: 735860

Sample: 313348-013 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	111	100	111	70-135		
o-Terphenyl	55 5	50.0	111	70-135		

Lab Batch #: 735860

Sample: 313348-014 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[ <b>D</b> ]					
I-Chlorooctane	110	100	110	70-135				
o-Terphenyi	54.8	50,0	110	70-135				

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43

Work Orders: 313348,

Project ID: Fairway Resources

Lab Batch #: 735860

Sample: 313348-015 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	116	100	116	70-135				
o-Terphenyl	57 7	50.0	115	70-135				

Lab Batch #: 735860

Sample: 313348-016 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY								
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes		'-'	[D]						
1-Chlorooctane	114	100	114	70-135					
o-Terphenyl	56.8	50.0	114	70-135					

Lab Batch #: 735860

Sample: 313348-017 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY								
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes		''	[D]						
1-Chlorooctane	118	100	118	70-135					
o-Terphenyl	59.3	50.0	119	70-135					

Lab Batch #: 735860

Sample: 313348-018 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	Units: mg/kg			SURROGATE RECOVERY STUDY							
TPH By SW801	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes				(D)							
1-Chlorooctane		118	100	118	70-135						
o-Terphenyl		58 8	50.0	118	70-135						

Lab Batch #: 735860

Sample: 313348-019 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY								
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctanc	113	100	113	70-135					
o-Terphenyl	56.2	50.0	112	70-135					

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit # 43

Work Orders: 313348,

Project ID: Fairway Resources

Lab Batch #: 735860

**Sample:** 516669-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY								
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes		, ,	[D]						
1-Chlorooctane	127	100	127	70-135					
o-Terphenyl	62 1	50.0	124	70-135					

Lab Batch #: 735860

**Sample:** 516669-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes	,	,	[D]					
1-Chlorooctane	117	100	117	70-135				
o-Terphenyl	59.0	50.0	118	70-135				

Lab Batch #: 735860

**Sample:** 516669-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY								
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
1-Chlorooctane	127	100	127	70-135					
o-Terphenyl	60.3	50.0	121	70-135					

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution
Surrogate Recovery [D] = 100 \* A / B



# **Blank Spike Recovery**



Project Name: South Red Lake II Unit # 43

Work Order #: 313348 Project ID: Fairway Resources

Lab Batch #: 735562 Sample: 735562-1-BKS Matrix: Solid

Date Analyzed: 09/29/2008 Date Prepared: 09/29/2008 Analyst: LATCOR

Reporting Units: mg/kg Ratch #: 1 RIANK/RIANK SPIKE RECOVERY ST

Reporting Units: mg/kg Batch #: 1 BLANK /BLANK SPIKE RECOVERY STUDY						STUDY
Anions by EPA 300/300.1	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	Į ĮAĮ		[C]	[D]	701	
Chloride	ND	10.0	8.94	89	75-125	



## **BS / BSD Recoveries**



Project Name: South Red Lake II Unit # 43

**Work Order #:** 313348

Analyst: BRB Date Prepared: 09/26/2008

Project ID: Fairway Resources

**Date Analyzed:** 09/27/2008

**Lab Batch ID:** 735516 **Sample:** 516467-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	}	[B]	[C]	[D]	[E] -	Result [F]	[G]				
Benzene	ND	0.1000	0.0995	100	0.1	0.1012	101	2	70-130	35	
Tolucne	ND	0.1000	0.0942	94	0.1	0.0967	97	3	70-130	35	
Ethylbenzene	ND	0.1000	0.0942	94	0.1	0.0977	98	4	71-129	35	
m,p-Xylenes	ND	0.2000	0.1944	97	0.2	0.2019	101	4	70-135	35	
o-Xylene	ND	0.1000	0.0907	91	0.1	0.0950	95	5	71-133	35	

Analyst: BRB

**Date Prepared:** 09/26/2008

**Date Analyzed:** 09/26/2008

**Lab Batch ID:** 735513

Sample: 516468-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

chits. 8 6											
BTEX by EPA 8021B  Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0 1000	0.1101	110	0.1	0.1101	110	0	70-130	35	
Toluene	ND	0 1000	0.1079	108	0.1	0.1075	108	0	70-130	35	
Ethylbenzene	ND	0.1000	0.1124	112	0.1	0.1117	112	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2326	116	0.2	0.2305	115	1	70-135	35	
o-Xylene	ND	0.1000	0.1055	106	0.1	0.1037	104	2	71-133	35	

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes



## **BS / BSD Recoveries**



Project Name: South Red Lake II Unit # 43

Work Order #: 313348

Analyst: BRB Date Prepared: 09/29/2008

Project ID: Fairway Resources

**Date Analyzed:** 09/29/2008

Lab Batch ID: 735599 Sample: 516528-1-BKS Batch #: 1 Matrix: Solid

Units: mg/kg			K/BLANK	SPIKE / I	BLANK S		LICATE 1	RECOV	ERY STUI	ΟY	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[D]	[C]	[0]	[E]	Kesuit [F]	[6]				
Benzene	ND	0.1000	0.1042	104	0.1	0.1121	112	7	70-130	35	
Toluene	ND	0 1000	0 1005	101	0.1	0.1083	108	7	70-130	35	
Ethylbenzene	ND	0.1000	0.1029	103	01	0 1108	111	7	71-129	35	7
m,p-Xylenes	· ND	0.2000	0.2137	107	0.2	0.2295	115	7	70-135	35	
o-Xylene	ND	0.1000	0.0958	96	0.1	0.1032	103	7	71-133	35	

Analyst: ASA Date Prepared: 09/30/2008 Date Analyzed: 10/01/2008

Lab Batch ID: 735860 Sample: 516669-1-BKS Batch #: 1 Matrix: Solid

Units: mg/kg		BLAN	K/BLANK S	SPIKE / E	BLANK S	SPIKE DUPI	ICATE I	RECOVI	ERY STUD	Y	
TPH By SW8015 Mod  Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	929	93	1000	894	89	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1030	103	1000	997	100	3	70-135	35	

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100\*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]
All results are based on MDL and Validated for QC Purposes



## Form 3 - MS Recoveries

Project Name: South Red Lake II Unit # 43



Work Order #: 313348

Lab Batch #: 735562

**Date Prepared:** 09/29/2008

Project ID: Fairway Resources

Analyst: LATCOR

**Date Analyzed:** 09/29/2008 QC- Sample ID: 313348-001 S

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECOV	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	14-51	101				
Chloride	ND	231	234	101	75-125	



## Form 3 - MS / MSD Recoveries

Project Name: South Red Lake II Unit # 43

Work Order #: 313348

Project ID: Fairway Resources

**Lab Batch ID:** 735513

**QC- Sample ID:** 313348-003 S

Batch #:

Matrix: Soil

**Date Analyzed:** 09/26/2008

**Date Prepared:** 09/26/2008

Analyst: BRB

Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLIČA	TE REC	OVERY	STUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	I
	Result	Added	[C]	%R	Added	Result [F]	%Ř	%	%R	%RPD	İ

BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample		Duplicate Spiked Sample	•	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	ND	0.1158	0.0821	71	0.1158	0 0887	77	8	70-130	35	
Tolucne	ND	0.1158	0.0582	50	0.1158	0.0654	56	11	70-130	35	Х
Ethylbenzene	ND	0 1158	0.0377	33	0.1158	0.0448	39	17	71-129	35	X
m,p-Xylenes	ND	0.2317	0.0739	32	0.2317	0.0877	38	17	70-135	35	Х
o-Xylene	ND	0.1158	0.0354	31	0.1158	0 0417	36	15	71-133	35	Х

Lab Batch ID: 735516

**QC- Sample ID:** 313348-019 S

Batch #:

Matrix: Soil

**Date Analyzed:** 09/27/2008

**Date Prepared:** 09/26/2008

Analyst: BRB

1

Reporting Units: mo/ko

MATRIX CRIVE / MATRIX CRIVE DUDI ICATE DECOVERY CTURY

Reporting Units. mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag	
Analytes	[A]	[B]	[0]	[D]	[E]	Kesun [r]	[G]	/0	, or	/UKI D		
Benzene	ND	0.1134	0.0812	72	0.1134	0.0877	77	7	70-130	35		
Toluene	ND	0.1134	0.0783	69	0.1134	0.0862	76	10	70-130	35	X	
Ethylbenzene	ND	0.1134	0.0795	70	0.1134	0.0880	78	11	71-129	35	X	
m,p-Xylenes	ND	0.2268	0.1646	73	0.2268	0 1823	80	9	70-135	35		
o-Xylene	ND	0.1134	0.0741	65	0.1134	0.0819	72	10	71-133	35	X	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/BRelative Percent Difference RPD = 200\*[(C-F)/(C+F)] Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E



# Form 3 - MS / MSD Recoveries

Project Name: South Red Lake II Unit # 43



Work Order #: 313348

Project ID: Fairway Resources

Lab Batch ID: 735599

**QC- Sample ID:** 313348-002 S

Batch #:

Matrix: Soil

**Date Analyzed:** 09/30/2008

Renorting Units: mg/kg

**Date Prepared:** 09/29/2008

Analyst: BRB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Sample		Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	ND	0.1113	0.0932	84	0 1113	0.0934	84	0	70-130	35	
Toluene	ND	0.1113	0.0860	77	0.1113	0.1094	98	24	70-130	35	
Ethylbenzene	ND	0.1113	0 0794	71	0.1113	0.0993	89	23	71-129	35	
m,p-Xylenes	ND	0.2227	0.1668	75	0.2227	0.2089	94	22	70-135	35	
o-Xylene	ND	0.1113	0.0762	68	0.1113	0.1050	94	32	71-133	35	Х

Lab Batch ID: 735860 **Date Analyzed: 10/01/2008** 

**QC-Sample ID:** 313348-001 S

Batch #:

Matrix: Soil 1

**Date Prepared:** 09/30/2008

Analyst: ASA

Donouting Italian mode

Reporting Units: mg/kg	WATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1150	1060	92	1150	1000	87	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1150	1170	102	1150	1110	97	5	70-135	35	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B Relative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E



# **Sample Duplicate Recovery**



Project Name: South Red Lake II Unit # 43

Work Order #: 313348

Lab Batch #: 735562 Project ID: Fairway Resources

 Date Analyzed: 09/29/2008
 Date Prepared: 09/29/2008
 O9/29/2008
 Analyst: LATCOR

 QC- Sample ID: 313348-001 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg SAMPLE / SAMPLE DUPLICATE RECOVERY

Anions by EPA 300/300.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	ND	ND	NC	20	

 Lab Batch #: 735506

 Date Analyzed: 09/29/2008
 Date Prepared: 09/29/2008
 O9/29/2008
 Analyst: WRU

 QC- Sample ID: 313348-001 D
 Batch #: 1
 Matrix: Soil

Reporting Units: % SAMPLE / SAMPLE DUPLICATE RECOVERY **Percent Moisture** Parent Sample Sample Control Duplicate RPD Limits Result Flag Result %RPD [A] [B] Analyte 13.3 Percent Moisture 13.2 20

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#### **Environmental Lab of Texas**

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

A Xenco Laboratories Company

12600 West I-20 East Odessa, Texas 79768 Phone: 432-563-1800 Fax: 432-563-1713

	Project Manager	Curt Stanley	Page	1 0! 2											-	Pro	oject	Nan	ne: <u>S</u>	out	h Re	ed L	_ake	ا ا	nıt #	43				
	Company Name	Basin Environmental								_					~		Pro	ojeci	#: <u>F</u>	airv	vay	Res	50ur	ces						
	Company Address	P O Box 301													_	P	roje	ct L	oc: <u>E</u>	ast	of Ar	tesi	a, NA	1						
	City/State/Zip	Lovington, New Mexico 88	260				_											PO	£						_					
	Telephone No	575-441-2244				Fax No		575-	396-t	429		Ī			- R4	eport	Fon	mat	[	X):	Stani	dard			TRI	RP		] N	POES	 S
	Sampler Signature:	C #12000	15	7	on the	e-mail.	_									_							<del></del>							
(lab use	only)		k.		1	p.												_		TC	LΡ	Ans	ly28 1	For	Ţ		Т	T	┨,	
ORDER	3/3	348						г	Pre	derve	tion &	# of 1	Contain	m/3	Ma	trix		_	_	TOT	-	-	Ŧ	-	} '				ž	1
LAB & (tab use onty)		LD COD€	Beginning Depth	Ending Depth	Date Sampled	Twne Sampled	Feid Fittand	otal # of Conference	HING		7		δ	Other ( Soecity)	P-Bullboard	Specify Cither	TPH 4181 (6015M ) 8015B	TPH TX 1805 TX 1006	Catterns (Co., Mg, Ma, K)	Asions (Cl. BOA, Alkabring)	SPICEC	Metals As Ag Ba Cd Cr Pts Hg Sa	Voietiles	BIEX (62) BISO30 34 BIEX 6260	RCI	NORM	Chlorides EPA 300	HOLD	TAT (Pre-Bichedule) 24.	Standard TAT
51		EW-1			9/24/2008	1010		1 3	x					1	1	: ]	х	7			1	T	T	X	1		х	Ι	L	X
52		WW-1			9/24/2008	1015		1 3	x	I					5	٠,	х	1	$\perp$				$\perp$	X	$\square$		x		L	x
03		EW-2			9/24/2008	1020		1 1	ĸ.						<		х	$\Box$	Ι		Ι	J.	I	X			X			X
04		NW-2			9/24/2008	1025		1 3	ĸ	Τ			$\top$	Τ	S	<u>~</u>	x	П	T	Т	Т	Т	T	x			х	$\mathbf{I}$	L	x
25		EW-3			9/24/2008	1030	П	1 3	κ					Т	=	5	х	T		T	T	Т	Т	x			x	I	L	x
OW	,	MVV-3			9/24/2008	1035		, ,	K					T	5		x				T	Ţ	T	X			х		L	X
61	F	loor-4			9/24/2008	1040		1 ,	K	Γ					=	-	x	7	$\top$		$\top$	T	Τ	X	П		х	L	L	X
୦୫		EW-4			9/24/2008	1045		ıĮ,	(	Γ			m T	Τ	S		X				Ι	Ι	Ι	X			X		L	x
29	V	WW-4			9/24/2008	1050		1 )	(L					Ţ	~	5	X	T			1	I	$\perp$	x	$\square$		X		L	x
ΙÚ	F	loor-5			9/24/2008	1055		1	$\mathbf{I}^{-}$					Ι	≤		x						$\perp$	X	$\square$		x	L	L	x
Reinquen Reinquen		BILL TO BASIN	7 40	50	Received by						• •		Ţ		ate		Time		aboi Samp VOCs .abel: Custo Custo Samp	le C Fre s on dy s dy s le H	ontal e of cont eals eals	Hear taine on c on c Deir	s inta idspa er(s) conta coole verec	nct? nce? nner( rr(s)	5)		St. (PO)		2 2 <b>E JE 2</b> 2 2	;
Raimqurah	ed by	Date	Ter	inés	Received by ELO		21	n					9		ان م		Time	υ <sup>7</sup>		Con	ner?		nt Red	ĎS.	DHL	L 	FedE			¥

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#### **Environmental Lab of Texas**

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Phone: 432-563-1800

Fax: 432-563-1713

A Xenço Laboratories Company 12609 West I-20 East Odessa, Texas 79765

Project Name: South Red Lake It Unit #43 Project Manager Curt Stanley Page 2 of 2 Company Name Basin Environmental Project # Fairway Resources Company Address P O Box 301 Project Loc' East of Artesia, NM City/State/Zip Lowington, New Mexico 88260 ☐ NPDES X Standard TRRP Fax No. Talephone No 575-396-1429 Sampler Signature Analyze For (lab use only) TOTAL 313348 ORDER # Preservation & # of Centainers Matrix ginning Depth Time Sampled dang Depth LAB # (lab use Date FÆLD CODE 11 NVV-5 9/24/2008 1100 Soil 11 Floor-6 9/24/2008 1105 Soil 13 SW-5 9/24/2008 1107 Soil 14 9/24/2008 1110 NW-6 Soil 15 SW-6 9/24/2008 1115 Soil 14 9/24/2008 1120 Soil Floor-7 17 9/24/2008 1125 Soil Floor-8 13 NW-8 9/24/2008 1130 Soil 101 SW-8 9/24/2008 1135 Spil x Laboratory Comments Special Instructions. Con Control BILL TO BASIN Sample Containers Intact? z z z 3 VOCs Free of Headspace? Labels on container(s) custody seals on container(s) Y DD N N N FedEx Lone Star Custody seals on cooler(s) Sample Hand Delivered by Sampler/Clarif Rep ?
by Course? UPS DHL Reinquished by Lam 9 26 00/14 W 40 andrea

#### **Environmental Lab of Texas**

	Variance/ Corrective Action Rep	oort- Sample	Log-In	1
Client	PRISIN ENV.			
Date/ Time	9 26 08 14.00			
Lab ID#	313348			
Initials	aL			
	Sample Receipt	Checklist		Client initials
#1 Temperat	ture of container/ cooler?	(es)	No	40 °C
	container in good condition?	(Yes)	No	
,	Seals intact on shipping container/ cooler?	Yes	No	Not Present
	Seals intact on sample bottles/ container?	(Ves)	No	Not Present
	Custody present?	Yes	No	
	nstructions complete of Chain of Custody?	Yes	No	
	Custody signed when relinquished/ received?	(Yes)	No	
	Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont / Lid
	r label(s) legible and intact?	(es)	No	Not Applicable
	matrix/ properties agree with Chain of Custody?	Yes	No	Not Applicable
	ers supplied by ELOT?	Tes l	No	
	s in proper container/ bottle?	(G)	No	See Below
	s properly preserved?	(Yes	No	
			No	See Below
#14 Sample		(Yes)		
	ations documented on Chain of Custody?	(Yes)	No	
	ers documented on Chain of Custody?	Yes	No_	
	nt sample amount for indicated test(s)?	(Yes)	No	See Below
	oles received within sufficient hold time?	₹68′	No	See Below
	ract of sample(s)?	Yes	No	Not Applicable >
#20 VOC sai	mples have zero headspace?	Yes	No	Not Applicable
Contact	<b>Variance Docu</b> Contacted by	mentation		Date/ Time
Regarding				
ga.ong				
Corrective Ac	tion Taken.			
Check all that	t Apply: See attached e-mail/ fax Client understands and wou Cooling process had begun	-		-

# **Analytical Report 321400**

for

## **Basin Enivronmental Services**

**Project Manager: Curt Stanley** 

South Red Lake II Unit #43
Fairway Resources

31-DEC-08





#### 12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Norcross(Atlanta), GA E87429

South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta





31-DEC-08

Project Manager: Curt Stanley Basin Enivronmental Services

P.O. Box 301

Lovington, NM 88260

Reference: XENCO Report No: 321400

South Red Lake II Unit #43
Project Address: East of Artesia

#### **Curt Stanley:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 321400. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 321400 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



## **Sample Cross Reference 321400**



# Basin Enivronmental Services, Lovington, NM

South Red Lake II Unit #43

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Floor #10	S	Dec-29-08 14:00		321400-001
EW #10	S	Dec-29-08 14:05		321400-002
SW #10	S	Dec-29-08 14:10		321400-003
NW #5A	S	Dec-29-08 14:15		321400-004
Floor #5A	S	Dec-29-08 14:20		321400-005
SW #5A	S	Dec-29-08 14:25		321400-006
NW #6A	S	Dec-29-08 14:30		321400-007
Floor #6A	S	Dec-29-08 14:35		321400-008
SW #6A	S	Dec-29-08 14:40		321400-009
NW #8A	S	Dec-29-08 14:45		321400-010
Floor #8A	S	Dec-29-08 14:50		321400-011
SW #8A	S	Dec-29-08 14:55		321400-012
NW #9	S	Dec-29-08 15:00		321400-013
Floor #9	S	Dec-29-08 15:05		321400-014
SW #9	S	Dec-29-08 15:10		321400-015



#### Basin Enivronmental Services, Lovington, NM

Project Name: South Red Lake II Unit #43



Project Id: Fairway Resources

Contact: Curt Stanley

Project Location: East of Artesia

Date Received in Lab: Tue Dec-30-08 08:45 am

Report Date: 31-DEC-08

Project Manager: Brent Barron, II

								I Toject Min	145011	Dient Duron,			
	Lab Id:	321400-0	001	321400-0	02	321400-0	03	321400-0	04	321400-0	005	321400-00	06
Analysis Danuastad	Field Id:	Floor #1	0	EW #10		SW #10		NW #5A		Floor #5A		SW #5A	
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-29-08	14.00	Dec-29-08	14.05	Dec-29-08 1	14:10	Dec-29-08 I	4 15	Dec-29-08	14 20	Dec-29-08 1	4.25
Anions by EPA 300	Extracted:												
ranions by 111 14 500	Analyzed:	Dec-30-08	Dec-30-08 12.07		Dec-30-08 12:07		Dec-30-08 12:07		Dec-30-08 12:07		12 07	Dec-30-08 12:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1360	22 8	934	11.4	389	10.9	326	103	179	11.6	1610	23 7
Percent Moisture	Extracted:												
2 02 00110 1/20100112 0	Analyzed:	Dec-30-08 17:00		Dec-30-08 17:00		Dec-30-08 17:00		Dec-30-08 17 00		Dec-30-08 17.00		Dec-30-08 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		12.2		12 6		8.37		3.19		13.7		157	
TPH By SW8015 Mod	Extracted:	Dec-30-08	09:50	Dec-30-08 09:50		Dec-30-08 09 50		Dec-30-08 09.50		Dec-30-08	09:50	Dec-30-08 0	9.50
III by Swoots nice	Analyzed:	Dec-30-08	13·39	Dec-30-08	4:05	Dec-30-08 14·31		Dec-30-08 l	14 57	Dec-30-08	15.23	Dec-30-08 1	5·48
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	17.1	ND	172	ND	164	ND	155	ND	17.4	ND	178
C12-C28 Diesel Range Hydrocarbons		ND	17.1	ND	172	ND	164	ND	15 5	ND	17.4	ND	178
C28-C35 Oil Range Hydrocarbons		ND	17.1	ND	172	ND	16.4	ND	15 5	ND	174	ND	178
Total TPH		ND	17.1	ND	17.2	ND	16.4	ND	155	ND	17.4	ND	178

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount involved for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi



#### Basin Enivronmental Services, Lovington, NM

Project Name: South Red Lake II Unit #43



Project Id: Fairway Resources

Contact: Curt Stanley

Project Location: East of Artesia

Date Received in Lab: Tue Dec-30-08 08:45 am

Report Date: 31-DEC-08

Project Manager: Brent Barron, II

								1 Toject Mia		Dient Darion,			
	Lab Id:	321400-0	007	321400-0	08	321400-009		321400-010		321400-011		321400-012	
Analysis Requested	Field Id:	NW #62	A	Floor #6A		SW #6A		NW #8A		Floor #8A		SW #8A	١.
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-29-08 l	Dec-29-08 14:30 De		4.35	Dec-29-08 1	14·40	Dec-29-08	14:45	Dec-29-08 14 50		Dec-29-08 14.55	
Anions by EPA 300	Extracted:												
	Analyzed:	Dec-30-08	12:07	Dec-30-08	2 07	Dec-30-08 1	12 07	Dec-30-08	12:07	Dec-30-08	12.07	Dec-30-08 1	2 07
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		900	11.0	ND	5.79	189	5 84	46.5	5.67	77 5	11.2	8.03	5.50
Percent Moisture	Extracted:												
	Analyzed:	Dec-30-08	17.00	Dec-30-08	17:00	Dec-30-08 1	17:00	Dec-30-08	17:00	Dec-30-08	17.00	Dec-30-08 1	7:00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9 32		13 7		144		11.8		11		9.16	
TPH By SW8015 Mod	Extracted:	Dec-30-08 (	09 50	Dec-30-08 09:50		Dec-30-08 09·50		Dec-30-08 09.50		Dec-30-08	09:50	Dec-30-08 0	9.50
	Analyzed:	Dec-30-08	16.14	Dec-30-08 1	6:39	Dec-30-08 17:04		Dec-30-08	17 53	Dec-30-08	18:20	Dec-30-08 1	8:46
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16 5	ND	17.4	ND	17.5	ND	170	ND	169	ND	16 5
C12-C28 Diesel Range Hydrocarbons		ND	16.5	ND	17.4	ND	17.5	ND	170	ND	169	ND	16 5
C28-C35 Oil Range Hydrocarbons		ND	165	ND	17.4	ND	17 5	ND	170	ND	169	ND	16.5
Total TPH		ND	16.5	ND	174	ND	17.5	ND	170	ND	16.9	ND	16.5

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is finated to the amount involved for this work order unless otherwise agreed to in writing.

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#### Basin Enivronmental Services, Lovington, NM

Project Name: South Red Lake II Unit #43



Project Id: Fairway Resources

Contact: Curt Stanley
Project Location: East of Artesia

Date Received in Lab: Tue Dec-30-08 08:45 am

Report Date: 31-DEC-08

Project Manager: Brent Barron, II

								Project Manager:	Bielli Balloli, II	
	Lab Id:	321400-0	13	321400-0	14	321400-0	15			
Analysis Danuarted	Field Id:	NW #9	,	Floor #	9	SW #9	1			
Analysis Requested	Depth:		}							
,	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Dec-29-08	5 00	Dec-29-08 1	5.05	Dec-29-08 1	15 10			
Anions by EPA 300	Extracted:									
	Analyzed:	Dec-30-08	12 07	Dec-30-08 1	2:07	Dec-30-08	12:07			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		40 8	5 65	49.1	32 0	13.2	5.57			
Percent Moisture	Extracted:									
Toront Madistare	Analyzed:	Dec-30-08	17 00	Dec-30-08 I	7:00	Dec-30-08	17 00			
	Units/RL:	%	RL	%	RL	%	RL			
Percent Moisture		115		37.5		10.3				
TPH By SW8015 Mod	Extracted:	Dec-30-08	09:50	Dec-30-08 09 50		Dec-30-08 (	09 50			
	Analyzed:	Dec-30-08	19.12	Dec-30-08 1	9:39	Dec-30-08 20-06				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
C6-C12 Gasoline Range Hydrocarbons		ND	169	ND	24.0	ND	167			
C12-C28 Dicsel Range Hydrocarbons		ND	169	ND	24.0	ND	167			
C28-C35 Oil Range Hydrocarbons		ND	169	ND	24.0	ND	167			
Total TPH		ND	169	ND	24.0	ND	167			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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## Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \* Outside XENCO's scope of NELAC Accreditation.

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Project Name: South Red Lake II Unit #43

Work Orders: 321400,

Project ID: Fairway Resources

Lab Batch #: 745197

Sample: 321400-001 / SMP

Matrix: Soil Batch:

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	102	100	102	70-135				
o-Terphenyl	51.7	50.0	103	70-135				

Lab Batch #: 745197

Sample: 321400-001 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes	[-1	(-1	[D]					
1-Chlorooctane	127	100	127	70-135				
o-Terphenyl	54.6	50.0	109	70-135				

Lab Batch #: 745197

Sample: 321400-001 SD / MSD

Batch: 1

Matrix: Soil

TPH By SW8015 Mod  Analytes	SU	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
1-Chlorooctane	169	100	169	70-135	**				
o-Terphenyl	70.9	50.0	142	70-135	**				

Lab Batch #: 745197

Sample: 321400-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1-Chlorooctane	104	100	104	70-135	-			
o-Terphenyl	52 5	50,0	105	70-135	-			

Lab Batch #: 745197

Sample: 321400-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1-Chlorooctane	102	100	102	70-135				
o-Terphenyl	51.2	50.0	102	70-135				

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit #43

Work Orders: 321400,

Project ID: Fairway Resources

Lab Batch #: 745197

Sample: 321400-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
I-Chlorooctane	101	100	101	70-135					
o-Terphenyl	50.4	50.0	101	70-135					

Lab Batch #: 745197

Sample: 321400-005 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	11		[D]			
1-Chlorooctane	101	100	101	70-135		
o-Terphenyl	51.1	50.0	102	70-135		

Lab Batch #: 745197

Sample: 321400-006 / SMP

Batch: 1

1 Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]		İ		
1-Chlorooctane	101	100	101	70-135			
o-Terphenyl	51.1	50.0	102	70-135			

Lab Batch #: 745197

19/ Sampl

**Sample:** 321400-007 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
			[D]				
1-Chlorooctane	101	100	101	70-135			
o-Terphenyl	51.3	50.0	103	70-135			

Lab Batch #: 745197

**Sample:** 321400-008 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	100	100	100	70-135		
o-Terphenyl	50.7	50,0	101	70-135		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit #43

Work Orders: 321400,

Project ID: Fairway Resources

Lab Batch #: 745197

Sample: 321400-009 / SMP

Matrix: Soil Batch:

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane	100	100	100	70-135					
o-Terphenyl	50.8	50.0	102	70-135					

Lab Batch #: 745197

Sample: 321400-010 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes	(**)		[D]						
1-Chlorooctane	101	100	101	70-135					
o-Terphenyl	51.2	50.0	102	70-135					

Lab Batch #: 745197

Sample: 321400-011 / SMP

Batch: 1

Matrix: Soil CHIDDOCATE DECOVEDY CTHOV

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
Analytes  I-Chlorooctane	100	100	100	70-135					
o-Terphenyl	51.0	50.0	102	70-135					

Lab Batch #: 745197

Sample: 321400-012 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY								
TPH By SW8015 Mod  Analytes  Chlorooctane	Amount Found [A]								
Analytes		. ,	[D]						
1-Chlorooctane	98.2	100	98	70-135					
o-Terphenyl	50.1	50 0	100	70-135					

Lab Batch #: 745197

Sample: 321400-013 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane	100	100	100	70-135					
o-Terphenyl	51 0	50.0	102	70-135					

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: South Red Lake II Unit #43

Work Orders: 321400,

Project ID: Fairway Resources

Lab Batch #: 745197

Sample: 321400-014 / SMP

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Control Amount Recovery Limits [B] %R %R							
Analytes			[D]						
1-Chlorocetane	107	100	107	70-135					
o-Terphenyl	53.8	50.0	108	70-135					

Lab Batch #: 745197

Sample: 321400-015 / SMP

Batch:

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes	[]	121	[D]						
1-Chlorooctane	116	100	116	70-135					
o-Terphenyl	57.4	50.0	115	70-135					

Lab Batch #: 745197

Sample: 522199-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
1-Chlorooctane	116	100	116	70-135	-				
o-Terphenyl	57.5	50.0	115	70-135					

Lab Batch #: 745197

Sample: 522199-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
1-Chlorooctane	99.5	100	100	70-135					
o-Terphenyl	50.6	50.0	101	70-135					

Lab Batch #: 745197

Sample: 522199-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane	116	100	116	70-135	_				
o-Terphenyl	62.6	50.0	125	70-135					

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

<sup>\*\*\*</sup> Poor recoveries due to dilution



# **Blank Spike Recovery**



Project Name: South Red Lake II Unit #43

Work Order #: 321400

Project ID:

Fairway Resources

Lab Batch #: 745192

Sample: 745192-1-BKS

Matrix: Solid

**Date Analyzed:** 12/30/2008

**Date Prepared:** 12/30/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #: 1 BLANK /BLANK SPIKE RECOVERY STUDY					STUDY
Anions by EPA 300	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]	[D]	[C]	[D]	/UK	
Chloride	ND	10.0	9.46	95	90-110	

Blank Spike Recovery [D] = 100\*[C]/[B]All results are based on MDL and validated for QC purposes.



# **BS / BSD Recoveries**



Project Name: South Red Lake II Unit #43

Work Order #: 321400 Analyst: BHW

**Date Prepared:** 12/30/2008

Project ID: Fairway Resources

Date Analyzed: 12/30/2008

Lab Batch ID: 745197

Sample: 522199-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	950	95	1000	940	94	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	993	99	1000	975	98	2	70-135	35	

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100\*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]
All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries

Project Name: South Red Lake II Unit #43



Work Order #: 321400

Lab Batch #: 745192

pared: 12/30/2008

Project ID: Fairway Resources

**Date Analyzed:** 12/30/2008

Date Prepared:

Analyst: LATCOR

**QC-Sample ID:** 321400-001 S

Batch #: 1 Matrix: Soil

Reporting Units: mg/kg	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	1360	456	1880	114	80-120	



# Form 3 - MS / MSD Recoveries

Project Name: South Red Lake II Unit #43

Work Order #: 321400

Project ID: Fairway Resources

Lab Batch ID: 745197

**QC-Sample ID:** 321400-001 S

Batch #: Matrix: Soil

Date Analyzed: 12/30/2008

**Date Prepared:** 12/30/2008

Analyst: BHW

Reporting	Units:	mg/kg

Reporting Units: mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY														
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Sample	•	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag				
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD					
C6-C12 Gasoline Range Hydrocarbons	ND	1140	1170	103	1710	1650	96	7	70-135	35					
C12-C28 Diesel Range Hydrocarbons	ND	1140	1230	108	1710	1770	104	4	70-135	35					



# **Sample Duplicate Recovery**



Project Name: South Red Lake II Unit #43

Work Order #: 321400

Lab Batch #: 745192 Project ID: Fairway Resources

 Date Analyzed: 12/30/2008
 Date Prepared: 12/30/2008
 Analyst: LATCOR

 QC- Sample ID: 321400-001 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg SAMPLE / SAMPLE DUPLICATE RECOVERY

Anions by EPA 300  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	1360	1370	1	20	

 Lab Batch #: 745177
 745177

 Date Analyzed: 12/30/2008
 Date Prepared: 12/30/2008
 Analyst: MOV

 QC- Sample ID: 321400-001 D
 Batch #: 1
 Matrix: Soil

Reporting Units: % SAMPLE / SAMPLE DUPLICATE RECOVERY **Percent Moisture** Parent Sample Sample RPD Duplicate Limits Result Flag %RPD Result [A] [B] Analyte Percent Moisture 12.2 12.3

Spike Relative Difference RPD 200 \* | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.

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### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client,	Basin Ewin	nmental					
Date/ Time	12-30-08 C	<u>0845</u>		•			
Lab ID #	321400						
Indials	JMM						
		A	Ob a station				
		Sample Receipt (	Checkiist		c	Client Initial	s
#1 Temper	rature of container/ coo	lo:?	Yés)	No	4.0 °C	, , , , , , , , , , , , , , , , , , , ,	ī
	g container in good cor		(Yes)	No	1.2		1
	Seals intact on shippi		Yes	No	(Not Present		1
		e bottles/ container?/[[abc]]	(Yes>	No	Not Present		
	of Custody present?		(Yeš)	No			1
	instructions complete	of Chain of Custody?	(Yes)	No			1 .
		relinquished/ received?	(Yes)	No			1 .
	of Custody agrees with		(Yes)	No.	ID written on Cont./ Lis		1
Lawrence and the same of	er label(s) legible and		(Yes)	No	Not Applicable		1 .
#10 Sample	e matrix/ properties agr	ee with Chain of Custody?	(Yes)	No	1.	7	1
	ners supplied by ELOT		(Yes)	No			1 .
	es in proper container/		¥es∠	No	See Below ,	<u> </u>	1
	es properly preserved?		Yes	No	See Below	· · · · · · · · · · · · · · · · · · ·	1
	e bottles intact?		Yes	No		<del>                                     </del>	1
	vations documented or	Chain of Custody?	Cyes	No		1	1
	iners documented on C		(Yès	No		1	<b>1</b> .
*********************	ent sample amount for		Yes	No	See Below	1-	
L	noles received within s		(Yes)	No	See Below	1 .	1
#19 Subco	intract of sample(s)?		Yes	No	(Not Applicable)	-	1
	samples have zero hea	dspace?	(Yes)	No	Not Applicable	1	1
haracter parties			······································	Assessment	· · · · · · · · · · · · · · · · · · ·		'',
		Variance Docur	nentation			• •	
Contact		Contacted by:	- (		Date/ Time:		, ,
Comaci	***************************************			-	Date time.	2	
Regarding							,
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Compation	Austan Takoni						` : · ·
Corrective A	Action Taken:						: ;
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	L	Cooking process had begun	snortly after	sampling	3 event .		

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# **Analytical Report 321559**

for

# **Basin Environmental Consulting, LLC**

**Project Manager: Curt Stanley** 

Fairway Resources

South Red Lake II Unit #43

06-JAN-09





### 12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Norcross(Atlanta), GA E87429

South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta





06-JAN-09

Project Manager: Curt Stanley

**Basin Environmental Consulting, LLC** 

P.O. Box 381

Lovington, NM 88260

Reference: XENCO Report No: 321559

**Fairway Resources** 

Project Address: East of Artesia, NM

### **Curt Stanley:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 321559. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 321559 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

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Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



# **Sample Cross Reference 321559**



# Basin Environmental Consulting, LLC, Lovington, NM

Fairway Resources

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
EW #1A	S	Dec-30-08 13:00		321559-001
WW #1A	S	Dec-30-08 13:05		321559-002
Floor #1A	S	Dec-30-08 13:10		321559-003
EW #2A	S	Dec-30-08 13:15		321559-004
WW #2A	S	Dec-30-08 13:20		321559-005
Floor #2A	S	Dec-30-08 13:25		321559-006
EW #3A	S	Dec-30-08 13:30		321559-007
WW #3A	S	Dec-30-08 13:35		321559-008
Floor #3A	S	Dec-30-08 13:40		321559-009
EW #4A	S	Dec-30-08 13:45		321559-010
WW #4A	S	Dec-30-08 13:50		321559-011
Floor #4A	S	Dec-30-08 13:55		321559-012
Floor #7A	S	Dec-30-08 14:00		321559-013
Backfill	S	Dec-30-08 14:05		321559-014



### Certificate of Analysis Summary 321559

### Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Fairway Resources

inelad:

Project Id: South Red Lake II Unit #43

Contact: Curt Stanley

Project Location: East of Artesia, NM

Date Received in Lab: Wed Dec-31-08 04:10 pm

Report Date: 06-JAN-09

Project Manager: Brent Barron, II

								I Tuject Mai	nager.	DICIL DALION,	11		
	Lab Id:	321559-0	001	321559-0	002	321559-0	003	321559-0	004	321559-	005	321559-00	06
Analysis Requested	Field Id:	EW #1.	A	WW #1	A	Floor #1	A	EW #2.	A.	WW #2	Α	Floor #2	Α
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-30-08	13:00	Dec-30-08	13 05	Dec-30-08 1	13:10	Dec-30-08	13:15	Dec-30-08	13:20	Dec-30-08 1	3 25
Anions by EPA 300	Extracted:												
	Analyzed:	Jan-05-09	14.05	Jan-05-09 1	4.05	Jan-05-09 1	4:05	Jan-05-09 1	4.05	Jan-05-09	14.05	Jan-05-09 14	4 05
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2160	28.7	692	117	2520	22 8	4620	58 5	4010	569	3940	58 8
Percent Moisture	Extracted:												
2 22 20110 1/20100111 2	Analyzed:	Jan-05-09	12-12	Jan-05-09 1	2.12	Jan-05-09 1	2:12	Jan-05-09 I	2:12	Jan-05-09	12:12	Jan-05-09 12	2 12
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		13.03	1.00	14.19	1 00	12 17	1.00	14.49	1 00	12 19	1 00	14.96	1.00
TPH By SW8015 Mod	Extracted:	Jan-05-09	10.30	Jan-05-09 I	0.30	Jan-05-09 l	0.30	Jan-05-09 1	0:30	Jan-05-09	10:30	Jan-05-09 10	0.30
== == == == == == == == == == == == ==	Analyzed:	Jan-05-09	11.31	Jan-05-09 I	1:54	Jan-05-09 1	2:17	Jan-05-09 1	2:41	Jan-05-09	13:04	Jan-05-09 13	3:28
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	172	ND	17.5	ND	171	354	17.5	ND	171	ND	176
C12-C28 Diesel Range Hydrocarbons		ND	172	ND	175	83.0	171	1450	17.5	ND	17.1	ND	17.6
C28-C35 Oil Range Hydrocarbons		ND	172	ND	175	ND	171	206	17.5	ND	17.1	ND	17.6
Total TPH		ND	17.2	ND	17.5	83	17.1	2010	17.5	ND	17.1	ND	17.6

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron
Odessa Laboratory Director



# Certificate of Analysis Summary 321559

### Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Fairway Resources



Contact: Curt Stanley Project Location: East of Artesia, NM

Project Id: South Red Lake II Unit #43

Date Received in Lab: Wed Dec-31-08 04:10 pm

Report Date: 06-JAN-09

Office Location. Last of Afficaia, 19191								_					
								Project Mai	nager:	Brent Barron,	H		
	Lab Id:	321559-0	007	321559-0	08	321559-0	009	321559-0	010	321559-0	01 1	321559-0	12
Anglysis Daguestad	Field Id:	EW #3.	Ą	WW #3	A	Floor #3	Α	EW #47	A	WW #4	A	Floor #4.	A
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-30-08	13:30	Dec-30-08	3.35	Dec-30-08	13.40	Dec-30-08	13 45	Dec-30-08	13:50	Dec-30-08 I	3.55
Anions by EPA 300	Extracted:												
	Analyzed:	Jan-05-09	14.05	Jan-05-09 1	4.05	Jan-05-09 1	4.05	Jan-05-09 1	4.05	Jan-05-09 1	14:05	Jan-05-09 1	4.05
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3910	57.3	4770	58 4	4690	57.9	335	12.0	444	114	1280	22 6
Percent Moisture	Extracted:												
	Analyzed:	Jan-05-09	12.12	Jan-05-09 l	2.12	Jan-05-09 I	2.12	Jan-05-09 i	2.12	Jan-05-09 1	12:12	Jan-05-09 1	2 12
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		12.81	1.00	14.41	1.00	13 60	1 00	16 39	1.00	12 00	1.00	11.31	1 00
TPH By SW8015 Mod	Extracted:	Jan-05-09	10.30	Jan-05-09 1	0.30	Jan-05-09 I	0.30	Jan-05-09 1	10:30	Jan-05-09 1	0 30	Jan-05-09 1	0.30
1111 = y 5 // 0010 1/101	Analyzed:	Jan-05-09	13 52	Jan-05-09 1	4:15	Jan-05-09 1	4:39	Jan-06-09 1	0.33	Jan-05-09 I	5 49	Jan-05-09 1	6.13
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	172	ND	17.5	659	174	ND	17.9	ND	170	ND	16.9
C12-C28 Diesel Range Hydrocarbons		ND	17 2	ND	17.5	2310	174	ND	17.9	ND	170	ND	169
C28-C35 Oil Range Hydrocarbons		ND	17.2	ND	17.5	313	17.4	ND	179	ND	170	ND	169
Total TPH		ND	17.2	ND	175	3282	17.4	ND	17.9	ND	170	ND	169

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

Odessa Laboratory Director



### Certificate of Analysis Summary 321559

### Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Fairway Resources



Project Id: South Red Lake II Unit #43

Contact: Curt Stanley

Project Location: East of Artesia, NM

Date Received in Lab: Wed Dec-31-08 04:10 pm

Report Date: 06-JAN-09

Project Manager: Brent Barron, II

							Froject Manager:	Dient Barron, 11	
	Lab Id:	321559-0	13	321559-0	14				
Analysis Requested	Field Id:	Floor #7	A	Backfil	ı				
Analysis Requested	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	Dec-30-08 1	4.00	Dec-30-08 1	4 05				
Anions by EPA 300	Extracted:					,			
,	Analyzed:	Jan-05-09 1	4:05	Jan-05-09 1	4.05				
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride /		363	11.6	369	114				
Percent Moisture	Extracted:								
	Analyzed:	Jan-05-09 1	2:12	Jan-05-09 1	2 12				
	Units/RL:	%	RL	%	RL.				
Percent Moisture		13 95	1.00	12.36	1 00	• '			
TPH By SW8015 Mod	Extracted:	Jan-05-09 1	0:30	Jan-05-09 1	0:30				
	Analyzed:	Jan-05-09 1	6:36	Jan-05-09 1	7.00				
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	174	ND	17.1				
C12-C28 Diesel Range Hydrocarbons		ND	174	ND	17.1				
C28-C35 Oil Range Hydrocarbons		ND	174	ND	171				
Total TPH		ND	17.4	ND	171			-	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount involved for this work order unless otherwise agreed to in writing.

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Brent Barron
Odessa Laboratory Director



# Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E. The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte.

  The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \* Outside XENCO's scope of NELAC Accreditation.

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5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



**Project Name: Fairway Resources** 

Work Orders: 321559, Project ID: South Red Lake II Unit #43

Lab Batch #: 745566 Sample: 321559-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
I-Chlorooctane	103	100	103	70-135			
o-Terphenyl	51.8	50.0	104	70-135			

Lab Batch #: 745566 Sample: 321559-002 / SMP Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY Units: mg/kg Amount Control TPH By SW8015 Mod Limits Flags Found Amount Recovery [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 103 100 103 70-135 o-Terphenyl 51.9 50.0 104 70-135

Lab Batch #: 745566 Sample: 321559-002 S/MS Batch: 1 Matrix: Soil

Units: mg/kg SURROGATE RECOVERY STUDY Amount True TPH By SW8015 Mod Found Amount Recovery Limits Flags [B] %R %R [D] **Analytes** 1-Chlorooctane \*\* 25.6 100 26 70-135 o-Terphenyl 8.34 50.0 17 70-135 \*\*

Lab Batch #: 745566 Sample: 321559-002 SD / MSD Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY Units: mg/kg Amount True Control TPH By SW8015 Mod Found Amount Recovery Limits Flags [B] %R [A] %R **Analytes** [D] I-Chlorooctane 26.6 100 27 70-135 \*\* 70-135 \*\* o-Terphenyl 8.58 50.0 17

Lab Batch #: 745566 Sample: 321559-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	102	100	102	70-135			
o-Terphenyl	52.8	50.0	106	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Fairway Resources** 

Work Orders: 321559, Project ID: South Red Lake II Unit #43

Units: mg/kg SURROGATE RECOVERY STUDY Amount Control TPH By SW8015 Mod Found Amount Recovery Limits Flags [B] %R %R [A] [D] **Analytes** 1-Chlorooctane 112 100 112 70-135 o-Terphenyl 57.9 50.0 116 70-135

Lab Batch #: 745566 Sample: 321559-005 / SMP Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY Units: mg/kg True Control Amount TPH By SW8015 Mod Found Amount Recovery Limits Flags [B] %R [A] %R [D] **Analytes** 1-Chlorooctane 103 100 103 70-135 52,3 50.0 105 70-135 o-Terphenyl

Lab Batch #: 745566 Sample: 321559-006 / SMP Batch: 1 Matrix: Soil

Units: mg/kg SURROGATE RECOVERY STUDY Amount True Control TPH By SW8015 Mod **Found** Amount Recovery Limits Flags %R %R [A] [B] [D] **Analytes** 1-Chlorooctane 103 103 100 70-135 o-Terphenyl 50.0 70-135 523 105

Lab Batch #: 745566 Sample: 321559-007 / SMP Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY Units: mg/kg True Control Amount TPH By SW8015 Mod Found Amount Recovery Limits Flags %R %R [A] B [D] Analytes 1-Chlorooctane 101 100 101 70-135 o-Terphenyl 51.7 50.0 103 70-135

Lab Batch #: 745566 Sample: 321559-008 / SMP Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount {B}	Recovery %R	Control Limits %R	Flags		
Analytes	[	121	[D]	, , , , ,			
1-Chlorooctane	102	100	102	70-135			
o-Terphenyl	51 6	50.0	103	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes



**Project Name: Fairway Resources** 

Work Orders: 321559,

Project ID: South Red Lake II Unit #43

Lab Batch #: 745566

Sample: 321559-009 / SMP

Matrix: Soil Batch: 1

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes		, ,	[D]	Limits			
1-Chlorooctane	119	100	119	70-135			
o-Terphenyl	57.4	50.0	115	70-135			

Lab Batch #: 745566

Sample: 321559-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
I-Chlorooctane	109	100	109	70-135			
o-Terphenyl	54.9	50.0	110	70-135			

Lab Batch #: 745566

Sample: 321559-011 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctanc	105	100	105	70-135			
o-Terphenyl	52.5	50.0	105	70-135			

Lab Batch #: 745566

**Sample:** 321559-012 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	104	100	104	70-135		
o-Terphenyl	52.5	50.0	105	70-135		

Lab Batch #: 745566

Sample: 321559-013 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	Units: mg/kg SURROGATE RECOV				
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	51 5	50.0	103	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Fairway Resources** 

Work Orders: 321559, Project ID: South Red Lake II Unit #43

Lab Batch #: 745566 Sample: 321559-014 / SMP Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	106	100	106	70-135			
o-Terphenyl	52.8	50.0	106	70-135			

Lab Batch #: 745566 Sample: 522434-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
I-Chlorooctane	117	100	117	70-135			
o-Terphenyl ·	57.3	50.0	115	70-135			

Lab Batch #: 745566 Sample: 522434-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg SURROGATE RECOVERY STUDY True Control TPH By SW8015 Mod Amount Found Amount Recovery Limits Flags %R %R [B] [A] [D] **Analytes** I-Chlorooctane 103 103 100 70-135 o-Terphenyl 52.2 50.0 104 70-135

Lab Batch #: 745566 Sample: 522434-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg SURROGATE RECOVERY STUDY Amount True Control TPH By SW8015 Mod Found Amount Recovery Limits Flags [A][B] %R %R [D]**Analytes** 1-Chlorooctane 119 119 100 70-135 o-Terphenyl 61.5 50.0 123 70-135

\*\*\* Poor recoveries due to dilution Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis



# **Blank Spike Recovery**



**Project Name: Fairway Resources** 

**Work Order #:** 321559

Project ID:

South Red Lake II Unit #43

Lab Batch #: 745513

Sample: 745513-1-BKS

Matrix: Solid

Date Analyzed: 01/05/2009

Date Prepared: 01/05/2009

Analyst: LATCOR

Reporting Units: mg/kg	Batch #:	BLANK /	BLANK SPI	KE REC	COVERYS	STUDY
Anions by EPA 30	Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	(B)	Result [C]	%R [D]	%R	
Chloride	ND	10.0	10.2	102	90-110	



# **BS / BSD Recoveries**



Project Name: Fairway Resources

Work Order #: 321559

Project ID: South Red Lake II Unit #43

Analyst: BHW

Date Analyzed: 01/05/2009

Analyst. Dirii

**Date Prepared:** 01/05/2009

Matrix: Solid

Lab Batch ID: 745566

Sample: 522434-1-BKS

Batch #: 1

Units: mg/kg		BLAN	K/BLANK S	SPIKE / E	BLANK S	PIKE DUPI	ICATE	RECOVE	ERY STUD	Y	
TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	(E)	Result [F]	[G]				
C6-C12 Gasoline Range Hydrocarbons	ND	1000	954	95	1000	959	96	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1020	102	1000	1050	105	3	70-135	35	

Relative Percent Difference RPD = 200\*[(C-F)/(C+F)]Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries

**Project Name: Fairway Resources** 



Work Order #: 321559

Lab Batch #: 745513

Project ID: South Red Lake II Unit #43

**Date Analyzed:** 01/05/2009

**Date Prepared:** 01/05/2009

Analyst: LATCOR

QC- Sample ID: 321559-001 S

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	2160	575	2690	92	80-120	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B Relative Percent Difference [E] = 200\*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries

**Project Name: Fairway Resources** 

Work Order #: 321559

Project TD: South Red Lake II Unit #43

Lab Batch ID: 745566

**QC- Sample ID:** 321559-002 S

Batch #:

Matrix: Soil

Date Analyzed: 01/05/2009

**Date Prepared:** 01/05/2009

Analyst: BHW

Reporting Units: mg/kg

M	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY S	STUDY	
	Spiked Sample			Duplicate	Spiked		Control	Control
Spike	Result	Sample	Spike	Spiked Sample	Dup.	RPD	Limits	Limits
dded	[C]	%R	Added	Result [F]	%R	%	%R	%RPD

TPH By SW8015 Mod  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1170	1120	96	1170	1150	98	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1170	1180	101	1170	1220	104	3	70-135	35	



# **Sample Duplicate Recovery**



**Project Name: Fairway Resources** 

Work Order #: 321559

Lab Batch #: 745513

Date Analyzed: 01/05/2009

QC-Sample ID: 321559-001 D

Project ID: South Red Lake II Unit #43

Date Prepared: 01/05/2009 Analyst: LATCOR
Batch #: 1 Matrix: Soil

Reporting Units: mg/kg SAMPLE / SAMPLE DUPLICATE RECOVERY

		~~~~			
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Chloride	2160	2130	1	20	

**Lab Batch #:** 745434 **Date Analyzed:** 01/05/2009

**Date Prepared:** 01/05/2009

Analyst: BEV

QC-Sample ID: 321559-001 D

Batch #: 1 Matrix: Soil

Reporting Units: %	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[10]			
Percent Moisture	13.0	12.7	3	20	

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	City/State/Zip	Lovington, New Mexico 88	3260	<del></del>							,					•			PC	#:											
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LAB # (tab use any)	<del> </del>	LD CODE W #4A	Beginning Depth	Ending Depth	Date Sampled 12/30/2008	Ime Samples	Fusial Fishered	- Total B. of Containers 4/02.5	X Es	HNO,	PG.	H-50,	NaOH C	Now.	Outer (Spacify)	BW- Drinking Water	W-Nun-Quable Sperity Oth	X TPh: 418.1 (80.0% )801	1994* TX 1005 TX 1006	Cattons (C.s., Mg. 14a, K1	Anomy (Cl. SO4, Alkalina)	SARIESPICFC	Mazeta, As Ag Ba Cd Cr Plottg Se	Volatina	Seminolatios A re contrados o a a consultados	RG	N.ORM.	X Citizades & 360	The region	POLD SHISH TATION SALESTED TO	X. Standard TAT
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	Environmental La Variance/ Corrective Action Rep				4
Chent	Basia Environments!				
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111,111410)	t				
	Sample Receipt (	Checklist		_	
#4 T		1 800 1	Nie	<u>ಕ.೧ ್೧</u>	lient Initials
	ature of container/ cooler?	Yes >	No No	(NA)	<del></del>
	container in good-condition? Seals intact on shipping container/ cooler?	Yes Yes	No	Not Present	
	Seals intact on sample bottles/ container? //a/w1	(Yes)	No	Not Present	` `
		Yes	No	Not Present	
	Custody present?				
	instructions complete of Chain of Custody?	Yes>	No		
	Custody signed when retinquished/ received?	_Yes <	No	15	
	Custody agrees with sample label(s)?	Yes	No ·	ID written on Cont./ Lid	
	er label(s) legible and intact?	Yes	Nó	Not Applicable	
	matrix/ properties agree with Chain of Custody?	(Yes)	<u>No</u>		,
	ers supplied by ELOT?	Yes	No	1	
	s in proper container/ bottle?	(Yes)	No	See Below '	
	s properly preserved?	(Yes	No	See Below	
#14 Sample	bottles intact?	Yes	No		
#15 Preserv	rations documented on Chain of Custody?	(Yes)	No		
#16 Contain	ers documented on Chain of Custody?	⟨Yes-'	No		
#17 Sufficie	nt-sample amount for indicated test(s)?	(Yes)	No	See Below	
	ples received within sufficient hold time?	Yes_	No	See Below	
	stract of sample(s)?	Yes	No		
	emples have zero headspace?	Yes	No	Not Applicable	
	Variance Docum	nentation			,
Contact:	Contacted by:	······································		Date/ Time:	
Regarding	,				
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Check all tha	at Apply: See attached e-mail/ fax Client understands and woul Cooling process had begun s	*		•	
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Appendix B Photographs

# Appendix C Release Notification and Corrective Action (Form C-141)

District I 1625 N. French Dr , Hobbs, NM 88240 District II 1301 W Grand Avenue, Artesia, NM,88210 District III
1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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### State of New Mexico Energy Minerals and Natural Resources

JUN 2 0 2008

Form C-141 Revised October 10, 2003

are to be presented to OCD

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

OCD-ARTESIA Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back side of form

'eranaa			Rele	ease Notific	ation	and Co	orrective A	ction					
i Sebori 9256396 nsebori 9256221					OPERA:	ГOR							
Name of Co		airway Resc											
Address 53				Telephone No. 817-416-1946									
Facility Nar	ne South l	Red Lake II	Unit #43	30-015-239	13 1	Facility Typ	e oil well						
Surface Ow	ner State	of New Mex	ico	Mineral C	wner S	State of New Mexico Lease No. NM109695X							
				LOCA	TION	OF RE	LEASE _						
Unit Letter Section Township Range Feet from the N			North/	South Line	ine Feet from the		East/West Line		County				
"K" 36 17-S 27-E 1,650 Sout						1,650 Wes		West	Eddy				
			Latit	tude <u>32.78778</u>	300	Longitude	-104.2350	200					
	_			NAT	URE	OF RELI	EASE						
Type of Rele						Volume of Release 25 bbls est. Volume Recovered 20 bbls est.							
Source of Re	lease Flow	line leak near						and Hour of Discovery 08 8:00am					
Was Immediate Notice Given?							If YES, To Whom?						
		$\boxtimes$	Yes	No 🗌 Not Re	quired	-							
By Whom?			Date and Hour 6/17/08										
Was a Watero	course Reac		If YES, Volume Impacting the Watercourse.										
If a Watercou	rse was Imp	pacted, Descr	ibe Fully.*	•		I							
Describe Cau	se of Proble	m and Remed	dial Action	n Taken.*									
A look dovelo	nad ia a ata	al minmle at th	a wallhaa	d flowline connec	tion Th	e ninnle was	replaced repairi	na tha la	ale				
A leak develo	ped ni a sie	er mppie at u	e weimead	a nowinie connec	uon. m	e inppie was	replaced, repairi	ing the ica	ık.				
		1.01											
Describe Area	a Affected a	ind Cleanup A	action lak	en.▼									
The affected a	area was the	well location	i, lease roa	ad, and area imme	diately a	long the leas	e road.						
All free-stand	ing liquids	were nicked-ı	io with a v	vacuum truck and	transpor	ted to the cer	ntral facility. A re	emediati	on work p	an will be p	repared	and	
submitted for							•			•	•	ļ	
I bereby certi	fv that the it	nformation gi	ven ahove	is true and compl	ete to th	e best of my	knowledge and u	nderstan	d that purs	uant to NMO	OCD ru	iles and	
regulations al	operators a	are required to	report an	d/or file certain re	elease no	tifications ar	nd perform correc	tive action	ons for rele	eases which	may en	danger	
public health	or the envir	onment. The	acceptanc	e of a C-141 repo investigate and re	rt by the	NMOCD ma	arked as "Final R	eport" do	oes not reli	eve the oper	ator of tec. hun	liability nan health	
or the environ	ment. In ac	dition, NMO	CD accept	tance of a C-141 r	eport do	es not reliev	e the operator of	responsil	oility for c	ompliance w	ith any	other	
federal, state,	or local law	s and/or regu	lations.				OIL COLL	~~~~~	1 (F) (O) I	DIVITORO			
						OIL CONSERVATION DIVISION  (Remediation Actio.is a) be completed and							
Signature:	K 2	<u> 211-</u>	Y Qa	ite				Tou		Final C - 141 sub	mitted wi	ith confirmation	
Printed Name: Kenneth Pearce							Approved by District Supervisor:			'analyses/documentation on or before the 'Expiration Date.			
T finited I vanie	. Remiedi i	Carco	······································			,	1		•				
Title: Operat	ions Engine	er			_   A	Approval Dat	e: 7-10-08	E	xpiration	Date: 9-17	1.08	<u> </u>	
E-mail Address: kpcarce@fairwayresources.com						Conditions of Approval:				Attached	П		
						The plan must include general site characteristics, site ranking				2 RP - 188			
Date: June Attach Addit	: 17, 2008 ional Shee	ar	and planned analytical testing for TPH, B-TEX, Chlorides or any Notify OCD 48 hours prior to										
SFB 0919	25650	4		ot	other COCs as applicable. Please use the "Guidelines for Remediation of Leaks, Spills, & Releases" as your guide. This obtaining samples where analyses								

Remediation of Leaks, Spills, & Releases" as your guide. This

http://www.emard.state.nm.us/ocd/documents/7C\_spill1.pdf

document may be found at the following link.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

### State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 JUN 26 2009

Form C-141 Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

### Release Notification and Corrective Action

	OPERATOR Initial Report X Final Report							
Name of Company Fairway Resources Operating, LLC	Contact: Jay-Pulte							
Address 538 Silicon Drive, Ste. 101, Southlake, Texas 76092	Telephone No. (817) 416-1946							
Facility Name South Red Lake II Unit #43	Facility Type Oil Well							
Surface Owner State of New Mexico Mineral Owner	State of New Mexico Lease No. NM10695X							
3001523913 LOCATION OF RELEASE								
Unit Letter Section Township Range Feet from the North  K" 36 178 27E 1,650 South	n/South Line   Feet from the   East/West Line   County   Eddy   Eddy							
Latitude 32.7877800° North Longitude 104.2350200° West								
NATURE OF RELEASE								
Type of Release Produced Water and Crude Oil	Volume of Release 25 bbls (est.) Volume Recovered 20 bbls (est)							
Source of Release Flowline Release Near Wellhead	Date and Hour of Occurrence Date and Hour of Discovery 06/16/08 @unknown time 06/17/08 - 0800 hours							
Was Immediate Notice Given?	If YES, To Whom?							
Yes No Not Required								
By Whom?	Date:and Hour							
Was a Watercourse Reached?  ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.							
If a Watercourse was Impacted, Describe Fully.*	dament de la constant							
Describe Cause of Problem and Remedial Action Taken:								
A steel nipple failed at the wellhead flowline connection. Free liquids were recovered and transported to the central facility using a vacuum truck. Following mitigation of the release, the nipple was replaced.								
Describe Area Affected and Cleanup Action Taken.								
Approximately 2,830 cubic yards of impacted soil was excavated, stockpiled and transported to be a Land Landfill (Permit #NM-01-0035) for disposal. Confirmation soil samples were collected and submitted to the laboratory for analysis. With NMOCD Artesia Office approval a risk- based site closure was employed, utilizing a polyethylene liner. Following the installation of the liner, the excavation was backfilled with locally purchased native soil. A Remediation Summary and Site Closure Request dated May 2009 was submitted to the NMOCD Artesia Office and contains additional details and documentation not contained in this document.								
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases, which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.								
Signature: Cay falle	OIL CONSERVATION DIVISION							
Printed Name: Jay Putte	Approved by District Supervisor:							
	Approval Date: 6/29/09 Expiration Date: W/A							
E-mail Address: jpulte@fairwayresources.com	Conditions of Approval: NA 2RP-0188							
Date: 6/24/09 Phone: (817) 416-1946	/ / / / / / / / / / / / / / / / / / /							