



**OXY USA WTP LP**  
A subsidiary of Occidental Petroleum Corporation

760 Horizon Drive, Suite 101  
Grand Junction, CO 81506

February 11, 2011

Mr. Chris Canfield, P.G.  
Environmental Protection Specialist, Northwest Region  
Colorado Oil and Gas Conservation Commission  
707 Wapiti Court, Suite 204  
Rifle, Colorado 81650

**Reference: 2010 Status Report, Rock Springs Release, COGCC Project 4622**

Dear Mr. Canfield:

Attached is the report titled *2010 Status Report, Release Monitoring and Interim Remedial Actions, Oxy Cascade Creek 605-01 Well Pad (Rock Springs)*. It documents 2010 monitoring and remedial actions conducted by OXY USA WTP LP (Oxy) at the COGCC Project #4622 site. Hydrocarbon and total dissolved solid concentrations have decreased during 2010. Sampling results are below the state surface water maximum contaminant levels (MCLs) for target compounds at all sampling locations except in the South Spring which exceeds the benzene MCL, and from two samples obtained from North Spring, each of which slightly exceeded the benzene MCL. This indicates that the remediation actions conducted at the site have been successful.

Oxy proposes to continue quarterly monitoring at all five sampling locations during 2011 and to further evaluate options for remediation. Oxy will develop a plan for remediation activities and provide that plan to you by April 15, 2011 for your approval.

If you need further information concerning the submittal or proposed actions, please contact me at 970.263.3628 or at [Sean\\_Norris@oxy.com](mailto:Sean_Norris@oxy.com). Thank you for your time.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sean Norris".

Sean Norris  
OXY USA WTP LP

cc: file

enclosures



**2010 STATUS REPORT  
RELEASE MONITORING AND  
INTERIM REMEDIAL ACTIONS  
OXY CASCADE CREEK 605-1  
WELL PAD (ROCK SPRINGS)**

**COGCC Project 4622**

Walsh Project Number: 900546.0009.010

February 15, 2011



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Environmental Scientists and Engineers, LLC



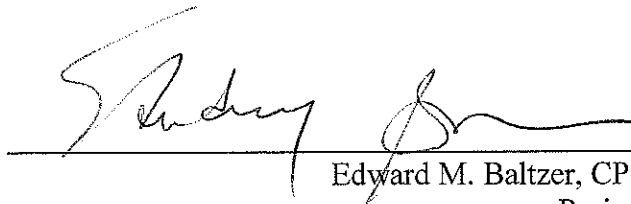
**2010 STATUS REPORT  
RELEASE MONITORING AND  
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OXY CASCADE CREEK 605-1 WELL PAD  
(ROCK SPRINGS)**

February 15, 2011

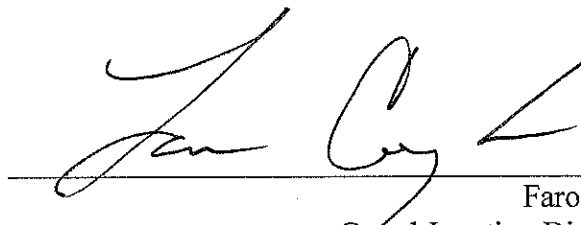
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Walsh Project Number: 900546.0009.010



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## ACRONYMS AND ABBREVIATIONS

COGCC	Colorado Oil and Gas Conservation Commission
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
µg/L	micrograms per liter
ORC®	proprietary oxygen releasing compound from Regenesis
Oxy	OXY USA WTP LP
RegenOx®	proprietary chemical oxidizer from Regenesis
RL	Reporting Limit
site	vicinity of the Rock Springs area
TDS	total dissolved solids
Walsh	Walsh Environmental Scientists and Engineers, LLC
Well pad	Cascade Creek 605-1



## EXECUTIVE SUMMARY

This 2010 status report was prepared by Walsh Environmental Scientists & Engineers, LLC (Walsh) on behalf of OXY USA WTP LP (Oxy) to document monitoring and remedial actions in response to a release of produced fluids at Oxy's Cascade Creek 605-1 well pad in 2008. The well pad is located in Section 5, Township 6 South, Range 97 West of the 6<sup>th</sup> Principal Meridian, Garfield County, Colorado (Figure 1, Appendix A). The well pad is situated east of an unnamed tributary to Crystal Creek, and a release of produced water has extended from the production pit at the well pad to springs (locally known as Rock Springs) which feed the tributary. The well pad and the area upon which the release occurred and surfaced are located entirely on property owned by Oxy.

Oxy has completed monitoring and remedial activities at the site, including:

- Surface water monitoring
- Maintenance of impoundments to capture and treat contamination
- Monitoring of impoundment water levels and condition
- Injection of oxidizing compounds to augment remediation

Hydrocarbons concentrations decreased between 2009 and 2010 at all locations except North Spring, where they were erratic through July and then declined. The point of compliance (Downstream sample location, Map ID 43) has never exceeded the maximum contaminant level (MCL) for any hydrocarbon constituent, and hydrocarbons remained below their respective MCLs at the Lower Pit sample location during 2010. The Upstream sample location had no detectable hydrocarbons.

Hydrocarbon concentrations have decreased by a factor of about 2-5 fold at the South Spring and by a factor of 5 at the Lower Pit since 2009. All sampling locations had hydrocarbon concentrations that were steady or declined during the second half of 2010.

In-situ chemical oxidation applications were completed during May, June, July, and August, 2010.

Total dissolved solids at the site generally were below the secondary drinking water standard of 500 milligrams per liter (mg/L), and averaged between 394 and 537 mg/L at the sampling locations. TDS concentrations at all sampling points were steady or decreased between 2009 and 2010.



# **2010 STATUS REPORT RELEASE MONITORING AND INTERIM REMEDIAL ACTIONS OXY CASCADE CANYON #605-1 WELL PAD**

## **1 INTRODUCTION**

This 2010 Status Report has been prepared by Walsh Environmental Scientists & Engineers, LLC (Walsh) on behalf of OXY USA WTP LP (Oxy) to document release monitoring and interim remedial actions activities conducted during the 2010 season. The activities are being conducted by Oxy in response to a release of produced water and condensate into a lined production pit formerly located at Oxy's Cascade Creek 605-1 well pad that affected nearby springs (Rock Springs). The well pad is located in Section 5, Township 6 South, Range 97 West of the 6<sup>th</sup> Principal Meridian, Garfield County, Colorado (Figure 1, Appendix A). The Rock Springs release (site) includes the former lined production pit, the seepages at Rock Springs, and the unnamed tributary to Crystal Creek (Figure 2, Appendix A). The well pad and the area upon which the release occurred and surfaced are located on property owned by Oxy.

This report summarizes Oxy's ongoing monitoring and interim remedial activities for 2010 as part of COGCC project 4622.

## **2 REMEDIAL AND ASSESSMENT ACTIVITIES**

Monthly site visits were completed (depending upon accessibility) by Oxy personnel throughout 2010, to assess water flow conditions, and to collect field geochemical parameters and water samples for laboratory analyses. The integrity of water impoundments and water levels in the impoundments were also monitored to ensure the impoundments were retaining flow. The site was accessible throughout 2010 except in February, November, and December, and weekly to bi-weekly site visits were made during the run-off period to ensure containments were secure and adequately handling flow. In-Situ Chemical Oxidation product was injected into the release location during the months of May, June, July, and August.

### **2.1 Water Monitoring**

Oxy personnel monitored the North Spring, South Spring, and Lower Pit impoundments during 2010. The impoundments were inspected and samples were obtained on a weekly basis during spring runoff during April, May, and June 2010. The impoundments did not fill up to a level requiring water removal, due to seepage and underflow, and as such were never pumped. Field parameters including temperature, pH, conductivity, dissolved oxygen, and reduction/oxidation potential were periodically collected. In addition, total dissolved solids (TDS) was measured in the field using a Hanna™ model 3310 TDS meter for all sampling events during 2010. Groundwater samples collected during the May 2010 event were submitted for laboratory analysis of TDS in addition to the regular analyte list.



A total of nine sampling events were conducted at the site during 2010 (access was not possible during February, November, and December, 2010). The sampling events were conducted on the following dates:

January 28, 2010	July 29, 2010
March 25, 2010	August 30, 2010
April 29, 2010	September 30, 2010
May 27, 2010	October 27, 2010
June 24, 2010	

Samples were collected by Oxy personnel on a regular basis from four locations. The sampling locations are identified in the following table and shown on Figure 2. An Upstream sample was also obtained during the April, May, and June 2010 sampling events; however, this location was dry during all other 2010 sampling events.

### 2010 Sample Location Descriptions

MAP ID	Sample Location	Location Description
40	North Spring	Trench/dam intercepting northern spring area
42	South Spring	Trench/dam intercepting southern spring area
43	Downstream	Down gradient sample location (Compliance sample location)
44	Lower Pit	Dam constructed during remedial activities

#### 2.1.1 Water Quality Results

Petroleum hydrocarbons were detected at concentrations greater than the maximum contaminant level (MCL), with the highest concentrations being found at South Spring (Map ID 42). Analytical results indicate benzene concentrations at the South Spring ranged from 0.04 to 0.18 milligrams per liter (mg/L), which exceeds the benzene MCL of 0.005 mg/L. Concentrations at the North Spring exceeded the MCL during the April and July 2010 sampling events and were below MCL for all other samples. Laboratory results for 2010 have been summarized in tables and charts presented in Appendix A, and the complete laboratory analytical results are included in Appendix B. Sampling locations are shown on Figure 2.

Five samples from the Lower Pit (Map ID 44) and four samples from the Downstream (Map ID 43) locations also contained benzene; however, the concentrations at these locations were below the MCL during 2010. Other petroleum hydrocarbon constituents were detected at levels below their respective MCLs. An Upstream sample was obtained during the April, May, and June 2010 sampling events; however, this location was dry during all other 2010 sampling events.

Except in South Spring, TDS results for samples collected at the site generally were below the secondary drinking water standard of 500 mg/L. The year-over-year average TDS concentration in impacted areas decreased as shown:

- 408 mg/L in 2009 to 415 mg/L in 2010 at the Upstream location;
- 409 mg/L in 2009 to 394 mg/L in 2010 at the North Spring location;
- 553 mg/L in 2009 to 537 mg/L in 2010 at South Spring location;



- 494 mg/L in 2009 to 464 mg/L in 2010 at the Downstream location;
- 532 mg/L in 2009 to 446 mg/L in 2010 at the Lower Pit location.

TDS data from 2010 are included in the summary tables found in Appendix A.

The North Spring location showed a general 10 to 100-fold decrease in hydrocarbon concentrations year-over-year between 2008 and 2009. However, hydrocarbon concentrations in the North Spring were about the same to somewhat greater year-over-year between 2009 and 2010. On the other hand, the South Spring location showed only an approximate 2 to 8-fold hydrocarbon decrease year-over-year between 2008 and 2009, and a further 2- to 5-fold decrease year-over-year between 2009 and 2010. The Lower Pit showed about a 5-fold decrease between 2009 and 2010. Data for 2009 is reported in the *2009 Status Report, Release Monitoring and Interim Remedial Actions, OXY Cascade Creek 605-01 Well Pad (Rock Springs)* prepared by Walsh.

Petroleum hydrocarbon and TDS data were tabulated and graphed and included in Appendix A. The complete laboratory analytical reports for 2010 are provided in Appendix B.

## 2.2 In-Situ Chemical Oxidation Applications

RegenOx<sup>®</sup>, a proprietary in-situ chemical oxidation compound manufactured by Regenesis, was applied in the vicinity of the former pit on the well pad. During 2010, chemical oxidation applications were completed according to the following schedule:

### 2010 Chemical Oxidation Compound Application Schedule

Injection number	Total pounds RegenOx	Water needed (gallons)	Date performed
8	900	2060	Completed 05/24/10
9	900	2060	Completed 06/23/10
10	900	2060	Completed 07/23/10
11	900	2060	Completed 08/19/10

Prior to the December 2008 application, a trench was excavated near the southwestern corner of the former production pit, and protective fencing placed around the excavation (Figure 2, “First Trench”). The initial application was slow to percolate into the subsurface. Although hydrocarbon concentrations in water samples had decreased during the subsequent sampling events, the slow percolation rate observed during the initial application indicated that the hydraulic pathway to the South Spring was not encountered by the trench.

Based on these results, Oxy and Walsh relocated the infiltration trench. A second trench (Figure 2, “Second Trench”) was installed by Oxy prior to the May 2009 applications, and Oxy re-initiated applications at the second trench in May 2009. This trench was utilized for the four subsequent applications.



By the mid-summer 2009, it appeared that the North Spring was getting favorable results, but the South Spring results were less favorable. Based on this, on October 30, 2009, Oxy relocated the trench to the old production pit boundaries (Figure 2, “Current Trench”). Flowing groundwater was encountered at approximately five feet below ground surface. Loose soils along the bottom of the trench were removed, and the excavation was fenced.

Four more applications of chemical oxidation compound were made during 2010, one each in May, June, July, and August. There were 900 pounds of RegenOx<sup>®</sup> and 2060 gallons of fresh water injected during each event. The injections were into the third (current) application trench (Figure 2).

### **3 CONCLUSIONS**

Hydrocarbons concentrations decreased between 2009 and 2010 at all locations except North Spring, where they were erratic through July and then declined. The point of compliance (Downstream sample location, Map ID 43) has never exceeded the surface water maximum contaminant level, and hydrocarbons remained below their respective MCLs at the Lower Pit sample location during 2010. The Upstream sample location had no detectable hydrocarbons.

Hydrocarbon concentrations have decreased by a factor of about 2-5 fold at the South Spring and by a factor of 5 at the Lower Pit since 2009. All sampling locations had hydrocarbon concentrations that were steady or declined during the second half of 2010.

The North Spring location had shown a general 10 to 100-fold decrease in hydrocarbon concentrations year-over-year between 2008 and 2009. However, hydrocarbon concentrations in the North Spring showed no significant change year-over-year between 2009 and 2010. On the other hand, the South Spring location had shown an approximate 2 to 8-fold decrease year-over-year between 2008 and 2009, and a further 2- to 5-fold decrease year-over-year between 2009 and 2010. South Spring contains approximately 10 to 50 times the hydrocarbon concentrations present in North Spring. The Lower Pit had about a 5-fold decrease in hydrocarbons between 2009 and 2010.

The chemical oxidation compound injection point was moved in November 2009, and the hydrocarbon reduction rate in South Spring accelerated somewhat between 2009 and 2010. This suggests that the new injection point may be more effective at remediating groundwater that is tributary to South Spring than the previous injection points. Conversely, hydrocarbons in North Spring have not significantly changed year-over-year between 2009 and 2010. This suggests that the previous injection point(s) were more effective at remediating groundwater tributary to North Spring than the current injection point, or indicate a contamination source that was not affected by the chemical oxidation injections.



## **Appendix A – Figures, Tables, and Graphs**



**Figure 1 - Vicinity Map**  
**OXY Rock Springs #605-01 Well Pad**

1 inch equals 2,000 feet  
Garfield County, Colorado



0 1,000 2,000 3,000 Feet

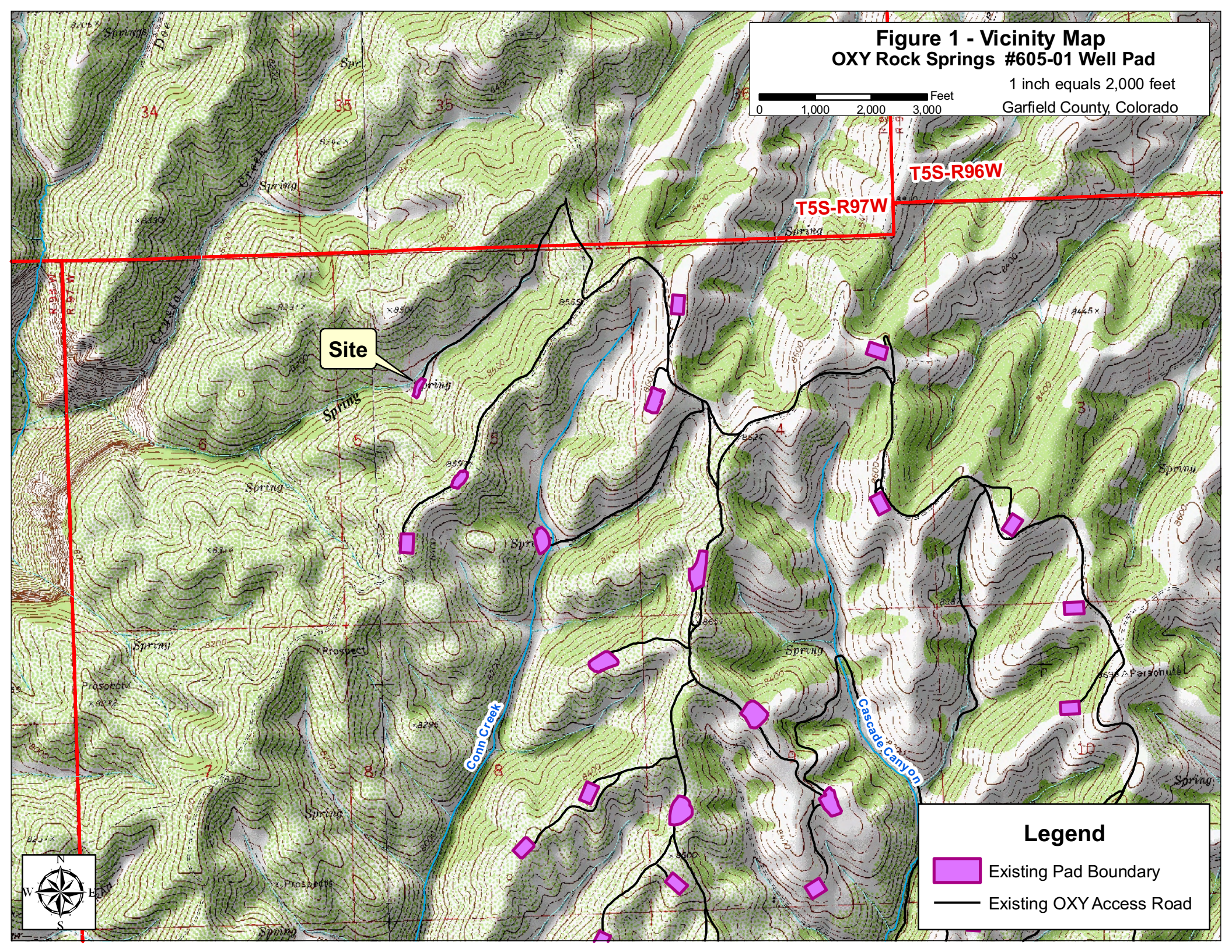
**T5S-R96W**

**T5S-R97W**

**Site**

**Legend**

-  Existing Pad Boundary
-  Existing OXY Access Road





## Figure 2 - Sampling Location Map

OXY #605-01 Well Pad (Rock Springs)

0 50 100 150 Feet

1 inch equals 125 feet  
Garfield County, Colorado

43  
(605-01 Downstream)

44  
(605-01 Lower Pit)

41  
(605-01 Upstream)

Second ISCO Application  
Trench Location

Current ISCO Application  
Trench Location

First ISCO Application  
Trench Location

40  
(605-01 North Spring)

42  
(605-01 South Spring)

### Legend

#### Sample Locations 2010 Results

- Above MCL
- Below MCL
- No Detection

▬ Dam

— Existing OXY Access Road

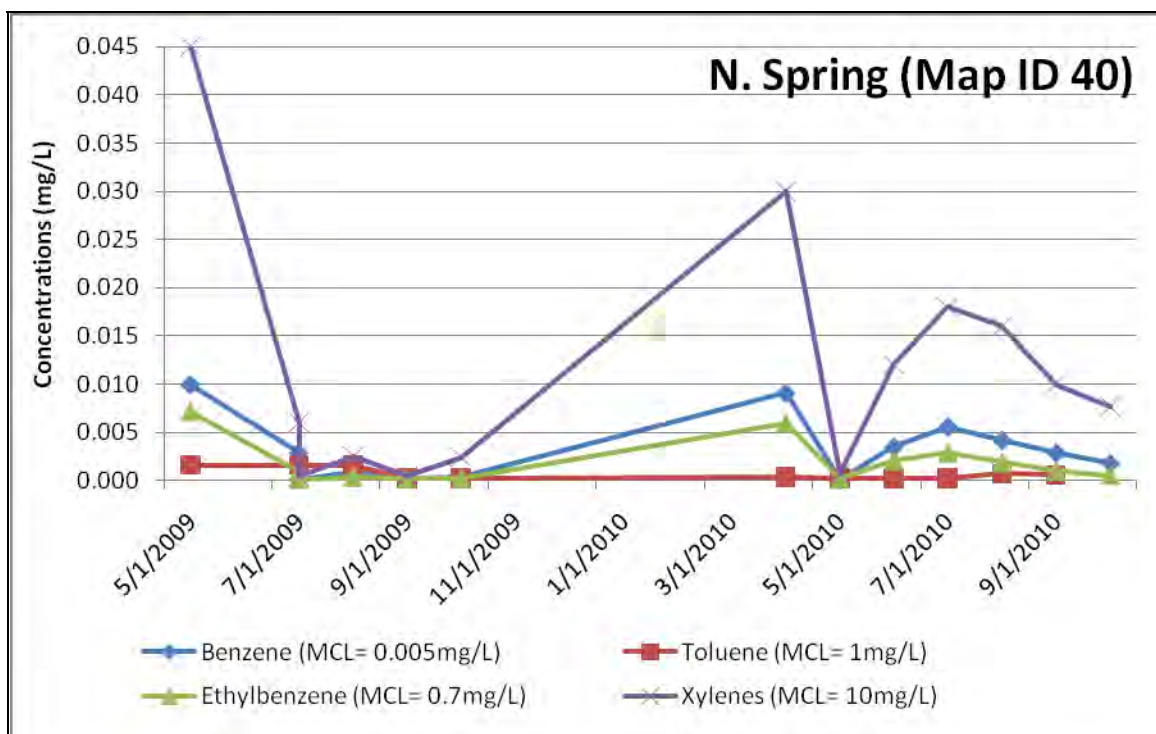




## 2010 Water Sample Results (mg/L), Rock Springs Release

North Spring (Map ID 40)						
Date	Benzene (MCL= 0.005 mg/L)	Toluene (MCL= 1mg/L)	Ethylbenzene (MCL= 0.7mg/L)	Total Xylenes (MCL= 10 mg/L)	TVH (No MCL)	TDS (*MCL= 500 mg/L)
4/29/2010	<b>0.0091</b>	0.00039	0.006	0.03	0.4	428
5/27/2010	<0.00013	<0.00021	<0.00021	0.0007	<0.040	391/ <b>500</b>
6/24/2010	0.0035	<0.00021	0.0021	0.012	0.072	392
7/29/2010	<b>0.0056</b>	<0.00021	0.0029	0.018	0.31	299
8/30/2010	0.0042	0.00071	0.0019	0.016	<0.040	431
9/30/2010	0.0029	0.00059	0.00097	0.010	<0.040	440
10/27/2010	0.0018	<0.00021	0.00056	0.0077	<0.040	374
Average TDS Concentration (except 5/27 lab result)						394

Notes: Sample results presented in **Bold** indicate the Maximum Contaminant Level for water was exceeded  
MCL CDPHE Maximum Contaminant Level - [Regulation 31- The Basic Standards and Methodologies for Surface Water](#)  
mg/L Milligram per liter  
TVH Total Volatile Hydrocarbons  
TDS Total Dissolved Solids - measured in field; laboratory sample also taken on 5/27 (second result shown)  
\*The MCL for TDS is the Colorado secondary drinking water standard and is not directly applicable.

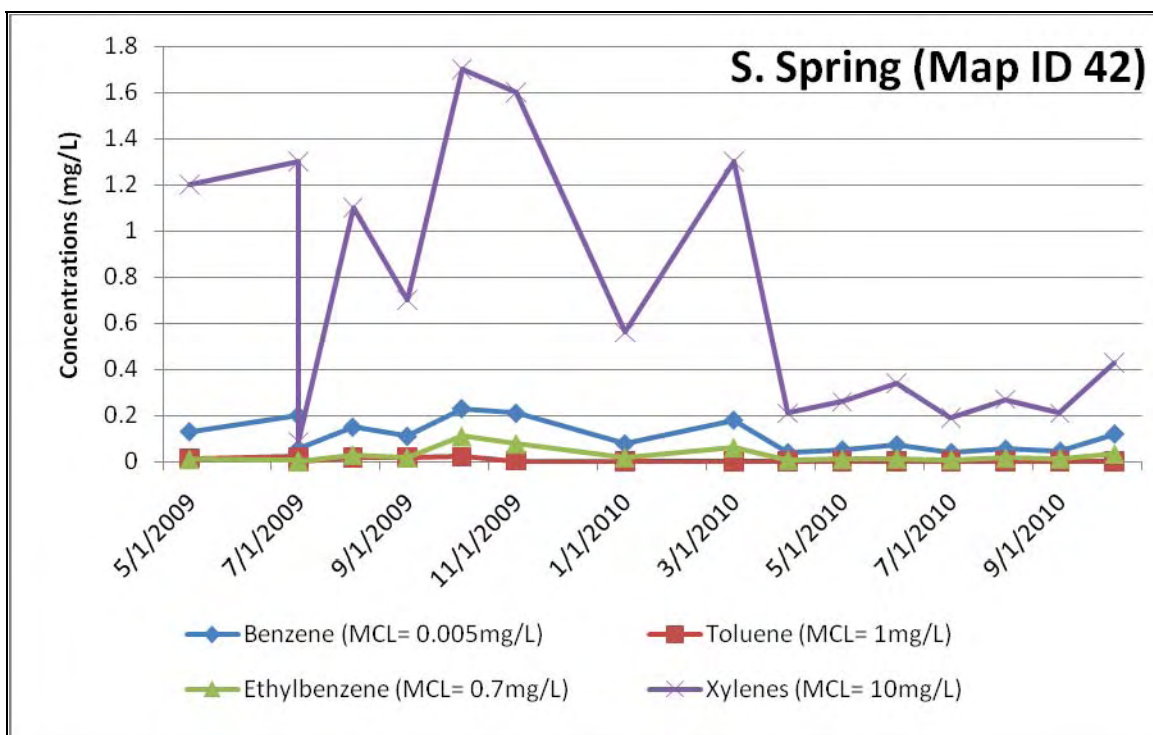




## 2010 Water Sample Results (mg/L), Rock Springs Release

South Spring (Map ID 42)						
Date	Benzene (MCL= 0.005 mg/L)	Toluene (MCL= 1mg/L)	Ethylbenzene (MCL= 0.7mg/L)	Total Xylenes (MCL= 10 mg/L)	TVH (No MCL)	TDS (*MCL= 500 mg/L)
1/28/2010	<b>0.077</b>	0.0019	0.019	0.56	2.40	472
3/25/2010	<b>0.180</b>	0.0023	0.061	1.30	3.60	<b>551</b>
4/29/2010	<b>0.039</b>	0.0014	0.0072	0.21	1.20	<b>559</b>
5/27/2010	<b>0.051</b>	0.00096	0.010	0.26	1.50	<b>511/630</b>
6/24/2010	<b>0.073</b>	0.00071	0.014	0.34	2.10	<b>552</b>
7/29/2010	<b>0.040</b>	<0.00021	0.0088	0.19	1.40	<b>540</b>
8/30/2010	<b>0.054</b>	0.00080	0.016	0.27	1.30	<b>575</b>
9/30/2010	<b>0.046</b>	0.00052	0.014	0.21	1.10	<b>540</b>
10/27/2010	<b>0.120</b>	0.00078	0.034	0.43	3.30	<b>537</b>
Average TDS Concentration (except 5/27 lab result)						<b>537</b>

Notes: Sample results presented in **Bold** indicate the Maximum Contaminant Level for water was exceeded  
MCL CDPHE Maximum Contaminant Level - [Regulation 31- The Basic Standards and Methodologies for Surface Water](#)  
mg/L Milligram per liter  
TVH Total Volatile Hydrocarbons  
TDS Total Dissolved Solids - measured in field with laboratory sample also taken on 5/27 (second result shown)  
\*The MCL for TDS is the Colorado secondary drinking water standard and is not directly applicable.

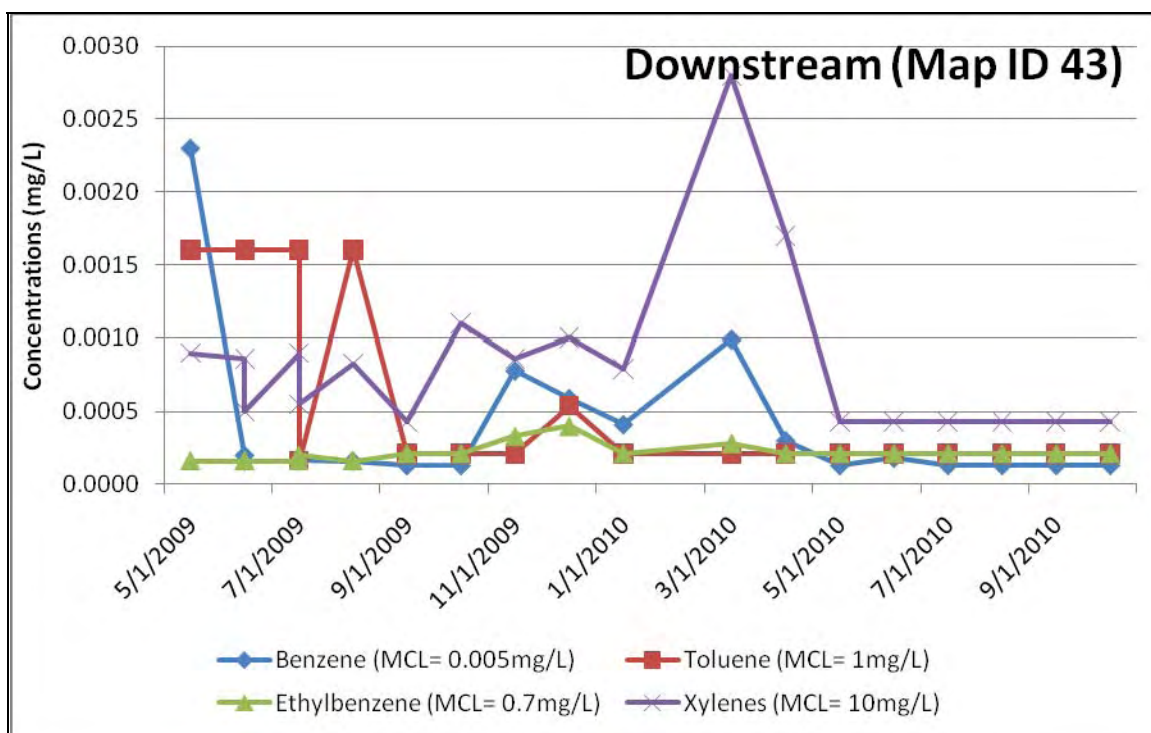




## 2010 Water Sample Results (mg/L), Rock Springs Release

Downstream (Map ID 43)						
Date	Benzene (MCL= 0.005 mg/L)	Toluene (MCL= 1mg/L)	Ethylbenzene (MCL= 0.7mg/L)	Total Xylenes (MCL= 10 mg/L)	TVH (No MCL)	TDS (*MCL= 500 mg/L)
1/28/2010	0.00041	<0.00021	<0.00021	0.00079	<0.040	<b>536</b>
3/25/2010	0.00099	<0.00021	0.00028	0.0028	<0.040	457
4/29/2010	0.00030	<0.00021	<0.00021	0.0017	<0.040	441
5/27/2010	<0.00013	<0.00021	<0.00021	<0.00043	<0.040	<b>436/520</b>
6/24/2010	0.00018	<0.00021	<0.00021	<0.00043	<0.040	463
7/29/2010	<0.00013	<0.00021	<0.00021	<0.00043	<0.040	436
8/30/2010	<0.00013	<0.00021	<0.00021	<0.00043	<0.040	472
9/30/2010	<0.00013	<0.00021	<0.00021	<0.00043	<0.040	458
10/27/2010	<0.00013	<0.00021	<0.00021	<0.00043	<0.040	470
Average TDS Concentration (except 5/27 lab result)						464

Notes: Sample results presented in **Bold** indicate the Maximum Contaminant Level for water was exceeded  
MCL CDPHE Maximum Contaminant Level - [Regulation 31- The Basic Standards and Methodologies for Surface Water](#)  
mg/L Milligram per liter  
TVH Total Volatile Hydrocarbons  
TDS Total Dissolved Solids - measured in field; laboratory sample also taken on 5/27 (second result shown)  
\*The MCL for TDS is the Colorado secondary drinking water standard and is not directly applicable.

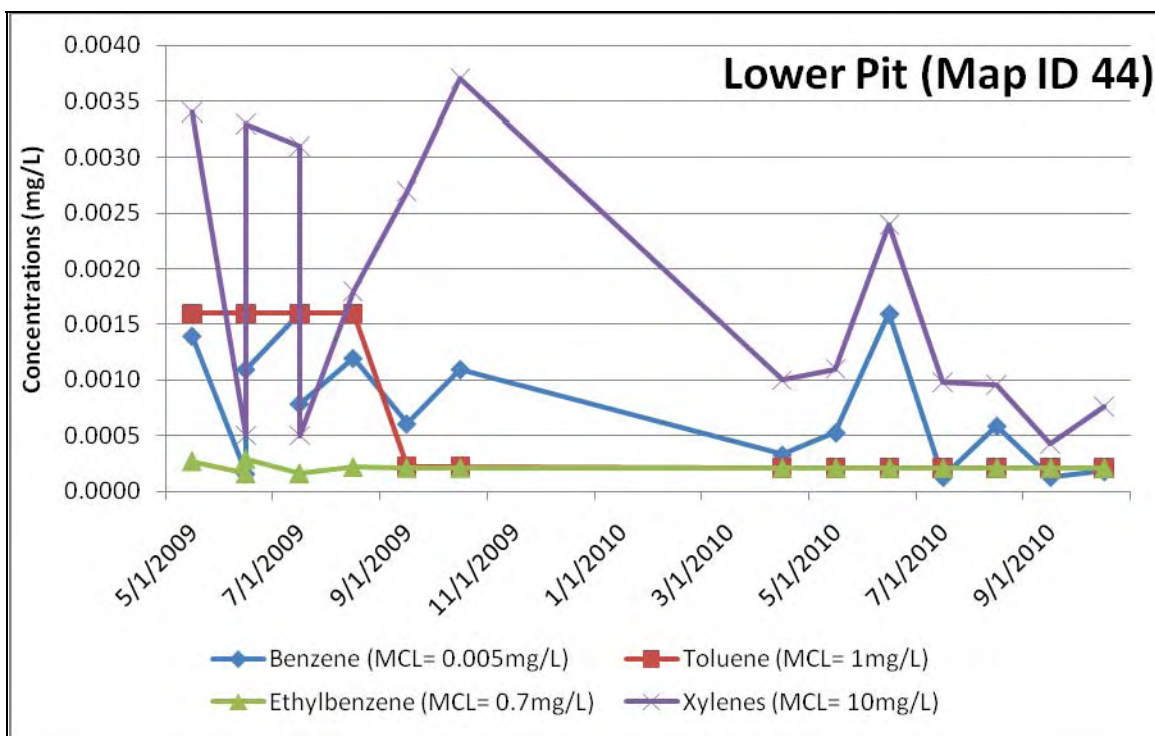




## 2010 Water Sample Results (mg/L), Rock Springs Release

Lower Pit (Map ID 44)						
Date	Benzene (MCL= 0.005 mg/L)	Toluene (MCL= 1mg/L)	Ethylbenzene (MCL= 0.7mg/L)	Total Xylenes (MCL= 10 mg/L)	TVH (No MCL)	TDS (*MCL= 500 mg/L)
4/29/2010	0.00033	<0.00021	<0.00021	0.001	<0.040	452
5/27/2010	0.00053	<0.00021	<0.00021	0.0011	<0.040	434/ <b>530</b>
6/24/2010	0.0016	<0.00021	<0.00021	0.0024	<0.040	464
7/29/2010	<0.00013	<0.00021	<0.00021	0.00098	<0.040	374
8/30/2010	0.00059	<0.00021	<0.00021	0.00096	<0.040	447
9/30/2010	<0.00013	<0.00021	<0.00021	<0.00043	<0.040	487
10/27/2010	0.00018	<0.00021	<0.00021	0.00076	<0.040	463
Average TDS Concentration (except 5/27 lab result)						446

Notes: Sample results presented in **Bold** indicate the Maximum Contaminant Level for water was exceeded  
MCL CDPHE Maximum Contaminant Level - [Regulation 31- The Basic Standards and Methodologies for Surface Water](#)  
mg/L Milligram per liter  
TVH Total Volatile Hydrocarbons  
TDS Total Dissolved Solids - measured in field with laboratory sample also taken on 5/27 (second result shown)  
\*The MCL for TDS is the Colorado secondary drinking water standard and is not directly applicable.





**Water Sample Results (mg/L), Rock Springs Release**

Upstream Sample Location (Map ID 41)						
Date	Benzene (MCL= 0.005 mg/L)	Toluene (MCL= 1mg/L)	Ethylbenzene (MCL= 0.7mg/L)	Total Xylenes (MCL= 10 mg/L)	TVH (No MCL)	TDS (*MCL= 500 mg/L)
4/29/2010	<0.00013	<0.00021	<0.00021	<0.00043	<0.040	420
5/27/2010	<0.00013	<0.00021	<0.00021	<0.00043	<0.040	403/ <b>520</b>
6/24/2010	<0.00013	<0.00021	<0.00021	<0.00043	<0.040	422
Average TDS Concentration (except 5/27 lab result)						415

Notes: Sample results presented in Red indicate the Maximum Contaminant Level for water was exceeded  
MCL CDPHE Maximum Contaminant Level - [Regulation 31- The Basic Standards and Methodologies for Surface Water](#)  
mg/L Milligram per liter  
TVH Total Volatile Hydrocarbons  
TDS Total Dissolved Solids - measured in field; laboratory sample also taken on 5/27 (second result shown)  
\*The MCL for TDS is the Colorado secondary drinking water standard and is not directly applicable.

**No Time-Series Chart**



## **Appendix B – Laboratory Analytical Data**





12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101

Grand Junction, CO 81506

## Report Summary

Friday February 05, 2010

Report Number: L442749

Samples Received: 01/30/10

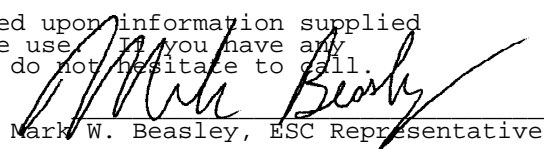
Client Project:

Description: 605-01

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

### Laboratory Certification Numbers

  
Mark W. Beasley, ESC Representative

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

This report may not be reproduced, except in full, without written approval from Environmental Science Corp.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





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Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 05, 2010

Date Received : January 30, 2010  
Description : 605-01

Sample ID : 42 SOUTH SPRING

Collected By : Brett Kennedy  
Collection Date : 01/28/10 12:55

ESC Sample # : L442749-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.077	0.00013	0.00050	mg/l		8021/80	02/02/10	1
Toluene	0.0019	0.00021	0.0050	mg/l	J	8021/80	02/02/10	1
Ethylbenzene	0.019	0.00021	0.00050	mg/l		8021/80	02/02/10	1
Total Xylene	0.56	0.0043	0.015	mg/l		8021/80	02/04/10	10
TPH (GC/FID) Low Fraction	2.4	0.040	0.10	mg/l		GRO	02/02/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	96.6			% Rec.		8021/80	02/02/10	1
a,a,a-Trifluorotoluene(PID)	102.			% Rec.		8021/80	02/02/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Est. 1970

# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 05, 2010

Date Received : January 30, 2010  
Description : 605-01

Sample ID : 43 DOWNSTREAM

Collected By : Brett Kennedy  
Collection Date : 01/28/10 13:05

ESC Sample # : L442749-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.00041	0.00013	0.00050	mg/l	J	8021/80	02/04/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	02/04/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	02/04/10	1
Total Xylene	0.00079	0.00043	0.0015	mg/l	J	8021/80	02/04/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	02/04/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	99.4			% Rec.		8021/80	02/04/10	1
a,a,a-Trifluorotoluene(PID)	101.			% Rec.		8021/80	02/04/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L442749-01	WG461373	SAMP	Toluene	R1100008	J
L442749-02	WG461815	SAMP	Benzene	R1100890	J
	WG461815	SAMP	Total Xylene	R1100890	J



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
02/05/10 at 10:46:57

TSR Signing Reports: 134  
R5 - Desired TAT

Sample: L442749-01 Account: OXYWTPGJCO Received: 01/30/10 17:15 Due Date: 02/05/10 00:00 RPT Date: 02/05/10 10:46

Sample: L442749-02 Account: OXYWTPGJCO Received: 01/30/10 17:15 Due Date: 02/05/10 00:00 RPT Date: 02/05/10 10:46









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Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

## Report Summary

Monday April 05, 2010

Report Number: L451420

Samples Received: 03/27/10

Client Project:

Description: 605-01

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Mark W. Beasley , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

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Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

April 05, 2010

Date Received : March 27, 2010  
Description : 605-01

Sample ID : 42 SOUTH SPRING

Collected By : Brett Kennedy  
Collection Date : 03/26/10 10:23

ESC Sample # : L451420-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.18	0.00013	0.00050	mg/l		8021/80	03/31/10	1
Toluene	0.0023	0.00021	0.0050	mg/l	J	8021/80	03/31/10	1
Ethylbenzene	0.061	0.00021	0.00050	mg/l		8021/80	03/31/10	1
Total Xylene	1.3	0.0043	0.015	mg/l		8021/80	04/02/10	10
TPH (GC/FID) Low Fraction	3.6	0.040	0.10	mg/l		GRO	03/31/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	94.7			% Rec.		8021/80	03/31/10	1
a,a,a-Trifluorotoluene(PID)	100.			% Rec.		8021/80	03/31/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

April 05, 2010

Date Received : March 27, 2010  
Description : 605-01

Sample ID : 43 DOWNSTREAM

Collected By : Brett Kennedy  
Collection Date : 03/26/10 10:33

ESC Sample # : L451420-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.00099	0.00013	0.00050	mg/l		8021/80	03/31/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	03/31/10	1
Ethylbenzene	0.00028	0.00021	0.00050	mg/l	J	8021/80	03/31/10	1
Total Xylene	0.0028	0.00043	0.0015	mg/l		8021/80	04/03/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	03/31/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	99.1			% Rec.		8021/80	03/31/10	1
a,a,a-Trifluorotoluene(PID)	99.9			% Rec.		8021/80	03/31/10	1

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Note:

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Reported: 04/05/10 18:07 Printed: 04/05/10 18:08



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L451420-01	WG470485	SAMP	Toluene	R1164349	J
L451420-02	WG470485	SAMP	Ethylbenzene	R1164349	J



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

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- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
04/05/10 at 18:08:20

TSR Signing Reports: 134  
R5 - Desired TAT

Sample: L451420-01 Account: OXYWTPGJCO Received: 03/27/10 09:00 Due Date: 04/02/10 00:00 RPT Date: 04/05/10 18:07

Sample: L451420-02 Account: OXYWTPGJCO Received: 03/27/10 09:00 Due Date: 04/02/10 00:00 RPT Date: 04/05/10 18:07



Company Name/Address: <b>Oxy USA WTP LP - Grand Junction, CO</b> 760 Horizon Dr., Ste. 101 Grand Junction, CO 81506			Alternate billing information:			Analysis/Container/Preservative			Chain of Custody Page 1 of 1  <b>A237</b>  <b>ENVIRONMENTAL SCIENCE CORP.</b> 12065 Lebanon Road Mt. Juliet, TN 37122  Phone (615) 758-5858 Phone (800) 767-5859 FAX (615) 758-5859			
Report to: <u>Brett Kennedy</u>			Email to: <u>brett.kennedy@oxy.com</u>									
Project Description: <u>605-01</u>			City/State Collected: <u>          </u>									
Phone: (970) 263-3601		Client Project #:		ESC Key:								
FAX: (970) 201-2305												
Collected by: <u>Brett Kennedy</u>			Site/Facility ID#:		P.O.#:							
Collected by (signature): <u>Brett Kennedy</u> Immediately Packed on Ice N <u>Y</u> <input checked="" type="checkbox"/>			<b>Rush?</b> (Lab MUST Be Notified) <input type="checkbox"/> Same Day..... 200% <input type="checkbox"/> Next Day..... 100% <input type="checkbox"/> Two Day..... 50% <input type="checkbox"/> Three Day..... 25%		Date Results Needed: Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		No. of Cntrs		CoCode: <b>OXYWTPGJ</b> (lab use only) Template/Prelogin Shipped Via:			
Sample ID			Comp/Grab	Matrix*	Depth	Date	Time					
#42 South Spring			Grab	SW	0-6"	3/25/10	1023	2	BTEX 16 RO			
#43 Downstream			↓	↓	↓	↓	1033	2				

\*Matrix: **SS** - Soil/Solid **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other SW pH            Temp           

Remarks: Surface Water Flow 8688 6671 1099 Other           

Relinquished by: (Signature) <u>Brett Kennedy</u>	Date: <u>3/26/10</u>	Time: <u>1035</u>	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> <u>          </u>		Condition: <u>          </u> (lab use only) <u>OK</u>
	Date: <u>          </u>	Time: <u>          </u>	Received by: (Signature)	Temp: <u>2.5</u>	Bottles Received: <u>4/1</u>	CoC Seals Intact <u>Y</u> <u>N</u> <u>NA</u>
Relinquished by: (Signature)	Date: <u>          </u>	Time: <u>          </u>	Received for lab by: (Signature) <u>Kenn Wren</u>	Date: <u>3/27/10</u>	Time: <u>6500</u>	pH Checked: <u>          </u> NCF: <u>          </u>





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Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

## Report Summary

Wednesday May 05, 2010

Report Number: L456646

Samples Received: 04/30/10

Client Project:

Description: 605-01

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Jarred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

May 05, 2010

Date Received : April 30, 2010  
Description : 605-01

Sample ID : 41 605-01 UPSTREAM

Collected By : Brett Kennedy  
Collection Date : 04/29/10 13:40

ESC Sample # : L456646-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	U	0.00013	0.00050	mg/l		8021/80	05/04/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	05/04/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	05/04/10	1
Total Xylene	U	0.00043	0.0015	mg/l		8021/80	05/04/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	05/04/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	102.			% Rec.		8021/80	05/04/10	1
a,a,a-Trifluorotoluene(PID)	103.			% Rec.		8021/80	05/04/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

May 05, 2010

Date Received : April 30, 2010  
Description : 605-01

Sample ID : 42 SOUTH SPRING

Collected By : Brett Kennedy  
Collection Date : 04/29/10 13:48

ESC Sample # : L456646-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.039	0.00013	0.00050	mg/l		8021/80	05/04/10	1
Toluene	0.0014	0.00021	0.0050	mg/l	J	8021/80	05/04/10	1
Ethylbenzene	0.0072	0.00021	0.00050	mg/l		8021/80	05/04/10	1
Total Xylene	0.21	0.00043	0.0015	mg/l		8021/80	05/04/10	1
TPH (GC/FID) Low Fraction	1.2	0.040	0.10	mg/l		GRO	05/04/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	93.1			% Rec.		8021/80	05/04/10	1
a,a,a-Trifluorotoluene(PID)	100.			% Rec.		8021/80	05/04/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

May 05, 2010

Date Received : April 30, 2010  
Description : 605-01

Sample ID : 43 DOWNSTREAM

Collected By : Brett Kennedy  
Collection Date : 04/29/10 14:03

ESC Sample # : L456646-03

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.00030	0.00013	0.00050	mg/l	J	8021/80	05/04/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	05/04/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	05/04/10	1
Total Xylene	0.0017	0.00043	0.0015	mg/l		8021/80	05/04/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	05/04/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	102.			% Rec.		8021/80	05/04/10	1
a,a,a-Trifluorotoluene(PID)	103.			% Rec.		8021/80	05/04/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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Est. 1970

# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

May 05, 2010

Date Received : April 30, 2010  
Description : 605-01

Sample ID : 44 LOWER PIT

Collected By : Brett Kennedy  
Collection Date : 04/29/10 13:58

ESC Sample # : L456646-04

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.00033	0.00013	0.00050	mg/l	J	8021/80	05/04/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	05/04/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	05/04/10	1
Total Xylene	0.0010	0.00043	0.0015	mg/l	J	8021/80	05/04/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	05/04/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	102.			% Rec.		8021/80	05/04/10	1
a,a,a-Trifluorotoluene(PID)	103.			% Rec.		8021/80	05/04/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

May 05, 2010

Date Received : April 30, 2010  
Description : 605-01

Sample ID : 40 NORTH SPRING

Collected By : Brett Kennedy  
Collection Date : 04/29/10 13:54

ESC Sample # : L456646-05

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.0091	0.00013	0.00050	mg/l		8021/80	05/04/10	1
Toluene	0.00039	0.00021	0.0050	mg/l	J	8021/80	05/04/10	1
Ethylbenzene	0.0060	0.00021	0.00050	mg/l		8021/80	05/04/10	1
Total Xylene	0.030	0.00043	0.0015	mg/l		8021/80	05/04/10	1
TPH (GC/FID) Low Fraction	0.40	0.040	0.10	mg/l		GRO	05/04/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	93.3			% Rec.		8021/80	05/04/10	1
a,a,a-Trifluorotoluene(PID)	101.			% Rec.		8021/80	05/04/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L456646-02	WG476343	SAMP	Toluene	R1205828	J
L456646-03	WG476343	SAMP	Benzene	R1205828	J
L456646-04	WG476343	SAMP	Benzene	R1205828	J
	WG476343	SAMP	Total Xylene	R1205828	J
L456646-05	WG476343	SAMP	Toluene	R1205828	J



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
05/05/10 at 16:51:49

TSR Signing Reports: 134  
R4 - Rush: Three Day

Sample: L456646-01 Account: OXYWTPGJCO Received: 04/30/10 09:00 Due Date: 05/05/10 00:00 RPT Date: 05/05/10 16:51  
Sample: L456646-02 Account: OXYWTPGJCO Received: 04/30/10 09:00 Due Date: 05/05/10 00:00 RPT Date: 05/05/10 16:51  
Sample: L456646-03 Account: OXYWTPGJCO Received: 04/30/10 09:00 Due Date: 05/05/10 00:00 RPT Date: 05/05/10 16:51  
Sample: L456646-04 Account: OXYWTPGJCO Received: 04/30/10 09:00 Due Date: 05/05/10 00:00 RPT Date: 05/05/10 16:51  
Sample: L456646-05 Account: OXYWTPGJCO Received: 04/30/10 09:00 Due Date: 05/05/10 00:00 RPT Date: 05/05/10 16:51



Company Name/Address: <b>Oxy USA WTP LP - Grand Junction, CO</b> 760 Horizon Dr.. Ste. 101 Grand Junction.CO 81506			Alternate billing information:			Analysis/Container/Preservative			Chain of Custody Page <u>1</u> of <u>1</u> Prepared by: <b>F096</b>  <b>ENVIRONMENTAL SCIENCE CORP.</b> 12065 Lebanon Road Mt. Juliet, TN 37122  Phone (615) 758-5858 Phone (800) 767-5859 FAX (615) 758-5859		
Report to: <b>Brett Kennedy</b>			Email to: <b>brett.kennedy@oxy.com</b>			No. of Cntrs <b>BTEX/620</b>					
Project Description: <b>605-01</b>			City/State Collected: <b>-</b>								
Phone: (970) 263-3601 FAX: (970) 201-2305		Client Project #: <b>-</b>		ESC Key: <b>-</b>							
Collected by: <b>Brett Kennedy</b>		Site/Facility ID#: <b>-</b>		P.O.#: <b>-</b>							
Collected by (signature): <b>Brett Kennedy</b> Immediately Packed on Ice N <u>Y</u> <input checked="" type="checkbox"/>		<b>Rush?</b> ( Lab MUST Be Notified ) <input type="checkbox"/> Same Day..... 200% <input type="checkbox"/> Next Day..... 100% <input type="checkbox"/> Two Day..... 50% <input checked="" type="checkbox"/> Three Day..... 25%		Date Results Needed: Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes							
Sample ID			Comp/Grab	Matrix*	Depth	Date	Time				
#41 605-01 Upstream			6reb	SW	06"	4/19/10	1340	2	<input checked="" type="checkbox"/>		
#42 South Spring			↓	↓	↓	↓	1348	2	<input checked="" type="checkbox"/>		
#43 Downstream			↓	↓	↓	↓	1403	2	<input checked="" type="checkbox"/>		
#44 Lower Pit			↓	↓	↓	↓	1358	2	<input checked="" type="checkbox"/>		
#40 North Spring			↓	↓	↓	↓	1354	2	<input checked="" type="checkbox"/>		

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other SW pH \_\_\_\_\_ Temp \_\_\_\_\_

Remarks: Surface Water 9632 6268 3/31 Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature) <b>Brett Kennedy</b>	Date: <b>4/19/10</b>	Time: <b>1435</b>	Received by: (Signature)  	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: <b>OK</b> (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <b>3.6°C</b>	Bottles Received: <b>10V</b>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <b>Jonah</b>	Date: <b>4/30/10</b>	Time: <b>8900</b>
					CoC Seals Intact <u>Y</u> <u>N</u> <input checked="" type="checkbox"/> NA
					pH Checked: NCF:





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Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

## Report Summary

Thursday June 10, 2010

Report Number: L461778

Samples Received: 05/29/10

Client Project:

Description: 605-01

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Mark W. Beasley , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 10, 2010

Date Received : May 29, 2010  
Description : 605-01  
Sample ID : 41 605-01 UPSTREAM 0-6IN  
Collected By : Brett Kennedy  
Collection Date : 05/27/10 14:10

ESC Sample # : L461778-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	0.17	0.041	0.10	mg/l		9056	05/29/10	1
Sulfate	44.	0.46	5.0	mg/l		9056	05/29/10	1
BOD	U	1.6	5.0	mg/l	B1J4	SM5210B	06/03/10	1
COD	9.8	1.7	10.	mg/l	J	410.4	06/02/10	1
Dissolved Oxygen	8.03@21.4c	0.99	3.0	mg/l	TT8	4500-O	05/29/10	1
ORP	180			mV	T8	2580	06/01/10	1
Phosphate,Ortho	0.12	0.0036	0.025	mg/l		4500P-E	05/29/10	1
TOC (Total Organic Carbon)	2.4	0.20	1.0	mg/l		9060A	06/08/10	1
Dissolved Solids	520	2.5	10.	mg/l		2540C	06/04/10	1
Arsenic	0.0065	0.0065	0.020	mg/l	J	6010B	06/09/10	1
Barium	0.20	0.0010	0.0050	mg/l		6010B	06/09/10	1
Cadmium	U	0.00080	0.0050	mg/l		6010B	06/09/10	1
Calcium	81.	0.11	0.50	mg/l		6010B	06/09/10	1
Chromium	0.0028	0.0017	0.010	mg/l	J	6010B	06/09/10	1
Copper	U	0.0042	0.020	mg/l		6010B	06/09/10	1
Iron	1.2	0.019	0.10	mg/l		6010B	06/09/10	1
Lead	U	0.0018	0.0050	mg/l		6010B	06/09/10	1
Magnesium	35.	0.018	0.10	mg/l		6010B	06/09/10	1
Molybdenum	0.0047	0.0017	0.0050	mg/l	J	6010B	06/09/10	1
Nickel	U	0.0053	0.020	mg/l		6010B	06/09/10	1
Zinc	0.0070	0.0068	0.030	mg/l	J	6010B	06/09/10	1
Benzene	U	0.00013	0.00050	mg/l		8021/80	06/06/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	06/06/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	06/06/10	1
Total Xylene	U	0.00043	0.0015	mg/l		8021/80	06/06/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	06/06/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	108.			% Rec.		8021/80	06/06/10	1
a,a,a-Trifluorotoluene(PID)	102.			% Rec.		8021/80	06/06/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 10, 2010

Date Received : May 29, 2010  
Description : 605-01  
Sample ID : 42 SOUTH SPRING 0-6IN  
Collected By : Brett Kennedy  
Collection Date : 05/27/10 14:25

ESC Sample # : L461778-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	0.041	0.10	mg/l		9056	05/29/10	1
Sulfate	26.	0.46	5.0	mg/l		9056	05/29/10	1
BOD	U	1.6	5.0	mg/l	B1J4	SM5210B	06/03/10	1
COD	30.	1.7	10.	mg/l		410.4	06/02/10	1
Dissolved Oxygen	3.74@21.1c	0.99	3.0	mg/l	TT8	4500-O	05/29/10	1
ORP	180			mV	T8	2580	06/01/10	1
Phosphate,Ortho	0.0066	0.0036	0.025	mg/l	J	4500P-E	05/29/10	1
TOC (Total Organic Carbon)	4.6	0.20	1.0	mg/l		9060A	06/08/10	1
Dissolved Solids	630	2.5	10.	mg/l		2540C	06/04/10	1
Arsenic	0.014	0.0065	0.020	mg/l	J	6010B	06/09/10	1
Barium	0.21	0.0010	0.0050	mg/l		6010B	06/09/10	1
Cadmium	U	0.00080	0.0050	mg/l		6010B	06/09/10	1
Calcium	89.	0.11	0.50	mg/l		6010B	06/09/10	1
Chromium	U	0.0017	0.010	mg/l		6010B	06/09/10	1
Copper	U	0.0042	0.020	mg/l		6010B	06/09/10	1
Iron	0.93	0.019	0.10	mg/l		6010B	06/09/10	1
Lead	U	0.0018	0.0050	mg/l		6010B	06/09/10	1
Magnesium	36.	0.018	0.10	mg/l		6010B	06/09/10	1
Molybdenum	0.0024	0.0017	0.0050	mg/l	J	6010B	06/09/10	1
Nickel	U	0.0053	0.020	mg/l		6010B	06/09/10	1
Zinc	0.011	0.0068	0.030	mg/l	J	6010B	06/09/10	1
Benzene	0.051	0.00013	0.00050	mg/l		8021/80	06/06/10	1
Toluene	0.00096	0.00021	0.0050	mg/l	J	8021/80	06/06/10	1
Ethylbenzene	0.010	0.00021	0.00050	mg/l		8021/80	06/06/10	1
Total Xylene	0.26	0.00043	0.0015	mg/l		8021/80	06/06/10	1
TPH (GC/FID) Low Fraction	1.5	0.040	0.10	mg/l		GRO	06/06/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	106.			% Rec.		8021/80	06/06/10	1
a,a,a-Trifluorotoluene(PID)	100.			% Rec.		8021/80	06/06/10	1

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MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 10, 2010

Date Received : May 29, 2010  
Description : 605-01  
Sample ID : 40 NORTH SPRING 0-6IN

ESC Sample # : L461778-03

Site ID :

Project # :

Collected By : Brett Kennedy  
Collection Date : 05/27/10 14:35

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	0.14	0.041	0.10	mg/l		9056	05/29/10	1
Sulfate	44.	0.46	5.0	mg/l		9056	05/29/10	1
BOD	U	1.6	5.0	mg/l	B1J4	SM5210B	06/03/10	1
COD	21.	1.7	10.	mg/l		410.4	06/02/10	1
Dissolved Oxygen	7.17@21.0c	0.99	3.0	mg/l	TT8	4500-O	05/29/10	1
ORP	180			mV	T8	2580	06/01/10	1
Phosphate,Ortho	0.087	0.0036	0.025	mg/l		4500P-E	05/29/10	1
TOC (Total Organic Carbon)	2.7	0.20	1.0	mg/l		9060A	06/08/10	1
Dissolved Solids	500	2.5	10.	mg/l		2540C	06/04/10	1
Arsenic	U	0.0065	0.020	mg/l		6010B	06/09/10	1
Barium	0.19	0.0010	0.0050	mg/l		6010B	06/09/10	1
Cadmium	U	0.00080	0.0050	mg/l		6010B	06/09/10	1
Calcium	77.	0.11	0.50	mg/l		6010B	06/09/10	1
Chromium	U	0.0017	0.010	mg/l		6010B	06/09/10	1
Copper	U	0.0042	0.020	mg/l		6010B	06/09/10	1
Iron	0.62	0.019	0.10	mg/l		6010B	06/09/10	1
Lead	U	0.0018	0.0050	mg/l		6010B	06/09/10	1
Magnesium	33.	0.018	0.10	mg/l		6010B	06/09/10	1
Molybdenum	0.0058	0.0017	0.0050	mg/l		6010B	06/09/10	1
Nickel	U	0.0053	0.020	mg/l		6010B	06/09/10	1
Zinc	U	0.0068	0.030	mg/l		6010B	06/09/10	1
Benzene	U	0.00013	0.00050	mg/l		8021/80	06/06/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	06/06/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	06/06/10	1
Total Xylene	0.00070	0.00043	0.0015	mg/l	J	8021/80	06/06/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	06/06/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	107.			% Rec.		8021/80	06/06/10	1
a,a,a-Trifluorotoluene(PID)	101.			% Rec.		8021/80	06/06/10	1

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MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 10, 2010

Date Received : May 29, 2010  
Description : 605-01  
Sample ID : 44 LOWER PIT 0-6IN  
Collected By : Brett Kennedy  
Collection Date : 05/27/10 14:43

ESC Sample # : L461778-04

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	0.041	0.10	mg/l		9056	05/29/10	1
Sulfate	42.	0.46	5.0	mg/l		9056	05/29/10	1
BOD	U	1.6	5.0	mg/l	B1J4	SM5210B	06/03/10	1
COD	9.7	1.7	10.	mg/l	J	410.4	06/02/10	1
Dissolved Oxygen	7.46@21.0c	0.99	3.0	mg/l	TT8	4500-O	05/29/10	1
ORP	180			mV	T8	2580	06/01/10	1
Phosphate,Ortho	0.13	0.0036	0.025	mg/l		4500P-E	05/29/10	1
TOC (Total Organic Carbon)	3.1	0.20	1.0	mg/l		9060A	06/08/10	1
Dissolved Solids	530	2.5	10.	mg/l		2540C	06/04/10	1
Arsenic	0.0080	0.0065	0.020	mg/l	J	6010B	06/09/10	1
Barium	0.23	0.0010	0.0050	mg/l		6010B	06/09/10	1
Cadmium	U	0.00080	0.0050	mg/l		6010B	06/09/10	1
Calcium	86.	0.11	0.50	mg/l		6010B	06/09/10	1
Chromium	U	0.0017	0.010	mg/l		6010B	06/09/10	1
Copper	U	0.0042	0.020	mg/l		6010B	06/09/10	1
Iron	1.4	0.019	0.10	mg/l		6010B	06/09/10	1
Lead	U	0.0018	0.0050	mg/l		6010B	06/09/10	1
Magnesium	34.	0.018	0.10	mg/l		6010B	06/09/10	1
Molybdenum	0.0036	0.0017	0.0050	mg/l	J	6010B	06/09/10	1
Nickel	U	0.0053	0.020	mg/l		6010B	06/09/10	1
Zinc	0.017	0.0068	0.030	mg/l	J	6010B	06/09/10	1
Benzene	0.00053	0.00013	0.00050	mg/l		8021/80	06/06/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	06/06/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	06/06/10	1
Total Xylene	0.0011	0.00043	0.0015	mg/l	J	8021/80	06/06/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	06/06/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	107.			% Rec.		8021/80	06/06/10	1
a,a,a-Trifluorotoluene(PID)	101.			% Rec.		8021/80	06/06/10	1

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MDL = Minimum Detection Limit = LOD

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Note:

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 10, 2010

Date Received : May 29, 2010  
Description : 605-01  
Sample ID : 43 DOWNSTREAM 0-6IN  
Collected By : Brett Kennedy  
Collection Date : 05/27/10 15:00

ESC Sample # : L461778-05

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	0.086	0.041	0.10	mg/l	J	9056	05/29/10	1
Sulfate	34.	0.46	5.0	mg/l		9056	05/29/10	1
BOD	U	1.6	5.0	mg/l	B1J4	SM5210B	06/03/10	1
COD	35.	1.7	10.	mg/l		410.4	06/02/10	1
Dissolved Oxygen	8.31@21.0c	0.99	3.0	mg/l	TT8	4500-O	05/29/10	1
ORP	180			mV	T8	2580	06/01/10	1
Phosphate,Ortho	0.13	0.0036	0.025	mg/l		4500P-E	05/29/10	1
TOC (Total Organic Carbon)	2.9	0.20	1.0	mg/l		9060A	06/08/10	1
Dissolved Solids	520	2.5	10.	mg/l		2540C	06/04/10	1
Arsenic	0.011	0.0065	0.020	mg/l	JP1	6010B	06/09/10	1
Barium	0.20	0.0010	0.0050	mg/l		6010B	06/09/10	1
Cadmium	U	0.00080	0.0050	mg/l		6010B	06/09/10	1
Calcium	86.	0.11	0.50	mg/l		6010B	06/09/10	1
Chromium	U	0.0017	0.010	mg/l		6010B	06/09/10	1
Copper	U	0.0042	0.020	mg/l		6010B	06/09/10	1
Iron	0.84	0.019	0.10	mg/l		6010B	06/09/10	1
Lead	U	0.0018	0.0050	mg/l		6010B	06/09/10	1
Magnesium	35.	0.018	0.10	mg/l		6010B	06/09/10	1
Molybdenum	0.0048	0.0017	0.0050	mg/l	J	6010B	06/09/10	1
Nickel	U	0.0053	0.020	mg/l		6010B	06/09/10	1
Zinc	0.012	0.0068	0.030	mg/l	JP1	6010B	06/09/10	1
Benzene	U	0.00013	0.00050	mg/l		8021/80	06/09/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	06/09/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	06/09/10	1
Total Xylene	U	0.00043	0.0015	mg/l		8021/80	06/09/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	06/09/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	103.			% Rec.		8021/80	06/09/10	1
a,a,a-Trifluorotoluene(PID)	97.8			% Rec.		8021/80	06/09/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

The reported analytical results relate only to the sample submitted.

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Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L461778-01	WG481313	SAMP	Dissolved Oxygen	R1239652	TT8
	WG481557	SAMP	Arsenic	R1248899	J
	WG481557	SAMP	Chromium	R1248899	J
	WG481557	SAMP	Molybdenum	R1248899	J
	WG481557	SAMP	Zinc	R1248899	J
	WG481064	SAMP	BOD	R1246128	B1J4
	WG481201	SAMP	COD	R1240689	J
	WG481216	SAMP	ORP	R1239892	T8
L461778-02	WG481313	SAMP	Dissolved Oxygen	R1239652	TT8
	WG481876	SAMP	Toluene	R1247470	J
	WG481557	SAMP	Arsenic	R1248899	J
	WG481557	SAMP	Molybdenum	R1248899	J
	WG481557	SAMP	Zinc	R1248899	J
	WG481035	SAMP	Phosphate,Ortho	R1237611	J
	WG481064	SAMP	BOD	R1246128	B1J4
	WG481216	SAMP	ORP	R1239892	T8
L461778-03	WG481313	SAMP	Dissolved Oxygen	R1239652	TT8
	WG481876	SAMP	Total Xylene	R1247470	J
	WG481064	SAMP	BOD	R1246128	B1J4
	WG481216	SAMP	ORP	R1239892	T8
L461778-04	WG481313	SAMP	Dissolved Oxygen	R1239652	TT8
	WG481876	SAMP	Total Xylene	R1247470	J
	WG481557	SAMP	Arsenic	R1248899	J
	WG481557	SAMP	Molybdenum	R1248899	J
	WG481557	SAMP	Zinc	R1248899	J
	WG481064	SAMP	BOD	R1246128	B1J4
	WG481201	SAMP	COD	R1240689	J
	WG481216	SAMP	ORP	R1239892	T8
L461778-05	WG481313	SAMP	Dissolved Oxygen	R1239652	TT8
	WG481557	SAMP	Arsenic	R1248899	JP1
	WG481557	SAMP	Molybdenum	R1248899	J
	WG481557	SAMP	Zinc	R1248899	JP1
	WG481025	SAMP	Nitrate	R1238890	J
	WG481064	SAMP	BOD	R1246128	B1J4
	WG481216	SAMP	ORP	R1239892	T8



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
B1	(ESC) - The blank depletion was greater than the recommended maximum depletion of 0.2mg/L.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

**Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

**Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

**Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

**TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
06/10/10 at 16:32:57

TSR Signing Reports: 134  
R5 - Desired TAT

Sample: L461778-01 Account: OXYWTPGJCO Received: 05/29/10 09:00 Due Date: 06/07/10 00:00 RPT Date: 06/10/10 16:32  
Sample: L461778-02 Account: OXYWTPGJCO Received: 05/29/10 09:00 Due Date: 06/07/10 00:00 RPT Date: 06/10/10 16:32  
Sample: L461778-03 Account: OXYWTPGJCO Received: 05/29/10 09:00 Due Date: 06/07/10 00:00 RPT Date: 06/10/10 16:32  
Sample: L461778-04 Account: OXYWTPGJCO Received: 05/29/10 09:00 Due Date: 06/07/10 00:00 RPT Date: 06/10/10 16:32  
Sample: L461778-05 Account: OXYWTPGJCO Received: 05/29/10 09:00 Due Date: 06/07/10 00:00 RPT Date: 06/10/10 16:32



Company Name/Address: <b>Oxy USA WTP LP - Grand Junction, CO</b> 760 Horizon Dr., Ste. 101 Grand Junction, CO 81506			Alternate billing information:			Analysis/Container/Preservative <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             As, Ba, Cd, Cr, Cu, Pb, Mn, Ni, Zn, Fe, Mg - Ca L2           </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             Ca L2           </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             Sulfate, Nitrate, Phosphate           </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             TOC L2           </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             TDS           </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             COD, BOD L2           </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             BTEX L2           </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             ORP, DO           </div> </div>			Chain of Custody Page <u>1</u> of <u>1</u>  <b>ENVIRONMENTAL SCIENCE CORP.</b> 12065 Lebanon Road Mt. Juliet, TN 37122  Phone (615) 758-5858 Phone (800) 767-5859 FAX (615) 758-5859		
Report to: <u>Brett Kennedy</u>			Email to: <u>brett.kennedy@oxy.com</u>								
Project Description: <u>605-01</u>			City/State Collected: <u>          </u>								
Phone: (970) 263-3601 FAX: (970) 201-2305		Client Project #: <u>          </u>		ESC Key: <u>          </u>							
Collected by: <u>Brett Kennedy</u>		Site/Facility ID#: <u>          </u>		P.O.#: <u>          </u>							
Collected by (signature): <u>Brett Kennedy</u> Immediately Packed on Ice N <u>  </u> Y <u>  </u> <input checked="" type="checkbox"/>		<b>Rush?</b> (Lab MUST Be Notified) <input type="checkbox"/> Same Day.....200% <input type="checkbox"/> Next Day.....100% <input type="checkbox"/> Two Day.....50% <input type="checkbox"/> Three Day.....25%		Date Results Needed: Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		No. of Cntrs					
Sample ID	Comp/Grab	Matrix*	Depth	Date	Time						
#41 605-01 Upstream	Grab	SW	0-6"	5/27/10	1410	9					
#42 South Spring	↓	↓	↓	↓	1425	9					
#40 North Spring	↓	↓	↓	↓	1435	9					
#44 Lower Pit	↓	↓	↓	↓	1443	9					
#43 Downstream	↓	↓	↓	↓	1500	9					

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other SW

Remarks:

8695 1789 5771

Surface water

pH            Temp           

Flow            Other           

Relinquished by: (Signature) <u>Brett Kennedy</u>	Date: <u>5/28/10</u>	Time: <u>1010</u>	Received by: (Signature)	Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: <u>          </u> (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <u>2.8°</u>	Bottles Received: <u>45</u>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <u>C. G. [Signature]</u>	Date: <u>5.29.10</u>	Time: <u>0900</u>
				CoC Seals Intact <u>  </u> Y <u>  </u> N <u>  </u> <input checked="" type="checkbox"/> NA pH Checked: <u>L2</u> NCF: <u>          </u>	





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Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

## Report Summary

Friday July 09, 2010

Report Number: L466385

Samples Received: 06/26/10

Client Project:

Description: 605-01

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Mark W. Beasley , ESC Representative

### *Laboratory Certification Numbers*

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

July 09, 2010

Date Received : June 26, 2010  
Description : 605-01

Sample ID : 41 605-01 UPSTREAM

Collected By : Brett Kennedy  
Collection Date : 06/24/10 08:20

ESC Sample # : L466385-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	U	0.00013	0.00050	mg/l		8021/80	07/04/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	07/04/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	07/04/10	1
Total Xylene	U	0.00043	0.0015	mg/l		8021/80	07/04/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	07/04/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	109.			% Rec.		8021/80	07/04/10	1
a,a,a-Trifluorotoluene(PID)	103.			% Rec.		8021/80	07/04/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

July 09, 2010

Date Received : June 26, 2010  
Description : 605-01

Sample ID : 40 NORTH SPRING

Collected By : Brett Kennedy  
Collection Date : 06/24/10 08:35

ESC Sample # : L466385-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.0035	0.00013	0.00050	mg/l		8021/80	07/04/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	07/04/10	1
Ethylbenzene	0.0021	0.00021	0.00050	mg/l		8021/80	07/04/10	1
Total Xylene	0.012	0.00043	0.0015	mg/l		8021/80	07/04/10	1
TPH (GC/FID) Low Fraction	0.072	0.040	0.10	mg/l	J	GRO	07/04/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	112.			% Rec.		8021/80	07/04/10	1
a,a,a-Trifluorotoluene(PID)	101.			% Rec.		8021/80	07/04/10	1

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

July 09, 2010

Date Received : June 26, 2010  
Description : 605-01

Sample ID : 42 SOUTH SPRING

Collected By : Brett Kennedy  
Collection Date : 06/24/10 08:40

ESC Sample # : L466385-03

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.073	0.00013	0.00050	mg/l		8021/80	07/04/10	1
Toluene	0.00071	0.00021	0.0050	mg/l	J	8021/80	07/04/10	1
Ethylbenzene	0.014	0.00021	0.00050	mg/l		8021/80	07/04/10	1
Total Xylene	0.34	0.00043	0.0015	mg/l		8021/80	07/04/10	1
TPH (GC/FID) Low Fraction	2.1	0.040	0.10	mg/l		GRO	07/04/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	102.			% Rec.		8021/80	07/04/10	1
a,a,a-Trifluorotoluene(PID)	100.			% Rec.		8021/80	07/04/10	1

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

July 09, 2010

Date Received : June 26, 2010  
Description : 605-01

Sample ID : 44 LOWER PIT

Collected By : Brett Kennedy  
Collection Date : 06/24/10 08:47

ESC Sample # : L466385-04

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.0016	0.00013	0.00050	mg/l		8021/80	07/04/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	07/04/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	07/04/10	1
Total Xylene	0.0024	0.00043	0.0015	mg/l		8021/80	07/04/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	07/04/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	110.			% Rec.		8021/80	07/04/10	1
a,a,a-Trifluorotoluene(PID)	102.			% Rec.		8021/80	07/04/10	1

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

July 09, 2010

Date Received : June 26, 2010  
Description : 605-01

Sample ID : 43 DOWNSTREAM

Collected By : Brett Kennedy  
Collection Date : 06/24/10 08:52

ESC Sample # : L466385-05

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.00018	0.00013	0.00050	mg/l	J	8021/80	07/06/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	07/06/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	07/06/10	1
Total Xylene	U	0.00043	0.0015	mg/l		8021/80	07/06/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l	J5	GRO	07/06/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	99.3			% Rec.		8021/80	07/06/10	1
a,a,a-Trifluorotoluene(PID)	104.			% Rec.		8021/80	07/06/10	1

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Reported: 07/09/10 10:07 Printed: 07/09/10 10:07



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L466385-02	WG486880	SAMP	TPH (GC/FID) Low Fraction	R1275430	J
L466385-03	WG486880	SAMP	Toluene	R1275430	J
L466385-05	WG486894	SAMP	Benzene	R1279814	J
	WG486894	SAMP	TPH (GC/FID) Low Fraction	R1279814	J5



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high

Qualifier Report Information

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- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
07/09/10 at 10:07:57

TSR Signing Reports: 134  
R5 - Desired TAT

Sample: L466385-01 Account: OXYWTPGJCO Received: 06/26/10 09:00 Due Date: 07/02/10 00:00 RPT Date: 07/09/10 10:07  
Sample: L466385-02 Account: OXYWTPGJCO Received: 06/26/10 09:00 Due Date: 07/02/10 00:00 RPT Date: 07/09/10 10:07  
Sample: L466385-03 Account: OXYWTPGJCO Received: 06/26/10 09:00 Due Date: 07/02/10 00:00 RPT Date: 07/09/10 10:07  
Sample: L466385-04 Account: OXYWTPGJCO Received: 06/26/10 09:00 Due Date: 07/02/10 00:00 RPT Date: 07/09/10 10:07  
Sample: L466385-05 Account: OXYWTPGJCO Received: 06/26/10 09:00 Due Date: 07/02/10 00:00 RPT Date: 07/09/10 10:07



Company Name/Address: <b>Oxy USA WTP LP - Grand Junction, CO</b> 760 Horizon Dr., Ste. 101 Grand Junction, CO 81506				Alternate billing information:				Analysis/Container/Preservative				Chain of Custody Page <u>1</u> of <u>1</u>  <b>E068</b>	
Report to: <u>Brett Kennedy</u>				Email to: <u>brett.kennedy@oxy.com</u>				<div style="text-align: center;"> <b>ENVIRONMENTAL SCIENCE CORP.</b>          12065 Lebanon Road          Mt Juliet, TN 37122           Phone (615) 758-5858          Phone (800) 767-5859          FAX (615) 758-5859       </div>				CoCode: <b>OXYWTPGJ</b> (lab use only)  Template/Prelogin  Shipped Via:	
Project Description: <u>605-01</u>				City/State Collected:									
Phone: (970) 263-3601 FAX: (970) 201-2305		Client Project #:		ESC Key:									
Collected by: <u>Brett Kennedy</u>		Site/Facility ID#:		P.O.#:									
Collected by (signature): <u>Brett Kennedy</u> Immediately Packed on Ice N <u>Y</u>		<b>Rush?</b> (Lab MUST Be Notified) <input type="checkbox"/> Same Day..... 200% <input type="checkbox"/> Next Day..... 100% <input type="checkbox"/> Two Day..... 50% <input type="checkbox"/> Three Day..... 25%		Date Results Needed: Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		No. of Cntrs							

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Remarks/Contaminant	Sample # (lab only)
#41 605-01 Upstream	grab	SW	0-6"	6/24/10	0820	2		L466385-01
#40 North Spring	↓	↓	↓	↓	0835	2		02
#42 South Spring	↓	↓	↓	↓	0840	2		03
#44 Lower Pit	↓	↓	↓	↓	0847	2		09
#43 Downstream	↓	↓	↓	↓	0852	0		05

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other \_\_\_\_\_

pH \_\_\_\_\_ Temp \_\_\_\_\_

Remarks:

Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature) <u>Brett Kennedy</u>		Date: <u>6/25/10</u> Time: <u>12:30</u>		Received by: (Signature) <u>C. Pano</u>		Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier		Condition: <u>OK</u> (lab use only)	
Relinquished by: (Signature)		Date: Time:		Received by: (Signature)		Temp: <u>3.4</u> Bottles Received: <u>10V</u>		CoC Seals Intact <u>Y</u> <u>N</u> <u>NA</u>	
Relinquished by: (Signature)		Date: Time:		Received for lab by: (Signature)		Date: <u>6/26/10</u> Time: <u>0900</u>		pH Checked: NCF:	





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Est. 1970

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

## Report Summary

Wednesday August 04, 2010

Report Number: L471710

Samples Received: 07/31/10

Client Project:

Description:

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Mark W. Beasley , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

August 04, 2010

Date Received : July 31, 2010  
Description :

Sample ID : 42 SOUTH SPRING

Collected By : Brett Kennedy  
Collection Date : 07/29/10 11:45

ESC Sample # : L471710-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.040	0.00013	0.00050	mg/l		8021/80	08/01/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	08/01/10	1
Ethylbenzene	0.0088	0.00021	0.00050	mg/l		8021/80	08/01/10	1
Total Xylene	0.19	0.00043	0.0015	mg/l		8021/80	08/01/10	1
TPH (GC/FID) Low Fraction	1.4	0.040	0.10	mg/l		GRO	08/01/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	102.			% Rec.		8021/80	08/01/10	1
a,a,a-Trifluorotoluene(PID)	87.4			% Rec.		8021/80	08/01/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

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Reported: 08/04/10 09:32 Printed: 08/04/10 09:32





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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

August 04, 2010

Date Received : July 31, 2010  
Description :  
Sample ID : 40 NORTH SPRING 0-6 IN  
Collected By : Brett Kennedy  
Collection Date : 07/29/10 11:35

ESC Sample # : L471710-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.0056	0.00013	0.00050	mg/l		8021/80	08/01/10	1
Toluene	U	0.00021	0.00050	mg/l		8021/80	08/01/10	1
Ethylbenzene	0.0029	0.00021	0.00050	mg/l		8021/80	08/01/10	1
Total Xylene	0.018	0.00043	0.0015	mg/l		8021/80	08/01/10	1
TPH (GC/FID) Low Fraction	0.31	0.040	0.10	mg/l		GRO	08/01/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	105.			% Rec.		8021/80	08/01/10	1
a,a,a-Trifluorotoluene(PID)	89.6			% Rec.		8021/80	08/01/10	1

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Reported: 08/04/10 09:32 Printed: 08/04/10 09:32





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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

August 04, 2010

Date Received : July 31, 2010  
Description :  
Sample ID : 44 LOWER PIT 0-6 IN  
Collected By : Brett Kennedy  
Collection Date : 07/29/10 11:52

ESC Sample # : L471710-03

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	U	0.00013	0.00050	mg/l		8021/80	08/01/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	08/01/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	08/01/10	1
Total Xylene	0.00098	0.00043	0.0015	mg/l	J	8021/80	08/01/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	08/01/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	107.			% Rec.		8021/80	08/01/10	1
a,a,a-Trifluorotoluene(PID)	89.7			% Rec.		8021/80	08/01/10	1

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MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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Reported: 08/04/10 09:32 Printed: 08/04/10 09:32





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# REPORT OF ANALYSIS

Brett Kennedy  
Oxy USA WTP LP - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

August 04, 2010

Date Received : July 31, 2010  
Description :

Sample ID : 43 DOWNSTREAM 0-6 IN

Collected By : Brett Kennedy  
Collection Date : 07/29/10 11:59

ESC Sample # : L471710-04

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	U	0.00013	0.00050	mg/l		8021/80	08/01/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	08/01/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	08/01/10	1
Total Xylene	U	0.00043	0.0015	mg/l		8021/80	08/01/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	08/01/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	105.			% Rec.		8021/80	08/01/10	1
a,a,a-Trifluorotoluene(PID)	89.4			% Rec.		8021/80	08/01/10	1

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MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Reported: 08/04/10 09:32 Printed: 08/04/10 09:32



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L471710-03	WG491399	SAMP	Total Xylene	R1310428	J



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
08/04/10 at 09:32:58

TSR Signing Reports: 134  
R5 - Desired TAT

Sample: L471710-01 Account: OXYWTPGJCO Received: 07/31/10 09:00 Due Date: 08/06/10 00:00 RPT Date: 08/04/10 09:32  
Sample: L471710-02 Account: OXYWTPGJCO Received: 07/31/10 09:00 Due Date: 08/06/10 00:00 RPT Date: 08/04/10 09:32  
Sample: L471710-03 Account: OXYWTPGJCO Received: 07/31/10 09:00 Due Date: 08/06/10 00:00 RPT Date: 08/04/10 09:32  
Sample: L471710-04 Account: OXYWTPGJCO Received: 07/31/10 09:00 Due Date: 08/06/10 00:00 RPT Date: 08/04/10 09:32









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Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

## Report Summary

Sunday September 05, 2010

Report Number: L476578

Samples Received: 09/01/10

Client Project:

Description: 605-01

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Mark W. Beasley , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

September 05, 2010

Date Received : September 01, 2010  
Description : 605-01

Sample ID : 42 SOUTH SPRING 0-6IN

Collected By : Brett Kennedy  
Collection Date : 08/30/10 09:35

ESC Sample # : L476578-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.054	0.00013	0.00050	mg/l		8021/80	09/02/10	1
Toluene	0.00080	0.00021	0.0050	mg/l	J	8021/80	09/02/10	1
Ethylbenzene	0.016	0.00021	0.00050	mg/l		8021/80	09/02/10	1
Total Xylene	0.27	0.00043	0.0015	mg/l		8021/80	09/02/10	1
TPH (GC/FID) Low Fraction	1.3	0.040	0.10	mg/l		GRO	09/02/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	85.7			% Rec.		8021/80	09/02/10	1
a,a,a-Trifluorotoluene(PID)	99.4			% Rec.		8021/80	09/02/10	1

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RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Reported: 09/05/10 18:53 Printed: 09/05/10 18:53





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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

September 05, 2010

Date Received : September 01, 2010  
Description : 605-01

Sample ID : 40 NORTH SPRING 0-6IN

Collected By : Brett Kennedy  
Collection Date : 08/30/10 09:28

ESC Sample # : L476578-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.0042	0.00013	0.00050	mg/l		8021/80	09/02/10	1
Toluene	0.00071	0.00021	0.0050	mg/l	J	8021/80	09/02/10	1
Ethylbenzene	0.0019	0.00021	0.00050	mg/l		8021/80	09/02/10	1
Total Xylene	0.016	0.00043	0.0015	mg/l		8021/80	09/02/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	09/02/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	95.5			% Rec.		8021/80	09/02/10	1
a,a,a-Trifluorotoluene(PID)	103.			% Rec.		8021/80	09/02/10	1

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Reported: 09/05/10 18:53 Printed: 09/05/10 18:53





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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

September 05, 2010

Date Received : September 01, 2010  
Description : 605-01

Sample ID : 44 LOWER PIT 0-6IN

Collected By : Brett Kennedy  
Collection Date : 08/30/10 09:42

ESC Sample # : L476578-03

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.00059	0.00013	0.00050	mg/l		8021/80	09/02/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	09/02/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	09/02/10	1
Total Xylene	0.00096	0.00043	0.0015	mg/l	J	8021/80	09/02/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	09/02/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.7			% Rec.		8021/80	09/02/10	1
a,a,a-Trifluorotoluene(PID)	103.			% Rec.		8021/80	09/02/10	1

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Reported: 09/05/10 18:53 Printed: 09/05/10 18:53





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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

September 05, 2010

Date Received : September 01, 2010  
Description : 605-01  
Sample ID : 43 DOWNSTREAM 0-6IN  
Collected By : Brett Kennedy  
Collection Date : 08/30/10 09:48

ESC Sample # : L476578-04

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	U	0.00013	0.00050	mg/l		8021/80	09/02/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	09/02/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	09/02/10	1
Total Xylene	U	0.00043	0.0015	mg/l		8021/80	09/02/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	09/02/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	116.			% Rec.		8021/80	09/02/10	1
a,a,a-Trifluorotoluene(PID)	98.5			% Rec.		8021/80	09/02/10	1

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Reported: 09/05/10 18:53 Printed: 09/05/10 18:53



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L476578-01	WG496414	SAMP	Toluene	R1359850	J
L476578-02	WG496414	SAMP	Toluene	R1359850	J
L476578-03	WG496414	SAMP	Total Xylene	R1359850	J



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

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- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
09/05/10 at 18:53:57

TSR Signing Reports: 134  
R4 - Rush: Three Day

Sample: L476578-01 Account: OXYGJCO Received: 09/01/10 09:00 Due Date: 09/07/10 00:00 RPT Date: 09/05/10 18:53  
Sample: L476578-02 Account: OXYGJCO Received: 09/01/10 09:00 Due Date: 09/07/10 00:00 RPT Date: 09/05/10 18:53  
Sample: L476578-03 Account: OXYGJCO Received: 09/01/10 09:00 Due Date: 09/07/10 00:00 RPT Date: 09/05/10 18:53  
Sample: L476578-04 Account: OXYGJCO Received: 09/01/10 09:00 Due Date: 09/07/10 00:00 RPT Date: 09/05/10 18:53



Company Name/Address: <b>OXY USA - Grand Junction, CO</b> WTP LP 760 Horizon Dr., Ste. 101 Grand Junction, CO 81506				Alternate billing information:				Analysis/Container/Preservative				Chain of Custody Page <u>1</u> of <u>1</u>  Prepared by:  <b>ENVIRONMENTAL SCIENCE CORP.</b> 12065 Lebanon Road Mt. Juliet, TN 37122  Phone (615) 758-5858 Phone (800) 767-5859 FAX (615) 758-5859  <b>B091</b>  CoCode: <b>OXYGJCO</b> (lab use only) Template/Prelogin Shipped Via:			
Report to: <u>Brett Kennedy</u>				Email to: <u>brett-kennedy@oxy.com</u>											
Project Description: <u>605-01</u>				City/State Collected: <u>          </u>											
Phone: (970) 263-3601		Client Project #:		ESC Key:											
FAX:															
Collected by: <u>Brett Kennedy</u>		Site/Facility ID#:		P.O.#:											
Collected by (signature): <u>Brett Kennedy</u>		<input checked="" type="checkbox"/> Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day..... 200% <input type="checkbox"/> Next Day..... 100% <input type="checkbox"/> Two Day..... 50% <input checked="" type="checkbox"/> Three Day..... 25%		Date Results Needed:		No. of Cntrs									
Packed on Ice N <u>Y</u> <input checked="" type="checkbox"/>				Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes											
				FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes											
Sample ID		Comp/Grab		Matrix*		Depth		Date		Time					
#42 South Spring		bret		SW		0-6"		8/30/10		0935		2			
#40 North Spring		↓		↓		↓		↓		0928		2			
#44 Lower Pit		↓		↓		↓		↓		0942		2			
#43 Downstream		↓		↓		↓		↓		0948		2			

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other SW

Remarks:

4341 9607 1699

surface water

pH            Temp           

Flow            Other           

Relinquished by: (Signature) <u>Brett Kennedy</u>	Date: <u>8/31/10</u>	Time: <u>1203</u>	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS	Condition: <u>          </u> (lab use only)
	Date: <u>          </u>	Time: <u>          </u>	Received by: (Signature)	<input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> <u>          </u>	
Relinquished by: (Signature)	Date: <u>          </u>	Time: <u>          </u>	Received by: (Signature)	Temp: <u>4.8°</u>	Bottles Received: <u>8V</u>
Relinquished by: (Signature)	Date: <u>          </u>	Time: <u>          </u>	Received for lab by: (Signature) <u>J. Ellis</u>	Date: <u>8/31-10</u>	Time: <u>0900</u>
				pH Checked:	NCF:





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Est. 1970

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

### Report Summary

Monday October 04, 2010

Report Number: L481957

Samples Received: 10/02/10

Client Project:

Description: 605-01

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Craig Cothron , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,  
TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

October 04, 2010

Date Received : October 02, 2010  
Description : 605-01

ESC Sample # : L481957-01

Sample ID : 42 SOUTH SPRING 0-6 IN

Site ID :

Collected By : Brett Kennedy  
Collection Date : 09/30/10 12:30

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.046	0.00013	0.00050	mg/l		8021/80	10/03/10	1
Toluene	0.00052	0.00021	0.0050	mg/l	J	8021/80	10/03/10	1
Ethylbenzene	0.014	0.00021	0.00050	mg/l		8021/80	10/03/10	1
Total Xylene	0.21	0.00043	0.0015	mg/l		8021/80	10/03/10	1
TPH (GC/FID) Low Fraction	1.1	0.040	0.10	mg/l		GRO	10/03/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	94.8			% Rec.		8021/80	10/03/10	1
a,a,a-Trifluorotoluene(PID)	99.7			% Rec.		8021/80	10/03/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

October 04, 2010

Date Received : October 02, 2010  
Description : 605-01  
Sample ID : 40 NORTH SPRING 0-6 IN  
Collected By : Brett Kennedy  
Collection Date : 09/30/10 12:25

ESC Sample # : L481957-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.0029	0.00013	0.00050	mg/l	J	8021/80	10/03/10	1
Toluene	0.00059	0.00021	0.0050	mg/l		8021/80	10/03/10	1
Ethylbenzene	0.00097	0.00021	0.00050	mg/l		8021/80	10/03/10	1
Total Xylene	0.010	0.00043	0.0015	mg/l		8021/80	10/03/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	10/03/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	96.3			% Rec.		8021/80	10/03/10	1
a,a,a-Trifluorotoluene(PID)	101.			% Rec.		8021/80	10/03/10	1

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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

October 04, 2010

Date Received : October 02, 2010  
Description : 605-01  
Sample ID : 44 LOWER PIT 0-6 IN  
Collected By : Brett Kennedy  
Collection Date : 09/30/10 12:36

ESC Sample # : L481957-03

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	U	0.00013	0.00050	mg/l		8021/80	10/03/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	10/03/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	10/03/10	1
Total Xylene	U	0.00043	0.0015	mg/l		8021/80	10/03/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	10/03/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.6			% Rec.		8021/80	10/03/10	1
a,a,a-Trifluorotoluene(PID)	102.			% Rec.		8021/80	10/03/10	1

U = ND (Not Detected)  
MDL = Minimum Detection Limit = LOD  
RDL = Reported Detection Limit = LOQ = PQL = EQL

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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

October 04, 2010

Date Received : October 02, 2010  
Description : 605-01

ESC Sample # : L481957-04

Sample ID : 43 DOWNSTREAM 0-6 IN

Site ID :

Collected By : Brett Kennedy  
Collection Date : 09/30/10 12:45

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	U	0.00013	0.00050	mg/l		8021/80	10/03/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	10/03/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	10/03/10	1
Total Xylene	U	0.00043	0.0015	mg/l		8021/80	10/03/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	10/03/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.6			% Rec.		8021/80	10/03/10	1
a,a,a-Trifluorotoluene(PID)	102.			% Rec.		8021/80	10/03/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L481957-01	WG501335	SAMP	Toluene	R1407949	J
L481957-02	WG501335	SAMP	Toluene	R1407949	J



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
10/04/10 at 15:43:09

TSR Signing Reports: 134  
R4 - Rush: Three Day

Sample: L481957-01 Account: OXYGJCO Received: 10/02/10 09:00 Due Date: 10/06/10 00:00 RPT Date: 10/04/10 15:42  
Sample: L481957-02 Account: OXYGJCO Received: 10/02/10 09:00 Due Date: 10/06/10 00:00 RPT Date: 10/04/10 15:42  
Sample: L481957-03 Account: OXYGJCO Received: 10/02/10 09:00 Due Date: 10/06/10 00:00 RPT Date: 10/04/10 15:42  
Sample: L481957-04 Account: OXYGJCO Received: 10/02/10 09:00 Due Date: 10/06/10 00:00 RPT Date: 10/04/10 15:42









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Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

### Report Summary

Monday November 01, 2010

Report Number: L486337

Samples Received: 10/29/10

Client Project:

Description: 605-01

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Mark W. Beasley , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,  
TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

November 01, 2010

Date Received : October 29, 2010  
Description : 605-01

Sample ID : 42 SOUTH SPRING

Collected By : Brett Kennedy  
Collection Date : 10/27/10 12:31

ESC Sample # : L486337-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.12	0.00013	0.00050	mg/l		8021/80	10/29/10	1
Toluene	0.00078	0.00021	0.0050	mg/l	J	8021/80	10/29/10	1
Ethylbenzene	0.034	0.00021	0.00050	mg/l		8021/80	10/29/10	1
Total Xylene	0.43	0.00043	0.0015	mg/l		8021/80	10/29/10	1
TPH (GC/FID) Low Fraction	3.3	0.040	0.10	mg/l		GRO	10/29/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	90.8			% Rec.		8021/80	10/29/10	1
a,a,a-Trifluorotoluene(PID)	95.5			% Rec.		8021/80	10/29/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 11/01/10 14:36 Printed: 11/01/10 14:36





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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

November 01, 2010

Date Received : October 29, 2010  
Description : 605-01

Sample ID : 40 NORTH SPRING

Collected By : Brett Kennedy  
Collection Date : 10/27/10 12:39

ESC Sample # : L486337-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.0018	0.00013	0.00050	mg/l		8021/80	10/29/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	10/29/10	1
Ethylbenzene	0.00056	0.00021	0.00050	mg/l		8021/80	10/29/10	1
Total Xylene	0.0077	0.00043	0.0015	mg/l		8021/80	10/29/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	10/29/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	96.0			% Rec.		8021/80	10/29/10	1
a,a,a-Trifluorotoluene(PID)	101.			% Rec.		8021/80	10/29/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Reported: 11/01/10 14:36 Printed: 11/01/10 14:36





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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

November 01, 2010

Date Received : October 29, 2010  
Description : 605-01

Sample ID : 44 LOWER PIT

Collected By : Brett Kennedy  
Collection Date : 10/27/10 12:43

ESC Sample # : L486337-03

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	0.00018	0.00013	0.00050	mg/l	J	8021/80	10/29/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	10/29/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	10/29/10	1
Total Xylene	0.00076	0.00043	0.0015	mg/l	J	8021/80	10/29/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	10/29/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	97.7			% Rec.		8021/80	10/29/10	1
a,a,a-Trifluorotoluene(PID)	102.			% Rec.		8021/80	10/29/10	1

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# REPORT OF ANALYSIS

Brett Kennedy  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

November 01, 2010

Date Received : October 29, 2010  
Description : 605-01

Sample ID : 43 DOWNSTREAM

Collected By : Brett Kennedy  
Collection Date : 10/27/10 12:50

ESC Sample # : L486337-04

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzene	U	0.00013	0.00050	mg/l		8021/80	10/30/10	1
Toluene	U	0.00021	0.0050	mg/l		8021/80	10/30/10	1
Ethylbenzene	U	0.00021	0.00050	mg/l		8021/80	10/30/10	1
Total Xylene	U	0.00043	0.0015	mg/l		8021/80	10/30/10	1
TPH (GC/FID) Low Fraction	U	0.040	0.10	mg/l		GRO	10/30/10	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	97.2			% Rec.		8021/80	10/30/10	1
a,a,a-Trifluorotoluene(PID)	101.			% Rec.		8021/80	10/30/10	1

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Note:

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Reported: 11/01/10 14:36 Printed: 11/01/10 14:36



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L486337-01	WG505886	SAMP	Toluene	R1450374	J
L486337-03	WG505886	SAMP	Benzene	R1450374	J
	WG505886	SAMP	Total Xylene	R1450374	J



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
11/01/10 at 14:36:33

TSR Signing Reports: 134  
R4 - Rush: Three Day

Sample: L486337-01 Account: OXYGJCO Received: 10/29/10 09:00 Due Date: 11/03/10 00:00 RPT Date: 11/01/10 14:36  
Sample: L486337-02 Account: OXYGJCO Received: 10/29/10 09:00 Due Date: 11/03/10 00:00 RPT Date: 11/01/10 14:36  
Sample: L486337-03 Account: OXYGJCO Received: 10/29/10 09:00 Due Date: 11/03/10 00:00 RPT Date: 11/01/10 14:36  
Sample: L486337-04 Account: OXYGJCO Received: 10/29/10 09:00 Due Date: 11/03/10 00:00 RPT Date: 11/01/10 14:36



Company Name/Address: <b>OXY USA Inc - Grand Junction, CO</b> 760 Horizon Dr., Ste. 101 Grand Junction, CO 81506				Alternate billing information:				Analysis/Container/Preservative				Chain of Custody Page 1 of 1	
Report to: <u>Brett Kennedy</u>				Email to: <u>brc ft-kennedy@oag.com</u>				<div style="font-size: 2em; transform: rotate(-90deg);">BTEX1610</div>				Prepared by:  <b>ENVIRONMENTAL SCIENCE CORP.</b> 12065 Lebanon Road Mt. Juliet, TN 37122 Phone (615) 758-5858 Phone (800) 767-5859 FAX (615) 758-5859 D122	
Project Description: <u>605-01</u>				City/State Collected: <u>          </u>									
Phone: (970) 263-3601 FAX: <u>          </u>		Client Project #: <u>          </u>		ESC Key: <u>          </u>									
Collected by: <u>Brett Kennedy</u>		Site/Facility ID#: <u>          </u>		P.O.#: <u>          </u>									
Collected by (signature): <u>Brett Kennedy</u> Packed on Ice N <u>  </u> Y <u>  </u>		<input checked="" type="checkbox"/> <b>Rush?</b> (Lab MUST Be Notified) <input type="checkbox"/> Same Day.....200% <input type="checkbox"/> Next Day.....100% <input type="checkbox"/> Two Day.....50% <input checked="" type="checkbox"/> Three Day.....25%		Date Results Needed: Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes									
Sample ID		Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Remarks/Contaminant				Sample # (lab only)	
<u>#42 South Spring</u>		<u>grab</u>	<u>SW</u>	<u>0-6"</u>	<u>10/27/10</u>	<u>1231</u>	<u>2</u>	<u>          </u>				<u>L486337-01</u>	
<u>#40 North Spring</u>		<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>1239</u>	<u>2</u>	<u>          </u>				<u>02</u>	
<u>#44 Lower Pit</u>		<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>1243</u>	<u>2</u>	<u>          </u>				<u>03</u>	
<u>#43 Mounstream</u>		<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>1250</u>	<u>2</u>	<u>          </u>				<u>04</u>	

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other SW pH            Temp           

Remarks: surface water 434198127423 Flow            Other           

Relinquished by: (Signature) <u>Brett Kennedy</u>		Date: <u>10/28/10</u>	Time: <u>1650</u>	Received by: (Signature) <u>          </u>		Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> <u>          </u>		Condition: (lab use only) <u>OK</u>	
Relinquished by: (Signature) <u>          </u>		Date: <u>          </u>	Time: <u>          </u>	Received by: (Signature) <u>          </u>		Temp: <u>3.1°C</u>		Bottles Received: <u>80</u>	
Relinquished by: (Signature) <u>          </u>		Date: <u>          </u>	Time: <u>          </u>	Received for lab by: (Signature) <u>          </u>		Date: <u>10/29/10</u>		Time: <u>0900</u>	
Relinquished by: (Signature) <u>          </u>		Date: <u>          </u>	Time: <u>          </u>	Received for lab by: (Signature) <u>          </u>		Date: <u>          </u>		Time: <u>          </u>	
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