

FORM

27

Rev 6/99

## State of Colorado

## Oil and Gas Conservation Commission

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



#6363

FOR OGCC USE ONLY

RECEIVED  
1/17/2012

## SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

## CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☐ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☒ Site/Facility Closure ☐ Other (describe):

OGCC Employee:

☐ Spill ☐ Complaint  
☐ Inspection ☐ NOAV

Tracking No:

OGCC Operator Number: 66571

Name of Operator: OXY USA WTP LP

Address: 760 Horizon Drive, Suite 101

City: Grand Junction State: CO Zip: 81506

Contact Name and Telephone:

Daniel I. Padilla

No: (970)263-3637

Fax: (970)263-3694

API Number: 05-045-07810

County: Garfield County

Facility Name: CC Pond 11

Facility Number: 414399 (Facility ID)

Well Name: Cascade Creek

Well Number: 617-41

Location: (QtrQtr, Sec, Twp, Rng, Meridian): NENE, Sec 17, T6S, R97W, 6th PM Latitude: 39.52846 Longitude: -108.2373

## TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Treated produced water was stored in permitted lined pit.

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☐ Y ☒ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Parachute-Rhone Loam, 5 to 30 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Nearest water well is ~1.20 miles west, nearest natural drainage is ~ 800' to the west, nearest surface water is an intermittent stream ~980' to the north east.

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):

- ☐ Soils  
☐ Vegetation  
☐ Groundwater  
☐ Surface Water

Extent of Impact:

NA  
NA  
NA  
NA

How Determined:

Laboratory analytical results  
Visual  
Visual inspection below pit liner  
Visual

## REMEDIALATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Please reference REM # 6363, which was obtained from the initial form 27 closure plan approved on 10/14/2011.

Describe how source is to be removed:

Prior to closure, the pit liner was pressure washed and liquids in the lined pit were removed by vacuum truck and reintroduced into Oxy's water system for reuse. The pit liner was sampled and disposed of at a commercial disposal facility in Utah.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

No solids were encountered in the pit bottom. All liquid was removed and re-introduced into Oxy's water distribution system for reuse. Upon liner removal, Oxy's environmental contractor visually identified a potential area of concern. Oxy's environmental contractor investigated the potential area of concern, staged the material on the pad, and will be dispose of the material at the ECDC Disposal facility. Oxy's environmental contractor sampled below the area of concern in order to ensure that no release had occurred. The liner was disposed of at a commercial disposal facility. Below liner samples were collected to ensure no environmental impacts were encountered. All samples were found to be within COGCC table 910-1 standards with the exception of Arsenic (As). Oxy will submit an accompanying form 4 to address As. Pit closure activities were monitored by a 3rd party consultant.

Submit Page 2 with Page 1

FORM  
27  
Rev 6/99

State of Colorado  
Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
(303)894-2100 Fax: (303)894-2109



Page 2  
REMEDIAL WORKPLAN (Cont.)

NFA ✓  
Tracking Number: \_\_\_\_\_  
Name of Operator: OXY  
OGCC Operator No: \_\_\_\_\_  
Received Date: \_\_\_\_\_  
Well Name & No: Pond 11  
Facility Name & No: Pit Facility # 914399

OGCC Employee: \_\_\_\_\_

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

No groundwater was impacted by the pit. Soil Sampling and Analytical data of the pit bottom, including the area that was initially visually thought to be a concern, did not indicate evidence of a release.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

Once the pit was reclaimed and backfilled with native material, it was graded to be level with the working pad surface to minimize storm run-on and run-off. The pit surface will be monitored and treated for noxious weed management as necessary. Seeding of the pit surface will occur when the entire pad surface is revegetated at the end of the life of the pad. Oxy is also submitting a Form 4 sundry to address the elevated level of As found in the pit bottom sample.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☐ Y ☒ N If yes, describe:

Continued monitoring and treatment for noxious weeds on the pit surface will be conducted.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

No solids were encountered in the pit. All liquid in the lined pit was removed by vacuum truck and reintroduced into Oxy's water system for reuse. Please note, the pit liner was disposed of at ECDC, a commercial disposal facility in Utah.

#### IMPLEMENTATION SCHEDULE

Date Site Investigation Began: <u>10/05/2011</u>	Date Site Investigation Completed: <u>01/03/2012</u>	Date Remediation Plan Submitted: <u>10/12/2011</u>
Remediation Start Date: <u>10/14/2011</u>	Anticipated Completion Date: <u>01/08/2012</u>	Actual Completion Date: <u>01/18/2012</u>

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Daniel I. Padilla

Signed: [Signature]

Title: Regulatory Advisor

Date: 1/13/12

OGCC Approved: [Signature]

Title: FOR

Date: 08/14/2012

Chris Canfield  
EPS NW Region



# SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 66571		4. Contact Name		Complete the Attachment Checklist  OP OGCC
2. Name of Operator: OXY USA WTP LP		Daniel I. Padilla		
3. Address: 760 Horizon Drive, Suite 101 City: Grand Junction State: CO Zip: 81506		Phone: 970.263.3637 Fax: 970.263.3694		
5. API Number 05-045-07810		OGCC Facility ID Number 414399 (Facility ID)		Survey Plat
6. Well/Facility Name: CC Pond 11		7. Well/Facility Number 617-41		Directional Survey
8. Location (Qtr/Sec, Twp, Rng, Meridian): NENE, Sec 17, T6S, R97W, 6th PM		10. Field Name: Grand Valley		Surface Eqmnt Diagram
9. County: Garfield		11. Federal, Indian or State Lease Number:		Technical Info Page
				Other Lab data, Map

## General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qr is substantive and requires a new permit)	
Change of Surface Footage from Exterior Section Lines:	<input type="checkbox"/> FNL/FSL <input type="checkbox"/> FEL/FWL
Change of Surface Footage to Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage from Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage to Exterior Section Lines:	<input type="checkbox"/> attach directional survey
Bottomhole location Qtr/Sec, Twp, Rng, Mer	
Latitude	Distance to nearest property line
Longitude	Distance to nearest bldg, public rd, utility or RR
Ground Elevation	Distance to nearest lease line
	Is location in a High Density Area (rule 603b)? Yes/No
	Distance to nearest well same formation
	Surface owner consultation date:
GPS DATA:	
Date of Measurement	PDOP Reading
	Instrument Operator's Name
<input type="checkbox"/> CHANGE SPACING UNIT	
Formation	Formation Code
Spacing order number	Unit Acreage
	Unit configuration
<input type="checkbox"/> Remove from surface bond	
Signed surface use agreement attached	
<input type="checkbox"/> CHANGE OF OPERATOR (prior to drilling):	
Effective Date:	
Plugging Bond: <input type="checkbox"/> Blanket <input type="checkbox"/> Individual	
<input type="checkbox"/> CHANGE WELL NAME	
From:	
To:	
Effective Date:	
<input type="checkbox"/> ABANDONED LOCATION:	
Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date Ready for Inspection:	
<input type="checkbox"/> NOTICE OF CONTINUED SHUT IN STATUS	
Date well shut in or temporarily abandoned:	
Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No	
MIT required if shut in longer than two years. Date of last MIT	
<input type="checkbox"/> SPUD DATE:	
<input type="checkbox"/> REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)	
<input type="checkbox"/> SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK	
*submit cbl and cement job summaries	
Method used	Cementing tool setting/perf depth
Cement volume	Cement top
Cement bottom	Date
<input type="checkbox"/> RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.	
Final reclamation will commence on approximately	
<input type="checkbox"/> Final reclamation is completed and site is ready for inspection.	

## Technical Engineering/Environmental Notice

<input type="checkbox"/> Notice of Intent		<input type="checkbox"/> Report of Work Done	
Approximate Start Date:		Date Work Completed:	
Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)			
<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare	<input type="checkbox"/> E&P Waste Disposal	
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste	
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested	<input type="checkbox"/> Status Update/Change of Remediation Plans	
<input type="checkbox"/> Casing/Cementing Program Change	<input checked="" type="checkbox"/> Other: Application of diff. standard	for Spills and Releases	

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Daniel I. Padilla Date: 1/13/12 Email: daniel\_padilla@oxy.com

Print Name: Daniel I. Padilla Title: Regulatory Advisor

OGCC Approved:

Chris Canfield

Title: FOR

Date: 08/14/2012

CONDITIONS OF APPROVAL IF ANY:

Chris Canfield

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

- |  |                              |
|--|------------------------------|
| 1. OGCC Operator Number: 66571   | API Number: 05-045-07810     |
| 2. Name of Operator: OXY USA WTP LP  | OGCC Facility ID # 414399    |
| 3. Well/Facility Name: CC Pond 11  | Well/Facility Number: 617-41 |
| 4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NENE, Sec 17, T6S, R97W, 6th PM |                              |

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

OXY USA WTP LP (Oxy) has completed reclamation of the above-mentioned reserve pit. Oxy identified post reclamation levels for Arsenic (As) to be below undisturbed background levels and also COGCC Table 910-1 concentration levels. Oxy believes this elevated level of As to be naturally occurring and requests consideration as an alternative to the default value for As in Table 910-1, based on our demonstration of naturally occurring concentrations of As in undisturbed samples taken from native material collected from nearby locations, as per foot note 1 of COGCC Table 910-1. Please refer to attached table, analytical data, and sample location map.

The sampling method Oxy employed was to take a representative random grab sample for each background sample location and post reclaim sample. The analytical concentrations table identifies the COGCC Table 910-1 concentration levels, Oxy's undisturbed background concentrations, and Oxy's post reclamation concentrations (Post Reclaim 12/15/2011). The Post Reclaim concentrations of As are lower to those found in Back Ground samples.

The reclaimed pit was contoured to be level with the pad grade to minimize stormwater runoff, during the operational phase of the pad. Final pad reclamation will occur at the end of the life of the pad.

<b>POND 11</b>
Pit Bottom

	Lab Report #	L552309	L552309	L552309	L552309	L552309	L552309	L493792	L493792	L493792	L493792	L520524	L519772	L519132	L554226	L546244	L546244	L546244	L546244
	Date Sampled	12/15/2011	12/15/2011	12/15/2011	12/15/2011	12/15/2011	12/15/2011	12/15/2010	12/15/2010	12/15/2010	12/15/2010	6/10/2011	6/3/2011	6/2/2011	1/3/2012	11/10/2011	11/10/2011	11/10/2011	11/10/2011
PIT CLOSURE SAMPLES	Sample Name	PB-NE	PB-SW	PB-LOW	PB-E	PB-N	PB-AOC	617-41 NEBG	617-41 WBG	617-41 NWBG	617-41 EBG	697-08-53 Pit BG SS-9	697-16-28 Pit BG -2	Annex Pit BG - 2	Pond 11 Cap Comp	697-16D Cut Slope - N	697-16D BG - NW	697-16D BG - W	697-16D BG - SW
	MCL (mg/Kg)																		
Organics in Soil																			
TPH (GRO and DRO) - Sen Area	500	17	1.3	6.9	27	51	25.8	NA	NA	NA	NA	BDL	2	10	32	24.0	20.0	8.0	39.0
Benzene	0.17	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	85	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	100	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes	175	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Organics in Soil (PAH's)																			
Acenaphthene	1000	BDL	BDL	0.0026	0.0013	0.006	0.0019	NA	NA	NA	NA	BDL	0.034	BDL	0.0029	BDL	BDL	BDL	BDL
Anthracene	1000	BDL	BDL	0.002	0.0013	0.0038	BDL	NA	NA	NA	NA	BDL	BDL	BDL	0.001	BDL	0.0011	BDL	0.0017
Benzo(A)anthracene	0.22	BDL	BDL	BDL	BDL	0.004	BDL	NA	NA	NA	NA	BDL	BDL	BDL	BDL	0.0013	BDL	BDL	BDL
Benzo(B)fluoranthene	0.22	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(K)fluoranthene	2.2	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(A)pyrene	0.022	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	0.00066	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chrysene	22	BDL	BDL	BDL	BDL	0.0044	BDL	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dibenzo(A,H)anthracene	0.022	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Fluoranthene	1000	BDL	BDL	BDL	BDL	0.0037	BDL	NA	NA	NA	NA	0.0017	0.015	BDL	0.0013	BDL	BDL	BDL	0.0012
Flourene	1000	0.0079	0.0009	0.011	0.0029	0.012	0.0076	NA	NA	NA	NA	BDL	0.072	0.0015	0.0076	BDL	BDL	BDL	0.001
Indeno(1,2,3,C,D)pyrene	0.22	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene	23	0.041	0.0056	0.018	0.013	0.13	0.0047	NA	NA	NA	NA	0.0008	0.11	0.0035	0.041	BDL	BDL	BDL	BDL
Pyrene	1000	BDL	0.00086	0.0031	0.0051	0.015	0.001	NA	NA	NA	NA	0.0029	0.053	BDL	0.005	BDL	BDL	BDL	BDL
Inorganics in Soil																			
EC	<4 mmhos/cm or 2X b	3.1	0.58	1.1	1.2	2.8	0.53	0.056	0.17	0.049	0.039	0.14	0.23	0.12	1.7	0.013	0.071	0.130	0.140
SAR	<12	11	0.82	3.6	4.1	3.9	4	0.81	0.27	0.96	0.61	0.95	0.7	2.5	NA	9.2	3.0	0.44	0.5
pH	6-9	7.6	7.9	7.8	8.6	7.3	8	6.5	5.9	6.4	6.3	7.3	9	8.8	7.6	8.2	8.0	8.1	7.6
Metals in Soils																			
Arsenic	0.39	6.4	6.8	4.6	6.3	11	24	2.8	3.2	2.8	3.6	20	20	20	4.5	32.0	20.0	13.0	27.0
Barium	15,000	330	390	380	340	400	350	NA	NA	NA	NA	410	440	310	320	310	250	340	350
Cadmium	70	BDL	BDL	0.59	0.083	BDL	BDL	NA	NA	NA	NA	1.9	1.2	0.24	BDL	BDL	BDL	0.1	BDL
Chromium III	120,000	53	53	44	48	52	46	NA	NA	NA	NA	82	31	52	55	24.0	21.0	23.0	21.0
Chromium VI	23	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL	0.72	BDL	0.8	0.8	1.7
Copper	3100	14	12	17	15	12	17	NA	NA	NA	NA	16	22	19	14	27.0	29.0	30.0	26.0
Lead	400	15	15	17	15	13	19	NA	NA	NA	NA	14	19	17	12	25.0	25.0	22.0	20.0
Mercury	23	0.018	0.02	0.021	0.026	0.014	0.077	NA	NA	NA	NA	0.015	0.023	0.029	0.015	0.021	0.024	0.017	0.020
Nickel	1600	33	28	29	29	27	33	NA	NA	NA	NA	37	29	25	29	19.0	17.0	22.0	17.0
Selenium	390	1.41	1	1.5	0.95	0.97	2.6	NA	NA	NA	NA	BDL	13	1.3	1.1	5.30	5.30	5.20	5.50
Silver	390	1.4	2.4	0.31	1.8	1.5	3.8	NA	NA	NA	NA	BDL	BDL	0.58	BDL	BDL	BDL	BDL	BDL
Zinc	23,000	56	52	66	56	56	46	NA	NA	NA	NA	54	56	52	44	46.0	47.0	73.0	62.0



## Pond 11 Closure Samples

Updated: January 3, 2012 Garfield County, Colorado  
0 0.004 0.008 0.016 0.024 0.032 0.04 Miles







OXY USA WTP LP

760 Horizon Drive, Suite 101  
Grand Junction, CO 81506

## Pond 11 Closure Samples

Updated: January 3, 2012 Garfield County, Colorado

0 0.05 0.1 0.2 0.3 0.4 0.5 Miles

697-08-53 Pad

609-14 Pad

Pond 11 Pad

697-16-28 Pad

697-16D Pad

Pond or Pit Location



Pit Bottom Samples



Pit Cap Sample



Background Samples







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

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

### Report Summary

Thursday January 12, 2012

Report Number: L552309

Samples Received: 12/17/11

Client Project: 900546.0013.010

Description: Pond 11

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 - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





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

# REPORT OF ANALYSIS

January 12, 2012

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

ESC Sample # : L552309-01

Site ID :

Project # : 900546.0013.010

Date Received : December 17, 2011  
Description : Pond 11  
Sample ID : PB-NE  
Collected By : CJB  
Collection Date : 12/15/11 12:40

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	12/22/11	1
Chromium, Trivalent	53.	0.17	2.0	mg/kg		Calc.	12/21/11	1
ORP	71.			mV	T8	2580	12/22/11	1
pH	7.6			su	T8	9045D	12/23/11	1
Sodium Adsorption Ratio	11.					Calc.	12/20/11	1
Specific Conductance	3100			umhos/cm		9050AMo	12/20/11	1
Mercury	0.018	0.0015	0.020	mg/kg	J	7471	12/22/11	1
Arsenic	6.4	0.32	1.0	mg/kg		6010B	12/21/11	1
Barium	330	0.050	0.25	mg/kg		6010B	12/21/11	1
Cadmium	U	0.040	0.25	mg/kg		6010B	12/21/11	1
Chromium	53.	0.085	0.50	mg/kg		6010B	12/21/11	1
Copper	14.	0.21	1.0	mg/kg		6010B	12/21/11	1
Lead	15.	0.090	0.25	mg/kg		6010B	12/21/11	1
Nickel	33.	0.26	1.0	mg/kg		6010B	12/21/11	1
Selenium	1.1	0.32	1.0	mg/kg		6010B	12/21/11	1
Silver	1.4	0.16	0.50	mg/kg		6010B	12/23/11	1
Zinc	56.	0.34	1.5	mg/kg		6010B	12/21/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	12/20/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	104.			% Rec.		602/801	12/20/11	5
Benzene	U	0.0017	0.0050	mg/kg		8260B	12/18/11	5
Toluene	U	0.0016	0.025	mg/kg		8260B	12/18/11	5
Ethylbenzene	U	0.0019	0.0050	mg/kg		8260B	12/18/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	12/18/11	5
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	12/18/11	5
Dibromofluoromethane	110.			% Rec.		8260B	12/18/11	5
a,a,a-Trifluorotoluene	96.5			% Rec.		8260B	12/18/11	5
4-Bromofluorobenzene	110.			% Rec.		8260B	12/18/11	5
TPH (GC/FID) High Fraction	17.	0.77	4.0	mg/kg		3546/DR	12/22/11	1
Surrogate recovery(%) o-Terphenyl	52.6			% Rec.		3546/DR	12/22/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 20:33 Revised: 01/12/12 08:50  
L552309-01 (PH) - 7.61@18.7c



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

# REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

January 12, 2012

Date Received : December 17, 2011  
Description : Pond 11  
  
Sample ID : PB-NE  
  
Collected By : CJB  
Collection Date : 12/15/11 12:40

ESC Sample # : L552309-01  
  
Site ID :  
  
Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0038	0.030	mg/kg		8270C-S	12/20/11	5
Acenaphthene	U	0.0035	0.030	mg/kg		8270C-S	12/20/11	5
Acenaphthylene	U	0.0029	0.030	mg/kg		8270C-S	12/20/11	5
Benzo(a)anthracene	U	0.0046	0.030	mg/kg		8270C-S	12/20/11	5
Benzo(a)pyrene	U	0.0031	0.030	mg/kg		8270C-S	12/20/11	5
Benzo(b)fluoranthene	U	0.0041	0.030	mg/kg		8270C-S	12/20/11	5
Benzo(g,h,i)perylene	U	0.0062	0.030	mg/kg		8270C-S	12/20/11	5
Benzo(k)fluoranthene	U	0.0067	0.030	mg/kg		8270C-S	12/20/11	5
Chrysene	U	0.0055	0.030	mg/kg		8270C-S	12/20/11	5
Dibenz(a,h)anthracene	U	0.0056	0.030	mg/kg		8270C-S	12/20/11	5
Fluoranthene	U	0.0052	0.030	mg/kg		8270C-S	12/20/11	5
Fluorene	0.0079	0.0028	0.030	mg/kg	J	8270C-S	12/20/11	5
Indeno(1,2,3-cd)pyrene	U	0.0058	0.030	mg/kg		8270C-S	12/20/11	5
Naphthalene	0.041	0.0032	0.030	mg/kg		8270C-S	12/20/11	5
Phenanthrene	0.017	0.0037	0.030	mg/kg	J	8270C-S	12/20/11	5
Pyrene	U	0.0030	0.030	mg/kg		8270C-S	12/20/11	5
1-Methylnaphthalene	0.036	0.0039	0.030	mg/kg		8270C-S	12/20/11	5
2-Methylnaphthalene	0.080	0.0029	0.030	mg/kg		8270C-S	12/20/11	5
2-Chloronaphthalene	U	0.0030	0.030	mg/kg		8270C-S	12/20/11	5
Surrogate Recovery								
Nitrobenzene-d5	73.5			% Rec.		8270C-S	12/20/11	5
2-Fluorobiphenyl	54.5			% Rec.		8270C-S	12/20/11	5
p-Terphenyl-d14	32.3			% Rec.		8270C-S	12/20/11	5

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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 20:33 Revised: 01/12/12 08:50  
L552309-01 (PH) - 7.61@18.7c





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

# REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

January 12, 2012

Date Received : December 17, 2011  
Description : Pond 11  
  
Sample ID : PB-SW  
  
Collected By : CJB  
Collection Date : 12/15/11 11:45

ESC Sample # : L552309-02  
  
Site ID :  
Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	12/22/11	1
Chromium, Trivalent	53.	0.17	2.0	mg/kg		Calc.	12/21/11	1
ORP	65.			mV	T8	2580	12/22/11	1
pH	7.9			su	T8	9045D	12/23/11	1
Sodium Adsorption Ratio	0.82					Calc.	12/20/11	1
Specific Conductance	580			umhos/cm		9050AMo	12/20/11	1
Mercury	0.020	0.0015	0.020	mg/kg	J	7471	12/22/11	1
Arsenic	6.8	0.32	1.0	mg/kg		6010B	12/21/11	1
Barium	390	0.050	0.25	mg/kg		6010B	12/21/11	1
Cadmium	U	0.040	0.25	mg/kg		6010B	12/21/11	1
Chromium	53.	0.085	0.50	mg/kg		6010B	12/21/11	1
Copper	12.	0.21	1.0	mg/kg		6010B	12/21/11	1
Lead	15.	0.090	0.25	mg/kg		6010B	12/21/11	1
Nickel	28.	0.26	1.0	mg/kg		6010B	12/21/11	1
Selenium	1.0	0.32	1.0	mg/kg		6010B	12/21/11	1
Silver	2.4	0.16	0.50	mg/kg		6010B	12/23/11	1
Zinc	52.	0.34	1.5	mg/kg		6010B	12/21/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	12/20/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	105.			% Rec.		602/801	12/20/11	5
Benzene	U	0.0017	0.0050	mg/kg		8260B	12/22/11	5
Toluene	U	0.0016	0.025	mg/kg		8260B	12/21/11	5
Ethylbenzene	U	0.0019	0.0050	mg/kg		8260B	12/21/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	12/21/11	5
Surrogate Recovery								
Toluene-d8	85.8			% Rec.		8260B	12/21/11	5
Dibromofluoromethane	100.			% Rec.		8260B	12/21/11	5
a,a,a-Trifluorotoluene	111.			% Rec.		8260B	12/21/11	5
4-Bromofluorobenzene	115.			% Rec.		8260B	12/21/11	5
TPH (GC/FID) High Fraction	1.3	0.77	4.0	mg/kg	J	3546/DR	12/22/11	1
Surrogate recovery(%) o-Terphenyl	54.2			% Rec.		3546/DR	12/22/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 20:33 Revised: 01/12/12 08:50  
L552309-02 (PH) - 7.90@18.9c



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

# REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

January 12, 2012

Date Received : December 17, 2011  
Description : Pond 11  
  
Sample ID : PB-SW  
  
Collected By : CJB  
Collection Date : 12/15/11 11:45

ESC Sample # : L552309-02  
  
Site ID :  
  
Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	12/20/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	12/20/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	12/20/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	12/20/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	12/20/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	12/20/11	1
Fluorene	0.00090	0.00055	0.0060	mg/kg	J	8270C-S	12/20/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	12/20/11	1
Naphthalene	0.0056	0.00065	0.0060	mg/kg	J	8270C-S	12/20/11	1
Phenanthrene	0.0026	0.00074	0.0060	mg/kg	J	8270C-S	12/20/11	1
Pyrene	0.00086	0.00059	0.0060	mg/kg	J	8270C-S	12/20/11	1
1-Methylnaphthalene	0.0052	0.00079	0.0060	mg/kg	J	8270C-S	12/20/11	1
2-Methylnaphthalene	0.014	0.00059	0.0060	mg/kg		8270C-S	12/20/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	12/20/11	1
Surrogate Recovery								
Nitrobenzene-d5	80.7			% Rec.		8270C-S	12/20/11	1
2-Fluorobiphenyl	77.1			% Rec.		8270C-S	12/20/11	1
p-Terphenyl-d14	47.4			% Rec.		8270C-S	12/20/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 20:33 Revised: 01/12/12 08:50  
L552309-02 (PH) - 7.90@18.9c



REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

January 12, 2012

Date Received : December 17, 2011  
Description : Pond 11  
Sample ID : PB-LOW  
Collected By : CJB  
Collection Date : 12/15/11 12:15

ESC Sample # : L552309-03  
Site ID :  
Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	12/22/11	1
Chromium, Trivalent	44.	0.17	2.0	mg/kg		Calc.	12/21/11	1
ORP	75.			mV	T8	2580	12/22/11	1
pH	7.8			su	T8	9045D	12/23/11	1
Sodium Adsorption Ratio	3.6					Calc.	12/20/11	1
Specific Conductance	1100			umhos/cm		9050AMo	12/20/11	1
Mercury	0.021	0.0015	0.020	mg/kg		7471	12/22/11	1
Arsenic	4.6	0.32	1.0	mg/kg		6010B	12/21/11	1
Barium	380	0.050	0.25	mg/kg		6010B	12/21/11	1
Cadmium	0.59	0.040	0.25	mg/kg		6010B	12/21/11	1
Chromium	44.	0.085	0.50	mg/kg		6010B	12/21/11	1
Copper	17.	0.21	1.0	mg/kg		6010B	12/21/11	1
Lead	17.	0.090	0.25	mg/kg		6010B	12/21/11	1
Nickel	29.	0.26	1.0	mg/kg		6010B	12/21/11	1
Selenium	1.5	0.32	1.0	mg/kg		6010B	12/21/11	1
Silver	0.31	0.16	0.50	mg/kg	J	6010B	12/23/11	1
Zinc	66.	0.34	1.5	mg/kg		6010B	12/21/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	12/20/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	104.			% Rec.		602/801	12/20/11	5
Benzene	U	0.0017	0.0050	mg/kg		8260B	12/18/11	5
Toluene	U	0.0016	0.025	mg/kg		8260B	12/18/11	5
Ethylbenzene	U	0.0019	0.0050	mg/kg		8260B	12/18/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	12/18/11	5
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	12/18/11	5
Dibromofluoromethane	106.			% Rec.		8260B	12/18/11	5
a,a,a-Trifluorotoluene	100.			% Rec.		8260B	12/18/11	5
4-Bromofluorobenzene	101.			% Rec.		8260B	12/18/11	5
TPH (GC/FID) High Fraction	6.9	0.77	4.0	mg/kg		3546/DR	12/22/11	1
Surrogate recovery(%) o-Terphenyl	56.5			% Rec.		3546/DR	12/22/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 20:33 Revised: 01/12/12 08:50

L552309-03 (PH) - 7.75@18.6c



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

# REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

January 12, 2012

Date Received : December 17, 2011  
Description : Pond 11  
Sample ID : PB-LOW  
Collected By : CJB  
Collection Date : 12/15/11 12:15

ESC Sample # : L552309-03

Site ID :

Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.0020	0.00076	0.0060	mg/kg	J	8270C-S	12/20/11	1
Acenaphthene	0.0026	0.00071	0.0060	mg/kg	J	8270C-S	12/20/11	1
Acenaphthylene	0.00059	0.00057	0.0060	mg/kg	J	8270C-S	12/20/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	12/20/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	12/20/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	12/20/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	12/20/11	1
Fluorene	0.011	0.00055	0.0060	mg/kg		8270C-S	12/20/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	12/20/11	1
Naphthalene	0.018	0.00065	0.0060	mg/kg		8270C-S	12/20/11	1
Phenanthrene	0.015	0.00074	0.0060	mg/kg		8270C-S	12/20/11	1
Pyrene	0.0031	0.00059	0.0060	mg/kg	J	8270C-S	12/20/11	1
1-Methylnaphthalene	0.031	0.00079	0.0060	mg/kg		8270C-S	12/20/11	1
2-Methylnaphthalene	0.083	0.00059	0.0060	mg/kg		8270C-S	12/20/11	1
2-Chloronaphthalene	0.00077	0.00060	0.0060	mg/kg	J	8270C-S	12/20/11	1
Surrogate Recovery								
Nitrobenzene-d5	88.0			% Rec.		8270C-S	12/20/11	1
2-Fluorobiphenyl	72.2			% Rec.		8270C-S	12/20/11	1
p-Terphenyl-d14	44.5			% Rec.		8270C-S	12/20/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 20:33 Revised: 01/12/12 08:50

L552309-03 (PH) - 7.75@18.6c





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

# REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

January 12, 2012

Date Received : December 17, 2011  
Description : Pond 11  
  
Sample ID : PB-E  
  
Collected By : CJB  
Collection Date : 12/15/11 12:30

ESC Sample # : L552309-04

Site ID :

Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	12/22/11	1
Chromium, Trivalent	48.	0.17	2.0	mg/kg		Calc.	12/21/11	1
ORP	78.			mV	T8	2580	12/22/11	1
pH	8.6			su	T8	9045D	12/23/11	1
Sodium Adsorption Ratio	4.1					Calc.	12/20/11	1
Specific Conductance	1200			umhos/cm		9050AMo	12/20/11	1
Mercury	0.026	0.0015	0.020	mg/kg		7471	12/22/11	1
Arsenic	6.3	0.32	1.0	mg/kg		6010B	12/21/11	1
Barium	340	0.050	0.25	mg/kg		6010B	12/21/11	1
Cadmium	0.083	0.040	0.25	mg/kg	J	6010B	12/21/11	1
Chromium	48.	0.085	0.50	mg/kg		6010B	12/21/11	1
Copper	15.	0.21	1.0	mg/kg		6010B	12/21/11	1
Lead	15.	0.090	0.25	mg/kg		6010B	12/21/11	1
Nickel	29.	0.26	1.0	mg/kg		6010B	12/21/11	1
Selenium	0.95	0.32	1.0	mg/kg	J	6010B	12/21/11	1
Silver	1.8	0.16	0.50	mg/kg		6010B	12/23/11	1
Zinc	56.	0.34	1.5	mg/kg		6010B	12/21/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	12/20/11	5
Surrogate Recovery (70-130)								
a, a, a-Trifluorotoluene (FID)	104.			% Rec.		602/801	12/20/11	5
Benzene	U	0.0017	0.0050	mg/kg		8260B	12/18/11	5
Toluene	U	0.0016	0.025	mg/kg		8260B	12/18/11	5
Ethylbenzene	U	0.0019	0.0050	mg/kg		8260B	12/18/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	12/18/11	5
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	12/18/11	5
Dibromofluoromethane	106.			% Rec.		8260B	12/18/11	5
a, a, a-Trifluorotoluene	96.4			% Rec.		8260B	12/18/11	5
4-Bromofluorobenzene	107.			% Rec.		8260B	12/18/11	5
TPH (GC/FID) High Fraction	27.	0.77	4.0	mg/kg		3546/DR	12/21/11	1
Surrogate recovery(%)								
o-Terphenyl	58.1			% Rec.		3546/DR	12/21/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 20:33 Revised: 01/12/12 08:50

L552309-04 (PH) - 8.58@18.3c



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

# REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

January 12, 2012

Date Received : December 17, 2011  
Description : Pond 11  
Sample ID : PB-E  
Collected By : CJB  
Collection Date : 12/15/11 12:30

ESC Sample # : L552309-04

Site ID :

Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
<b>Polynuclear Aromatic Hydrocarbons</b>								
Anthracene	0.0013	0.00076	0.0060	mg/kg	J	8270C-S	12/22/11	1
Acenaphthene	0.0013	0.00071	0.0060	mg/kg	J	8270C-S	12/22/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	12/22/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	12/22/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	12/22/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	12/22/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	12/22/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	12/22/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	12/22/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	12/22/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	12/22/11	1
Fluorene	0.0029	0.00055	0.0060	mg/kg	J	8270C-S	12/22/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	12/22/11	1
Naphthalene	0.013	0.00065	0.0060	mg/kg		8270C-S	12/22/11	1
Phenanthrene	0.012	0.00074	0.0060	mg/kg		8270C-S	12/22/11	1
Pyrene	0.0051	0.00059	0.0060	mg/kg	J	8270C-S	12/22/11	1
1-Methylnaphthalene	0.019	0.00079	0.0060	mg/kg		8270C-S	12/22/11	1
2-Methylnaphthalene	0.058	0.00059	0.0060	mg/kg		8270C-S	12/22/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	12/22/11	1
<b>Surrogate Recovery</b>								
Nitrobenzene-d5	87.6			% Rec.		8270C-S	12/22/11	1
2-Fluorobiphenyl	73.6			% Rec.		8270C-S	12/22/11	1
p-Terphenyl-d14	121.			% Rec.		8270C-S	12/22/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 20:33 Revised: 01/12/12 08:50  
L552309-04 (PH) - 8.58@18.3c



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

# REPORT OF ANALYSIS

January 12, 2012

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

Date Received : December 17, 2011  
Description : Pond 11  
Sample ID : PB-N  
Collected By : CJB  
Collection Date : 12/15/11 11:30

ESC Sample # : L552309-05

Site ID :

Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	12/22/11	1
Chromium, Trivalent	52.	0.17	2.0	mg/kg		Calc.	12/21/11	1
ORP	110			mV	T8	2580	12/22/11	1
pH	7.3			su	T8	9045D	12/23/11	1
Sodium Adsorption Ratio	3.9					Calc.	12/20/11	1
Specific Conductance	2800			umhos/cm		9050AMo	12/20/11	1
Mercury	0.014	0.0015	0.020	mg/kg	J	7471	12/22/11	1
Arsenic	11.	0.32	1.0	mg/kg		6010B	12/21/11	1
Barium	400	0.050	0.25	mg/kg		6010B	12/21/11	1
Cadmium	U	0.040	0.25	mg/kg		6010B	12/21/11	1
Chromium	52.	0.085	0.50	mg/kg		6010B	12/21/11	1
Copper	12.	0.21	1.0	mg/kg		6010B	12/21/11	1
Lead	13.	0.090	0.25	mg/kg		6010B	12/21/11	1
Nickel	27.	0.26	1.0	mg/kg		6010B	12/21/11	1
Selenium	0.97	0.32	1.0	mg/kg	J	6010B	12/21/11	1
Silver	1.5	0.16	0.50	mg/kg		6010B	12/23/11	1
Zinc	56.	0.34	1.5	mg/kg		6010B	12/21/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	12/20/11	5
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (FID)	104.			% Rec.		602/801	12/20/11	5
Benzene	U	0.0017	0.0050	mg/kg		8260B	12/19/11	5
Toluene	U	0.0016	0.025	mg/kg		8260B	12/21/11	5
Ethylbenzene	U	0.0019	0.0050	mg/kg		8260B	12/21/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	12/21/11	5
Surrogate Recovery								
Toluene-d8	95.6			% Rec.		8260B	12/19/11	5
Dibromofluoromethane	101.			% Rec.		8260B	12/19/11	5
a, a, a-Trifluorotoluene	104.			% Rec.		8260B	12/19/11	5
4-Bromofluorobenzene	99.6			% Rec.		8260B	12/19/11	5
TPH (GC/FID) High Fraction	51.	0.77	4.0	mg/kg		3546/DR	12/21/11	1
Surrogate recovery(%) o-Terphenyl	66.5			% Rec.		3546/DR	12/21/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 20:33 Revised: 01/12/12 08:50  
L552309-05 (PH) - 7.33@18.7c



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

# REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

January 12, 2012

Date Received : December 17, 2011  
Description : Pond 11  
Sample ID : PB-N  
Collected By : CJB  
Collection Date : 12/15/11 11:30

ESC Sample # : L552309-05

Site ID :

Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.0038	0.00076	0.0060	mg/kg	J	8270C-S	12/22/11	1
Acenaphthene	0.0060	0.00071	0.0060	mg/kg	J	8270C-S	12/22/11	1
Acenaphthylene	0.0011	0.00057	0.0060	mg/kg	J	8270C-S	12/22/11	1
Benzo(a)anthracene	0.0040	0.00092	0.0060	mg/kg	J	8270C-S	12/22/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	12/22/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	12/22/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	12/22/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	12/22/11	1
Chrysene	0.0044	0.0011	0.0060	mg/kg	J	8270C-S	12/22/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	12/22/11	1
Fluoranthene	0.0037	0.0010	0.0060	mg/kg	J	8270C-S	12/22/11	1
Fluorene	0.012	0.00055	0.0060	mg/kg		8270C-S	12/22/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	12/22/11	1
Naphthalene	0.13	0.00065	0.0060	mg/kg		8270C-S	12/22/11	1
Phenanthrene	0.043	0.00074	0.0060	mg/kg		8270C-S	12/22/11	1
Pyrene	0.015	0.00059	0.0060	mg/kg		8270C-S	12/22/11	1
1-Methylnaphthalene	0.12	0.00079	0.0060	mg/kg		8270C-S	12/22/11	1
2-Methylnaphthalene	0.28	0.00059	0.0060	mg/kg		8270C-S	12/22/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	12/22/11	1
Surrogate Recovery								
Nitrobenzene-d5	92.4			% Rec.		8270C-S	12/22/11	1
2-Fluorobiphenyl	67.4			% Rec.		8270C-S	12/22/11	1
p-Terphenyl-d14	99.5			% Rec.		8270C-S	12/22/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 20:33 Revised: 01/12/12 08:50  
L552309-05 (PH) - 7.33@18.7c



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L552309-01	WG570928	SAMP	Mercury	R1976854	J
	WG571397	SAMP	pH	R1978592	T8
	WG570616	SAMP	Fluorene	R1972912	J
	WG570616	SAMP	Phenanthrene	R1972912	J
	WG571190	SAMP	ORP	R1977032	T8
L552309-02	WG571251	SAMP	TPH (GC/FID) High Fraction	R1976832	J
	WG570928	SAMP	Mercury	R1976854	J
	WG571397	SAMP	pH	R1978592	T8
	WG570616	SAMP	Fluorene	R1972912	J
	WG570616	SAMP	Naphthalene	R1972912	J
	WG570616	SAMP	Phenanthrene	R1972912	J
	WG570616	SAMP	Pyrene	R1972912	J
	WG570616	SAMP	1-Methylnaphthalene	R1972912	J
	WG571190	SAMP	ORP	R1977032	T8
L552309-03	WG571290	SAMP	Silver	R1977952	J
	WG571397	SAMP	pH	R1978592	T8
	WG570616	SAMP	Anthracene	R1972912	J
	WG570616	SAMP	Acenaphthene	R1972912	J
	WG570616	SAMP	Acenaphthylene	R1972912	J
	WG570616	SAMP	Pyrene	R1972912	J
	WG570616	SAMP	2-Chloronaphthalene	R1972912	J
	WG571190	SAMP	ORP	R1977032	T8
	WG570945	SAMP	Cadmium	R1976254	J
L552309-04	WG570945	SAMP	Selenium	R1976254	J
	WG571397	SAMP	pH	R1978592	T8
	WG570953	SAMP	Anthracene	R1975593	J
	WG570953	SAMP	Acenaphthene	R1975593	J
	WG570953	SAMP	Fluorene	R1975593	J
	WG570953	SAMP	Pyrene	R1975593	J
	WG571190	SAMP	ORP	R1977032	T8
	WG570945	SAMP	Selenium	R1976254	J
	WG570929	SAMP	Mercury	R1976855	J
L552309-05	WG571397	SAMP	pH	R1978592	T8
	WG570953	SAMP	Anthracene	R1975593	J
	WG570953	SAMP	Acenaphthene	R1975593	J
	WG570953	SAMP	Acenaphthylene	R1975593	J
	WG570953	SAMP	Benzo (a) anthracene	R1975593	J
	WG570953	SAMP	Chrysene	R1975593	J
	WG570953	SAMP	Fluoranthene	R1975593	J
	WG571190	SAMP	ORP	R1977032	T8

Attachment B  
Explanation of QC Qualifier Codes

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



Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

### Report Summary

Tuesday December 27, 2011

Report Number: L552306

Samples Received: 12/17/11

Client Project: 900546.0013.010

Description: Pond 11

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, PA - 68-02979

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.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





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

# REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 27, 2011

Date Received : December 17, 2011  
Description : Pond 11  
Sample ID : PB-AOC  
Collected By : CJB  
Collection Date : 12/15/11 16:00

ESC Sample # : L552306-01  
Site ID :  
Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	12/22/11	1
Chromium, Trivalent	46.	0.17	2.0	mg/kg		Calc.	12/21/11	1
ORP	98.			mV	T8	2580	12/22/11	1
pH	8.0			su	T8	9045D	12/23/11	1
Sodium Adsorption Ratio	4.0					Calc.	12/20/11	1
Specific Conductance	530			umhos/cm		9050AMo	12/20/11	1
Mercury	0.077	0.0015	0.020	mg/kg		7471	12/22/11	1
Arsenic	24.	0.32	1.0	mg/kg		6010B	12/21/11	1
Barium	350	0.050	0.25	mg/kg		6010B	12/21/11	1
Cadmium	U	0.040	0.25	mg/kg		6010B	12/21/11	1
Chromium	46.	0.085	0.50	mg/kg		6010B	12/21/11	1
Copper	17.	0.21	1.0	mg/kg		6010B	12/21/11	1
Lead	19.	0.090	0.25	mg/kg		6010B	12/21/11	1
Nickel	33.	0.26	1.0	mg/kg		6010B	12/21/11	1
Selenium	2.6	0.32	1.0	mg/kg		6010B	12/21/11	1
Silver	3.8	0.16	0.50	mg/kg		6010B	12/23/11	1
Zinc	46.	0.34	1.5	mg/kg		6010B	12/21/11	1
TPH (GC/FID) Low Fraction	2.8	0.25	0.50	mg/kg		8015D/G	12/18/11	5
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (FID)	95.8			% Rec.		602/801	12/18/11	5
Benzene	U	0.0017	0.0050	mg/kg		8260B	12/18/11	5
Toluene	U	0.0016	0.025	mg/kg		8260B	12/18/11	5
Ethylbenzene	U	0.0019	0.0050	mg/kg		8260B	12/18/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	12/18/11	5
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	12/18/11	5
Dibromofluoromethane	100.			% Rec.		8260B	12/18/11	5
a, a, a-Trifluorotoluene	106.			% Rec.		8260B	12/18/11	5
4-Bromofluorobenzene	108.			% Rec.		8260B	12/18/11	5
TPH (GC/FID) High Fraction	23.	0.77	4.0	mg/kg		3546/DR	12/21/11	1
Surrogate recovery(%) o-Terphenyl	81.9			% Rec.		3546/DR	12/21/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 16:13 Printed: 12/27/11 16:14  
L552306-01 (PH) - 7.96@18.9c



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

# REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 27, 2011

Date Received : December 17, 2011  
Description : Pond 11  
Sample ID : PB-AOC  
Collected By : CJB  
Collection Date : 12/15/11 16:00

ESC Sample # : L552306-01

Site ID :

Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	12/20/11	1
Acenaphthene	0.0019	0.00071	0.0060	mg/kg	J	8270C-S	12/20/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	12/20/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	12/20/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	12/20/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	12/20/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	12/20/11	1
Fluorene	0.0076	0.00055	0.0060	mg/kg		8270C-S	12/20/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	12/20/11	1
Naphthalene	0.0047	0.00065	0.0060	mg/kg	J	8270C-S	12/20/11	1
Phenanthrene	0.0077	0.00074	0.0060	mg/kg		8270C-S	12/20/11	1
Pyrene	0.0010	0.00059	0.0060	mg/kg	J	8270C-S	12/20/11	1
1-Methylnaphthalene	0.025	0.00079	0.0060	mg/kg		8270C-S	12/20/11	1
2-Methylnaphthalene	0.030	0.00059	0.0060	mg/kg		8270C-S	12/20/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	12/20/11	1
Surrogate Recovery								
Nitrobenzene-d5	92.8			% Rec.		8270C-S	12/20/11	1
2-Fluorobiphenyl	71.1			% Rec.		8270C-S	12/20/11	1
p-Terphenyl-d14	54.1			% Rec.		8270C-S	12/20/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 16:13 Printed: 12/27/11 16:14  
L552306-01 (PH) - 7.96@18.9c



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

# REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 27, 2011

Date Received : December 17, 2011  
Description : Pond 11  
  
Sample ID : AOC SPOIL  
  
Collected By : CJB  
Collection Date : 12/15/11 16:30

ESC Sample # : L552306-02

Site ID :

Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	1.0	0.71	2.0	mg/kg	JJ6J3	3060A/7	12/22/11	1
Chromium, Trivalent	32.	0.17	2.0	mg/kg		Calc.	12/21/11	1
ORP	50.			mV	T8	2580	12/22/11	1
pH	7.2			su	T8	9045D	12/23/11	1
Sodium Adsorption Ratio	13.					Calc.	12/20/11	1
Specific Conductance	2400			umhos/cm		9050AMo	12/20/11	1
Mercury	0.057	0.0015	0.020	mg/kg		7471	12/22/11	1
Arsenic	5.0	0.32	1.0	mg/kg		6010B	12/21/11	1
Barium	1100	0.050	0.25	mg/kg		6010B	12/21/11	1
Cadmium	U	0.040	0.25	mg/kg		6010B	12/21/11	1
Chromium	34.	0.085	0.50	mg/kg		6010B	12/21/11	1
Copper	12.	0.21	1.0	mg/kg		6010B	12/21/11	1
Lead	11.	0.090	0.25	mg/kg		6010B	12/21/11	1
Nickel	17.	0.26	1.0	mg/kg		6010B	12/21/11	1
Selenium	0.62	0.32	1.0	mg/kg	J	6010B	12/21/11	1
Silver	1.9	0.16	0.50	mg/kg		6010B	12/23/11	1
Zinc	35.	0.34	1.5	mg/kg		6010B	12/21/11	1
TPH (GC/FID) Low Fraction	1300	25.	50.	mg/kg		8015D/G	12/20/11	500
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (FID)	104.			% Rec.		602/801	12/20/11	500
Benzene	0.45	0.017	0.050	mg/kg		8260B	12/19/11	50
Toluene	11.	0.31	5.0	mg/kg		8260B	12/21/11	1000
Ethylbenzene	2.2	0.37	1.0	mg/kg		8260B	12/21/11	1000
Total Xylenes	48.	0.46	3.0	mg/kg		8260B	12/21/11	1000
Surrogate Recovery								
Toluene-d8	114.			% Rec.		8260B	12/19/11	50
Dibromofluoromethane	93.2			% Rec.		8260B	12/19/11	50
a, a, a-Trifluorotoluene	107.			% Rec.		8260B	12/19/11	50
4-Bromofluorobenzene	120.			% Rec.		8260B	12/19/11	50
TPH (GC/FID) High Fraction	480	3.8	20.	mg/kg		3546/DR	12/22/11	5
Surrogate recovery(%) o-Terphenyl	61.8			% Rec.		3546/DR	12/22/11	5

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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 16:13 Printed: 12/27/11 16:14

L552306-02 (CR6) - reducer

L552306-02 (PH) - 7.24@18.9c



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

# REPORT OF ANALYSIS

Daniel Padilla  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 27, 2011

Date Received : December 17, 2011  
Description : Pond 11  
Sample ID : AOC SPOIL  
Collected By : CJB  
Collection Date : 12/15/11 16:30

ESC Sample # : L552306-02

Site ID :

Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.018	0.0015	0.012	mg/kg		8270C-S	12/20/11	2
Acenaphthene	0.036	0.0014	0.012	mg/kg		8270C-S	12/20/11	2
Acenaphthylene	0.058	0.0011	0.012	mg/kg		8270C-S	12/20/11	2
Benzo(a)anthracene	U	0.0018	0.012	mg/kg		8270C-S	12/20/11	2
Benzo(a)pyrene	U	0.0012	0.012	mg/kg		8270C-S	12/20/11	2
Benzo(b)fluoranthene	U	0.0016	0.012	mg/kg		8270C-S	12/20/11	2
Benzo(g,h,i)perylene	U	0.0025	0.012	mg/kg		8270C-S	12/20/11	2
Benzo(k)fluoranthene	U	0.0027	0.012	mg/kg		8270C-S	12/20/11	2
Chrysene	U	0.0022	0.012	mg/kg		8270C-S	12/20/11	2
Dibenz(a,h)anthracene	U	0.0022	0.012	mg/kg		8270C-S	12/20/11	2
Fluoranthene	0.0035	0.0021	0.012	mg/kg	J	8270C-S	12/20/11	2
Fluorene	0.14	0.0011	0.012	mg/kg		8270C-S	12/20/11	2
Indeno(1,2,3-cd)pyrene	U	0.0023	0.012	mg/kg		8270C-S	12/20/11	2
Naphthalene	0.52	0.026	0.24	mg/kg		8270C-S	12/21/11	40
Phenanthrene	0.14	0.0015	0.012	mg/kg		8270C-S	12/20/11	2
Pyrene	0.013	0.0012	0.012	mg/kg		8270C-S	12/20/11	2
1-Methylnaphthalene	0.46	0.032	0.24	mg/kg		8270C-S	12/21/11	40
2-Methylnaphthalene	1.4	0.024	0.24	mg/kg		8270C-S	12/21/11	40
2-Chloronaphthalene	U	0.024	0.24	mg/kg		8270C-S	12/21/11	40
Surrogate Recovery								
Nitrobenzene-d5	0.00			% Rec.	J7	8270C-S	12/21/11	40
2-Fluorobiphenyl	61.9			% Rec.		8270C-S	12/20/11	2
p-Terphenyl-d14	41.6			% Rec.		8270C-S	12/20/11	2

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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/27/11 16:13 Printed: 12/27/11 16:14

L552306-02 (CR6) - reducer

L552306-02 (PH) - 7.24@18.9c



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L552306-01	WG571397	SAMP	pH	R1978592	T8
	WG570616	SAMP	Acenaphthene	R1972912	J
	WG570616	SAMP	Naphthalene	R1972912	J
	WG570616	SAMP	Pyrene	R1972912	J
	WG571190	SAMP	ORP	R1977032	T8
L552306-02	WG570945	SAMP	Selenium	R1976254	J
	WG570985	SAMP	Chromium, Hexavalent	R1977133	JJ6J3
	WG571397	SAMP	pH	R1978592	T8
	WG570616	SAMP	Fluoranthene	R1972912	J
	WG570616	SAMP	Nitrobenzene-d5	R1972912	J7
	WG571190	SAMP	ORP	R1977032	T8

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
J7	Surrogate recovery limits cannot be evaluated; surrogates were diluted out
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  
12/27/11 at 16:14:20

TSR Signing Reports: 134  
R4 - Rush: Three Day

Sample: L552306-01 Account: OXYGJCO Received: 12/17/11 09:00 Due Date: 12/23/11 00:00 RPT Date: 12/27/11 16:13  
Changed to rush - MB 12/20  
Sample: L552306-02 Account: OXYGJCO Received: 12/17/11 09:00 Due Date: 12/23/11 00:00 RPT Date: 12/27/11 16:13

[illegible]



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

### Report Summary

Friday December 24, 2010

Report Number: L493792

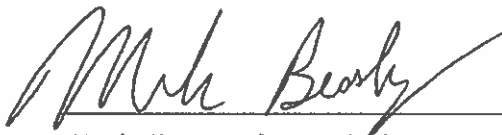
Samples Received: 12/15/10

Client Project:

Description: 614-41

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.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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

# REPORT OF ANALYSIS

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

December 24, 2010

Date Received : December 15, 2010  
Description : 614-41  
Sample ID : 617-41-NEB-121310  
Collected By : Jake Harris  
Collection Date : 12/13/10 12:50

ESC Sample # : L493792-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
pH	6.5			su		9045D	12/18/10	1
Sodium Adsorption Ratio	0.81					Calc.	12/20/10	1
Specific Conductance	56.			umhos/cm		9050AMo	12/20/10	1
Arsenic	2.8	0.32	1.0	mg/kg		6010B	12/22/10	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/24/10 15:08 Printed: 12/24/10 15:09  
L493792-01 (PH) - 6.5@17.0c



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

# REPORT OF ANALYSIS

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

December 24, 2010

Date Received : December 15, 2010  
Description : 614-41  
Sample ID : 617-41-WB-121310  
Collected By : Jake Harris  
Collection Date : 12/13/10 13:10

ESC Sample # : L493792-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
pH	5.9			su		9045D	12/18/10	1
Sodium Adsorption Ratio	0.27					Calc.	12/20/10	1
Specific Conductance	170			umhos/cm		9050AMo	12/20/10	1
Arsenic	3.2	0.32	1.0	mg/kg		6010B	12/24/10	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/24/10 15:08 Printed: 12/24/10 15:09  
L493792-02 (PH) - 5.9@17.4c



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

# REPORT OF ANALYSIS

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

December 24, 2010

Date Received : December 15, 2010  
Description : 614-41  
Sample ID : 617-41-NWB-121310  
Collected By : Jake Harris  
Collection Date : 12/13/10 13:00

ESC Sample # : L493792-03

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
pH	6.4			su		9045D	12/18/10	1
Sodium Adsorption Ratio	0.96					Calc.	12/20/10	1
Specific Conductance	49.			umhos/cm		9050AMo	12/20/10	1
Arsenic	2.8	0.32	1.0	mg/kg		6010B	12/24/10	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/24/10 15:08 Printed: 12/24/10 15:09  
L493792-03 (PH) - 6.4@17.2c



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

# REPORT OF ANALYSIS

December 24, 2010

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

ESC Sample # : L493792-04

Date Received : December 15, 2010  
Description : 614-41

Site ID :

Sample ID : 617-41-EB-121310

Project # :

Collected By : Jake Harris  
Collection Date : 12/13/10 13:20

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
pH	6.3			su		9045D	12/18/10	1
Sodium Adsorption Ratio	0.61					Calc.	12/20/10	1
Specific Conductance	39.			umhos/cm		9050AMo	12/20/10	1
Arsenic	3.6	0.32	1.0	mg/kg		6010B	12/24/10	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/24/10 15:08 Printed: 12/24/10 15:09

L493792-04 (PH) - 6.3817.4c

Summary of Remarks For Samples Printed  
12/24/10 at 15:09:04

TSR Signing Reports: 134  
R5 - Desired TAT

Sample: L493792-01 Account: OXYWTPGJCO Received: 12/15/10 09:00 Due Date: 12/22/10 00:00 RPT Date: 12/24/10 15:08  
Sample: L493792-02 Account: OXYWTPGJCO Received: 12/15/10 09:00 Due Date: 12/22/10 00:00 RPT Date: 12/24/10 15:08  
Sample: L493792-03 Account: OXYWTPGJCO Received: 12/15/10 09:00 Due Date: 12/22/10 00:00 RPT Date: 12/24/10 15:08  
Sample: L493792-04 Account: OXYWTPGJCO Received: 12/15/10 09:00 Due Date: 12/22/10 00:00 RPT Date: 12/24/10 15:08





Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

### Report Summary

Monday June 20, 2011

Report Number: L520524

Samples Received: 06/11/11

Client Project: 900546.0001.050

Description: 697-08-53-Pit Background

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.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-6  
Collected By : CJB  
Collection Date : 06/10/11 10:40

ESC Sample # : L520524-01

Site ID :

Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/17/11	1
Chromium, Trivalent	58.	0.17	2.0	mg/kg		Calc.	06/15/11	1
ORP	44.			mV		2580	06/17/11	1
pH	9.2			su		9045D	06/17/11	1
Sodium Adsorption Ratio	2.5					Calc.	06/14/11	1
Specific Conductance	100			umhos/cm		9050AMo	06/17/11	1
Mercury	0.033	0.0015	0.020	mg/kg		7471	06/15/11	1
Arsenic	17.	0.32	1.0	mg/kg		6010B	06/15/11	1
Barium	360	0.050	0.25	mg/kg		6010B	06/15/11	1
Cadmium	2.6	0.040	0.25	mg/kg		6010B	06/15/11	1
Chromium	58.	0.085	0.50	mg/kg		6010B	06/15/11	1
Copper	22.	0.21	1.0	mg/kg		6010B	06/15/11	1
Lead	21.	0.090	0.25	mg/kg	B	6010B	06/16/11	1
Nickel	34.	0.26	1.0	mg/kg		6010B	06/15/11	1
Selenium	0.66	0.32	1.0	mg/kg	J	6010B	06/15/11	1
Silver	U	0.16	0.50	mg/kg		6010B	06/15/11	1
Zinc	66.	0.34	1.5	mg/kg		6010B	06/15/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/13/11	5
Surrogate Recovery (70-130)								
a,a,a-Trifluorotoluene(FID)	94.1			% Rec.		602/801	06/13/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/13/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/13/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/13/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/13/11	5
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	06/13/11	5
Dibromofluoromethane	111.			% Rec.		8260B	06/13/11	5
a,a,a-Trifluorotoluene	106.			% Rec.		8260B	06/13/11	5
4-Bromofluorobenzene	99.0			% Rec.		8260B	06/13/11	5
TPH (GC/FID) High Fraction	4.6	0.77	4.0	mg/kg		3546/DR	06/18/11	1
Surrogate recovery(%)								
o-Terphenyl	83.1			% Rec.		3546/DR	06/18/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38

L520524-01 (PH) - 9.2@20.4c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-6  
Collected By : CJB  
Collection Date : 06/10/11 10:40

ESC Sample # : L520524-01

Site ID :

Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	06/16/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	06/16/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(a)anthracene	0.0012	0.00092	0.0060	mg/kg	J	8270C-S	06/16/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(b)fluoranthene	0.0016	0.00082	0.0060	mg/kg	J	8270C-S	06/16/11	1
Benzo(g,h,i)perylene	0.0016	0.0012	0.0060	mg/kg	J	8270C-S	06/16/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	06/16/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	06/16/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	06/16/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	06/16/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	06/16/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	06/16/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	06/16/11	1
Phenanthrene	0.0019	0.00074	0.0060	mg/kg	J	8270C-S	06/16/11	1
Pyrene	0.00076	0.00059	0.0060	mg/kg	J	8270C-S	06/16/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	06/16/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	06/16/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	06/16/11	1
Surrogate Recovery								
Nitrobenzene-d5	45.9			% Rec.		8270C-S	06/16/11	1
2-Fluorobiphenyl	51.6			% Rec.		8270C-S	06/16/11	1
p-Terphenyl-d14	43.8			% Rec.		8270C-S	06/16/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38

L520524-01 (PH) - 9.2@20.4c

REPORT OF ANALYSIS

June 20, 2011

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-7  
Collected By : CJB  
Collection Date : 06/10/11 11:00

ESC Sample # : L520524-02

Site ID :

Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/17/11	1
Chromium, Trivalent	86.	0.17	2.0	mg/kg		Calc.	06/15/11	1
ORP	63.			mV		2580	06/17/11	1
pH	8.8			su		9045D	06/17/11	1
Sodium Adsorption Ratio	0.80					Calc.	06/14/11	1
Specific Conductance	110			umhos/cm		9050AMo	06/17/11	1
Mercury	0.022	0.0015	0.020	mg/kg		7471	06/15/11	1
Arsenic	19.	0.32	1.0	mg/kg		6010B	06/15/11	1
Barium	410	0.050	0.25	mg/kg		6010B	06/15/11	1
Cadmium	2.0	0.040	0.25	mg/kg		6010B	06/15/11	1
Chromium	86.	0.085	0.50	mg/kg		6010B	06/15/11	1
Copper	14.	0.21	1.0	mg/kg		6010B	06/15/11	1
Lead	18.	0.090	0.25	mg/kg	B	6010B	06/16/11	1
Nickel	39.	0.26	1.0	mg/kg		6010B	06/15/11	1
Selenium	U	0.32	1.0	mg/kg		6010B	06/15/11	1
Silver	U	0.16	0.50	mg/kg		6010B	06/15/11	1
Zinc	46.	0.34	1.5	mg/kg		6010B	06/15/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/13/11	5
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (FID)	94.3			% Rec.		602/801	06/13/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/13/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/13/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/13/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/13/11	5
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	06/13/11	5
Dibromofluoromethane	108.			% Rec.		8260B	06/13/11	5
a, a, a-Trifluorotoluene	103.			% Rec.		8260B	06/13/11	5
4-Bromofluorobenzene	99.4			% Rec.		8260B	06/13/11	5
TPH (GC/FID) High Fraction	1.2	0.77	4.0	mg/kg	J	3546/DR	06/17/11	1
Surrogate recovery (%) o-Terphenyl	80.0			% Rec.		3546/DR	06/17/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38

L520524-02 (PH) - 8.8@20.4c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background

Sample ID : SS-7

Collected By : CJB  
Collection Date : 06/10/11 11:00

ESC Sample # : L520524-02

Site ID :

Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	06/16/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	06/16/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(g,h,i)perylene	0.0017	0.0012	0.0060	mg/kg	J	8270C-S	06/16/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	06/16/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	06/16/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	06/16/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	06/16/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	06/16/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	06/16/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	06/16/11	1
Phenanthrene	U	0.00074	0.0060	mg/kg		8270C-S	06/16/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	06/16/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	06/16/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	06/16/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	06/16/11	1
Surrogate Recovery								
Nitrobenzene-d5	50.2			% Rec.		8270C-S	06/16/11	1
2-Fluorobiphenyl	55.8			% Rec.		8270C-S	06/16/11	1
p-Terphenyl-d14	63.0			% Rec.		8270C-S	06/16/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38

L520524-02 (PH) - 8.8@20.4c





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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-8  
Collected By : CJB  
Collection Date : 06/10/11 11:07

ESC Sample # : L520524-03

Site ID :

Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/17/11	1
Chromium, Trivalent	84.	0.17	2.0	mg/kg		Calc.	06/15/11	1
ORP	87.			mV		2580	06/17/11	1
pH	8.5			su		9045D	06/17/11	1
Sodium Adsorption Ratio	0.99					Calc.	06/14/11	1
Specific Conductance	140			umhos/cm		9050AMo	06/17/11	1
Mercury	0.019	0.0015	0.020	mg/kg	J	7471	06/16/11	1
Arsenic	14.	0.32	1.0	mg/kg		6010B	06/15/11	1
Barium	320	0.050	0.25	mg/kg		6010B	06/15/11	1
Cadmium	1.8	0.040	0.25	mg/kg		6010B	06/15/11	1
Chromium	84.	0.085	0.50	mg/kg		6010B	06/15/11	1
Copper	16.	0.21	1.0	mg/kg		6010B	06/15/11	1
Lead	17.	0.090	0.25	mg/kg	B	6010B	06/16/11	1
Nickel	38.	0.26	1.0	mg/kg		6010B	06/15/11	1
Selenium	U	0.32	1.0	mg/kg		6010B	06/15/11	1
Silver	U	0.16	0.50	mg/kg		6010B	06/15/11	1
Zinc	52.	0.34	1.5	mg/kg		6010B	06/15/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/13/11	5
Surrogate Recovery (70-130)								
a,a,a-Trifluorotoluene (FID)	94.0			% Rec.		602/801	06/13/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/13/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/13/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/13/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/13/11	5
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	06/13/11	5
Dibromofluoromethane	111.			% Rec.		8260B	06/13/11	5
a,a,a-Trifluorotoluene	104.			% Rec.		8260B	06/13/11	5
4-Bromofluorobenzene	92.8			% Rec.		8260B	06/13/11	5
TPH (GC/FID) High Fraction	1.6	0.77	4.0	mg/kg	J	3546/DR	06/18/11	1
Surrogate recovery(%)								
o-Terphenyl	76.1			% Rec.		3546/DR	06/18/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38

L520524-03 (PH) - 8.5@20.3c



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

# REPORT OF ANALYSIS

June 20, 2011

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-8  
Collected By : CJB  
Collection Date : 06/10/11 11:07

ESC Sample # : L520524-03  
Site ID :  
Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	06/17/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	06/17/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	06/17/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	06/17/11	1
Benzo(a)pyrene	0.00086	0.00062	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(b)fluoranthene	0.0016	0.00082	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(g,h,i)perylene	0.0042	0.0012	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	06/17/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	06/17/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	06/17/11	1
Fluoranthene	0.0011	0.0010	0.0060	mg/kg	J	8270C-S	06/17/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	06/17/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	06/17/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	06/17/11	1
Phenanthrene	0.00079	0.00074	0.0060	mg/kg	J	8270C-S	06/17/11	1
Pyrene	0.0011	0.00059	0.0060	mg/kg	J	8270C-S	06/17/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	06/17/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	06/17/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	06/17/11	1
Surrogate Recovery								
Nitrobenzene-d5	98.9			% Rec.		8270C-S	06/17/11	1
2-Fluorobiphenyl	98.7			% Rec.		8270C-S	06/17/11	1
p-Terphenyl-d14	93.2			% Rec.		8270C-S	06/17/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38  
L520524-03 (PH) - 8.5@20.3c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-9  
Collected By : CJB  
Collection Date : 06/10/11 11:13

ESC Sample # : L520524-04  
Site ID :  
Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/17/11	1
Chromium, Trivalent	82.	0.17	2.0	mg/kg		Calc.	06/15/11	1
ORP	85.			mV		2580	06/17/11	1
pH	7.3			su		9045D	06/17/11	1
Sodium Adsorption Ratio	0.95					Calc.	06/14/11	1
Specific Conductance	140			umhos/cm		9050AMo	06/17/11	1
Mercury	0.015	0.0015	0.020	mg/kg	J	7471	06/16/11	1
Arsenic	20.	0.32	1.0	mg/kg		6010B	06/15/11	1
Barium	410	0.050	0.25	mg/kg	V	6010B	06/15/11	1
Cadmium	1.9	0.040	0.25	mg/kg		6010B	06/15/11	1
Chromium	82.	0.085	0.50	mg/kg		6010B	06/15/11	1
Copper	16.	0.21	1.0	mg/kg		6010B	06/15/11	1
Lead	14.	0.090	0.25	mg/kg	B	6010B	06/16/11	1
Nickel	37.	0.26	1.0	mg/kg		6010B	06/15/11	1
Selenium	U	0.32	1.0	mg/kg		6010B	06/15/11	1
Silver	U	0.16	0.50	mg/kg		6010B	06/15/11	1
Zinc	54.	0.34	1.5	mg/kg		6010B	06/15/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/13/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	94.4			% Rec.		602/801	06/13/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/13/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/13/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/13/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/13/11	5
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	06/13/11	5
Dibromofluoromethane	106.			% Rec.		8260B	06/13/11	5
a,a,a-Trifluorotoluene	104.			% Rec.		8260B	06/13/11	5
4-Bromofluorobenzene	97.0			% Rec.		8260B	06/13/11	5
TPH (GC/FID) High Fraction	5.3	0.77	4.0	mg/kg		3546/DR	06/18/11	1
Surrogate recovery(%) o-Terphenyl	79.3			% Rec.		3546/DR	06/18/11	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.  
This report shall not be reproduced, except in full, without the written approval from ESC.  
Reported: 06/20/11 16:37 Printed: 06/20/11 16:38  
L520524-04 (PH) - 7.3@20.6c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
  
Sample ID : SS-9  
  
Collected By : CJB  
Collection Date : 06/10/11 11:13

ESC Sample # : L520524-04  
  
Site ID :  
  
Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	06/17/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	06/17/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	06/17/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	06/17/11	1
Benzo(a)pyrene	0.00066	0.00062	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(b)fluoranthene	0.0017	0.00082	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(g,h,i)perylene	0.0014	0.0012	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	06/17/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	06/17/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	06/17/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	06/17/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	06/17/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	06/17/11	1
Naphthalene	0.00080	0.00065	0.0060	mg/kg	J	8270C-S	06/17/11	1
Phenanthrene	0.0010	0.00074	0.0060	mg/kg	J	8270C-S	06/17/11	1
Pyrene	0.0029	0.00059	0.0060	mg/kg	J	8270C-S	06/17/11	1
1-Methylnaphthalene	0.0010	0.00079	0.0060	mg/kg	J	8270C-S	06/17/11	1
2-Methylnaphthalene	0.0024	0.00059	0.0060	mg/kg	J	8270C-S	06/17/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	06/17/11	1
Surrogate Recovery								
Nitrobenzene-d5	100.			% Rec.		8270C-S	06/17/11	1
2-Fluorobiphenyl	101.			% Rec.		8270C-S	06/17/11	1
p-Terphenyl-d14	107.			% Rec.		8270C-S	06/17/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38  
L520524-04 (PH) - 7.3@20.6c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L520524-01	WG540600	SAMP	Lead	R1727230	B
	WG540130	SAMP	Selenium	R1724389	J
	WG540795	SAMP	Benzo(a)anthracene	R1728470	J
	WG540795	SAMP	Benzo(b)fluoranthene	R1728470	J
	WG540795	SAMP	Benzo(g,h,i)perylene	R1728470	J
	WG540795	SAMP	Phenanthrene	R1728470	J
	WG540795	SAMP	Pyrene	R1728470	J
L520524-02	WG540600	SAMP	Lead	R1727230	B
	WG540644	SAMP	TPH (GC/FID) High Fraction	R1728369	J
	WG540527	SAMP	Benzo(g,h,i)perylene	R1727331	J
L520524-03	WG540600	SAMP	Lead	R1727230	B
	WG540644	SAMP	TPH (GC/FID) High Fraction	R1728369	J
	WG540079	SAMP	Mercury	R1726809	J
	WG540652	SAMP	Benzo(a)pyrene	R1727749	J
	WG540652	SAMP	Benzo(b)fluoranthene	R1727749	J
	WG540652	SAMP	Benzo(g,h,i)perylene	R1727749	J
	WG540652	SAMP	Fluoranthene	R1727749	J
	WG540652	SAMP	Phenanthrene	R1727749	J
	WG540652	SAMP	Pyrene	R1727749	J
	WG540130	SAMP	Barium	R1724389	V
L520524-04	WG540600	SAMP	Lead	R1727230	B
	WG540079	SAMP	Mercury	R1726809	J
	WG540652	SAMP	Benzo(a)pyrene	R1727749	J
	WG540652	SAMP	Benzo(b)fluoranthene	R1727749	J
	WG540652	SAMP	Benzo(g,h,i)perylene	R1727749	J
	WG540652	SAMP	Naphthalene	R1727749	J
	WG540652	SAMP	Phenanthrene	R1727749	J
	WG540652	SAMP	Pyrene	R1727749	J
	WG540652	SAMP	1-Methylnaphthalene	R1727749	J
	WG540652	SAMP	2-Methylnaphthalene	R1727749	J

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
B	(EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
V	(ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.

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  
06/20/11 at 16:38:24

TSR Signing Reports: 134  
R5 - Desired TAT

Sample: L520524-01 Account: OXYGJCO Received: 06/11/11 09:00 Due Date: 06/17/11 00:00 RPT Date: 06/20/11 16:37  
Sample: L520524-02 Account: OXYGJCO Received: 06/11/11 09:00 Due Date: 06/17/11 00:00 RPT Date: 06/20/11 16:37  
Sample: L520524-03 Account: OXYGJCO Received: 06/11/11 09:00 Due Date: 06/17/11 00:00 RPT Date: 06/20/11 16:37  
Sample: L520524-04 Account: OXYGJCO Received: 06/11/11 09:00 Due Date: 06/17/11 00:00 RPT Date: 06/20/11 16:37

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

## Report Summary

Monday June 20, 2011

Report Number: L520524

Samples Received: 06/11/11

Client Project: 900546.0001.050

Description: 697-08-53-Pit Background

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.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-6  
Collected By : CJB  
Collection Date : 06/10/11 10:40

ESC Sample # : L520524-01

Site ID :

Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/17/11	1
Chromium, Trivalent	58.	0.17	2.0	mg/kg		Calc.	06/15/11	1
ORP	44.			mV		2580	06/17/11	1
pH	9.2			su		9045D	06/17/11	1
Sodium Adsorption Ratio	2.5					Calc.	06/14/11	1
Specific Conductance	100			umhos/cm		9050AMo	06/17/11	1
Mercury	0.033	0.0015	0.020	mg/kg		7471	06/15/11	1
Arsenic	17.	0.32	1.0	mg/kg		6010B	06/15/11	1
Barium	360	0.050	0.25	mg/kg		6010B	06/15/11	1
Cadmium	2.6	0.040	0.25	mg/kg		6010B	06/15/11	1
Chromium	58.	0.085	0.50	mg/kg		6010B	06/15/11	1
Copper	22.	0.21	1.0	mg/kg		6010B	06/15/11	1
Lead	21.	0.090	0.25	mg/kg	B	6010B	06/16/11	1
Nickel	34.	0.26	1.0	mg/kg		6010B	06/15/11	1
Selenium	0.66	0.32	1.0	mg/kg	J	6010B	06/15/11	1
Silver	U	0.16	0.50	mg/kg		6010B	06/15/11	1
Zinc	66.	0.34	1.5	mg/kg		6010B	06/15/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/13/11	5
Surrogate Recovery (70-130)								
a,a,a-Trifluorotoluene (FID)	94.1			% Rec.		602/801	06/13/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/13/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/13/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/13/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/13/11	5
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	06/13/11	5
Dibromofluoromethane	111.			% Rec.		8260B	06/13/11	5
a,a,a-Trifluorotoluene	106.			% Rec.		8260B	06/13/11	5
4-Bromofluorobenzene	99.0			% Rec.		8260B	06/13/11	5
TPH (GC/FID) High Fraction	4.6	0.77	4.0	mg/kg		3546/DR	06/18/11	1
Surrogate recovery(%)								
o-Terphenyl	83.1			% Rec.		3546/DR	06/18/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38

L520524-01 (PH) - 9.2@20.4c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-6  
Collected By : CJB  
Collection Date : 06/10/11 10:40

ESC Sample # : L520524-01

Site ID :

Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	06/16/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	06/16/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(a)anthracene	0.0012	0.00092	0.0060	mg/kg	J	8270C-S	06/16/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(b)fluoranthene	0.0016	0.00082	0.0060	mg/kg	J	8270C-S	06/16/11	1
Benzo(g,h,i)perylene	0.0016	0.0012	0.0060	mg/kg	J	8270C-S	06/16/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	06/16/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	06/16/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	06/16/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	06/16/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	06/16/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	06/16/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	06/16/11	1
Phenanthrene	0.0019	0.00074	0.0060	mg/kg	J	8270C-S	06/16/11	1
Pyrene	0.00076	0.00059	0.0060	mg/kg	J	8270C-S	06/16/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	06/16/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	06/16/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	06/16/11	1
Surrogate Recovery								
Nitrobenzene-d5	45.9			% Rec.		8270C-S	06/16/11	1
2-Fluorobiphenyl	51.6			% Rec.		8270C-S	06/16/11	1
p-Terphenyl-d14	43.8			% Rec.		8270C-S	06/16/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38

L520524-01 (PH) - 9.2@20.4c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-7  
Collected By : CJB  
Collection Date : 06/10/11 11:00

ESC Sample # : L520524-02

Site ID :

Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/17/11	1
Chromium, Trivalent	86.	0.17	2.0	mg/kg		Calc.	06/15/11	1
ORP	63.			mV		2580	06/17/11	1
pH	8.8			su		9045D	06/17/11	1
Sodium Adsorption Ratio	0.80					Calc.	06/14/11	1
Specific Conductance	110			umhos/cm		9050AMo	06/17/11	1
Mercury	0.022	0.0015	0.020	mg/kg		7471	06/15/11	1
Arsenic	19.	0.32	1.0	mg/kg		6010B	06/15/11	1
Barium	410	0.050	0.25	mg/kg		6010B	06/15/11	1
Cadmium	2.0	0.040	0.25	mg/kg		6010B	06/15/11	1
Chromium	86.	0.085	0.50	mg/kg		6010B	06/15/11	1
Copper	14.	0.21	1.0	mg/kg		6010B	06/15/11	1
Lead	18.	0.090	0.25	mg/kg	B	6010B	06/16/11	1
Nickel	39.	0.26	1.0	mg/kg		6010B	06/15/11	1
Selenium	U	0.32	1.0	mg/kg		6010B	06/15/11	1
Silver	U	0.16	0.50	mg/kg		6010B	06/15/11	1
Zinc	46.	0.34	1.5	mg/kg		6010B	06/15/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/13/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	94.3			% Rec.		602/801	06/13/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/13/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/13/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/13/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/13/11	5
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	06/13/11	5
Dibromofluoromethane	108.			% Rec.		8260B	06/13/11	5
a,a,a-Trifluorotoluene	103.			% Rec.		8260B	06/13/11	5
4-Bromofluorobenzene	99.4			% Rec.		8260B	06/13/11	5
TPH (GC/FID) High Fraction	1.2	0.77	4.0	mg/kg	J	3546/DR	06/17/11	1
Surrogate recovery(%) o-Terphenyl	80.0			% Rec.		3546/DR	06/17/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38

L520524-02 (PH) - 8.8@20.4c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-7  
Collected By : CJB  
Collection Date : 06/10/11 11:00

ESC Sample # : L520524-02

Site ID :

Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	06/16/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	06/16/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	06/16/11	1
Benzo(g,h,i)perylene	0.0017	0.0012	0.0060	mg/kg	J	8270C-S	06/16/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	06/16/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	06/16/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	06/16/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	06/16/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	06/16/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	06/16/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	06/16/11	1
Phenanthrene	U	0.00074	0.0060	mg/kg		8270C-S	06/16/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	06/16/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	06/16/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	06/16/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	06/16/11	1
Surrogate Recovery								
Nitrobenzene-d5	50.2			% Rec.		8270C-S	06/16/11	1
2-Fluorobiphenyl	55.8			% Rec.		8270C-S	06/16/11	1
p-Terphenyl-d14	63.0			% Rec.		8270C-S	06/16/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38

L520524-02 (PH) - 8.8@20.4c





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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-8  
Collected By : CJB  
Collection Date : 06/10/11 11:07

ESC Sample # : L520524-03

Site ID :

Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/17/11	1
Chromium, Trivalent	84.	0.17	2.0	mg/kg		Calc.	06/15/11	1
ORP	87.			mV		2580	06/17/11	1
pH	8.5			su		9045D	06/17/11	1
Sodium Adsorption Ratio	0.99					Calc.	06/14/11	1
Specific Conductance	140			umhos/cm		9050AMo	06/17/11	1
Mercury	0.019	0.0015	0.020	mg/kg	J	7471	06/16/11	1
Arsenic	14.	0.32	1.0	mg/kg		6010B	06/15/11	1
Barium	320	0.050	0.25	mg/kg		6010B	06/15/11	1
Cadmium	1.8	0.040	0.25	mg/kg		6010B	06/15/11	1
Chromium	84.	0.085	0.50	mg/kg		6010B	06/15/11	1
Copper	16.	0.21	1.0	mg/kg		6010B	06/15/11	1
Lead	17.	0.090	0.25	mg/kg	B	6010B	06/16/11	1
Nickel	38.	0.26	1.0	mg/kg		6010B	06/15/11	1
Selenium	U	0.32	1.0	mg/kg		6010B	06/15/11	1
Silver	U	0.16	0.50	mg/kg		6010B	06/15/11	1
Zinc	52.	0.34	1.5	mg/kg		6010B	06/15/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/13/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	94.0			% Rec.		602/801	06/13/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/13/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/13/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/13/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/13/11	5
Surrogate Recovery				% Rec.				
Toluene-d8	104.			% Rec.		8260B	06/13/11	5
Dibromofluoromethane	111.			% Rec.		8260B	06/13/11	5
a,a,a-Trifluorotoluene	104.			% Rec.		8260B	06/13/11	5
4-Bromofluorobenzene	92.8			% Rec.		8260B	06/13/11	5
TPH (GC/FID) High Fraction	1.6	0.77	4.0	mg/kg	J	3546/DR	06/18/11	1
Surrogate recovery(%) o-Terphenyl	76.1			% Rec.		3546/DR	06/18/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38

L520524-03 (PH) - 8.5@20.3c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-8  
Collected By : CJB  
Collection Date : 06/10/11 11:07

ESC Sample # : L520524-03  
Site ID :  
Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	06/17/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	06/17/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	06/17/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	06/17/11	1
Benzo(a)pyrene	0.00086	0.00062	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(b)fluoranthene	0.0016	0.00082	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(g,h,i)perylene	0.0042	0.0012	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	06/17/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	06/17/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	06/17/11	1
Fluoranthene	0.0011	0.0010	0.0060	mg/kg	J	8270C-S	06/17/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	06/17/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	06/17/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	06/17/11	1
Phenanthrene	0.00079	0.00074	0.0060	mg/kg	J	8270C-S	06/17/11	1
Pyrene	0.0011	0.00059	0.0060	mg/kg	J	8270C-S	06/17/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	06/17/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	06/17/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	06/17/11	1
Surrogate Recovery								
Nitrobenzene-d5	98.9			% Rec.		8270C-S	06/17/11	1
2-Fluorobiphenyl	98.7			% Rec.		8270C-S	06/17/11	1
p-Terphenyl-d14	93.2			% Rec.		8270C-S	06/17/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38

L520524-03 (PH) - 8.5@20.3c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-9  
Collected By : CJB  
Collection Date : 06/10/11 11:13

ESC Sample # : L520524-04  
Site ID :  
Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/17/11	1
Chromium, Trivalent	82.	0.17	2.0	mg/kg		Calc.	06/15/11	1
ORP	85.			mV		2580	06/17/11	1
pH	7.3			su		9045D	06/17/11	1
Sodium Adsorption Ratio	0.95					Calc.	06/14/11	1
Specific Conductance	140			umhos/cm		9050AMo	06/17/11	1
Mercury	0.015	0.0015	0.020	mg/kg	J	7471	06/16/11	1
Arsenic	20.	0.32	1.0	mg/kg		6010B	06/15/11	1
Barium	410	0.050	0.25	mg/kg	V	6010B	06/15/11	1
Cadmium	1.9	0.040	0.25	mg/kg		6010B	06/15/11	1
Chromium	82.	0.085	0.50	mg/kg		6010B	06/15/11	1
Copper	16.	0.21	1.0	mg/kg		6010B	06/15/11	1
Lead	14.	0.090	0.25	mg/kg	B	6010B	06/16/11	1
Nickel	37.	0.26	1.0	mg/kg		6010B	06/15/11	1
Selenium	U	0.32	1.0	mg/kg		6010B	06/15/11	1
Silver	U	0.16	0.50	mg/kg		6010B	06/15/11	1
Zinc	54.	0.34	1.5	mg/kg		6010B	06/15/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/13/11	5
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (FID)	94.4			% Rec.		602/801	06/13/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/13/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/13/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/13/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/13/11	5
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	06/13/11	5
Dibromofluoromethane	106.			% Rec.		8260B	06/13/11	5
a, a, a-Trifluorotoluene	104.			% Rec.		8260B	06/13/11	5
4-Bromofluorobenzene	97.0			% Rec.		8260B	06/13/11	5
TPH (GC/FID) High Fraction	5.3	0.77	4.0	mg/kg		3546/DR	06/18/11	1
Surrogate recovery(%) o-Terphenyl	79.3			% Rec.		3546/DR	06/18/11	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.  
This report shall not be reproduced, except in full, without the written approval from ESC.  
Reported: 06/20/11 16:37 Printed: 06/20/11 16:38  
L520524-04 (PH) - 7.3@20.6c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 11, 2011  
Description : 697-08-53-Pit Background  
Sample ID : SS-9  
Collected By : CJB  
Collection Date : 06/10/11 11:13

ESC Sample # : L520524-04  
Site ID :  
Project # : 900546.0001.050

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	06/17/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	06/17/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	06/17/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	06/17/11	1
Benzo(a)pyrene	0.00066	0.00062	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(b)fluoranthene	0.0017	0.00082	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(g,h,i)perylene	0.0014	0.0012	0.0060	mg/kg	J	8270C-S	06/17/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	06/17/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	06/17/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	06/17/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	06/17/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	06/17/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	06/17/11	1
Naphthalene	0.00080	0.00065	0.0060	mg/kg	J	8270C-S	06/17/11	1
Phenanthrene	0.0010	0.00074	0.0060	mg/kg	J	8270C-S	06/17/11	1
Pyrene	0.0029	0.00059	0.0060	mg/kg	J	8270C-S	06/17/11	1
1-Methylnaphthalene	0.0010	0.00079	0.0060	mg/kg	J	8270C-S	06/17/11	1
2-Methylnaphthalene	0.0024	0.00059	0.0060	mg/kg	J	8270C-S	06/17/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	06/17/11	1
Surrogate Recovery								
Nitrobenzene-d5	100.			% Rec.		8270C-S	06/17/11	1
2-Fluorobiphenyl	101.			% Rec.		8270C-S	06/17/11	1
p-Terphenyl-d14	107.			% Rec.		8270C-S	06/17/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:38  
L520524-04 (PH) - 7.3@20.6c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L520524-01	WG540600	SAMP	Lead	R1727230	B
	WG540130	SAMP	Selenium	R1724389	J
	WG540795	SAMP	Benzo(a)anthracene	R1728470	J
	WG540795	SAMP	Benzo(b)fluoranthene	R1728470	J
	WG540795	SAMP	Benzo(g,h,i)perylene	R1728470	J
	WG540795	SAMP	Phenanthrene	R1728470	J
	WG540795	SAMP	Pyrene	R1728470	J
L520524-02	WG540600	SAMP	Lead	R1727230	B
	WG540644	SAMP	TPH (GC/FID) High Fraction	R1728369	J
	WG540527	SAMP	Benzo(g,h,i)perylene	R1727331	J
L520524-03	WG540600	SAMP	Lead	R1727230	B
	WG540644	SAMP	TPH (GC/FID) High Fraction	R1728369	J
	WG540079	SAMP	Mercury	R1726809	J
	WG540652	SAMP	Benzo(a)pyrene	R1727749	J
	WG540652	SAMP	Benzo(b)fluoranthene	R1727749	J
	WG540652	SAMP	Benzo(g,h,i)perylene	R1727749	J
	WG540652	SAMP	Fluoranthene	R1727749	J
	WG540652	SAMP	Phenanthrene	R1727749	J
	WG540652	SAMP	Pyrene	R1727749	J
	WG540130	SAMP	Barium	R1724389	V
L520524-04	WG540600	SAMP	Lead	R1727230	B
	WG540079	SAMP	Mercury	R1726809	J
	WG540652	SAMP	Benzo(a)pyrene	R1727749	J
	WG540652	SAMP	Benzo(b)fluoranthene	R1727749	J
	WG540652	SAMP	Benzo(g,h,i)perylene	R1727749	J
	WG540652	SAMP	Naphthalene	R1727749	J
	WG540652	SAMP	Phenanthrene	R1727749	J
	WG540652	SAMP	Pyrene	R1727749	J
	WG540652	SAMP	1-Methylnaphthalene	R1727749	J
	WG540652	SAMP	2-Methylnaphthalene	R1727749	J

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
B	(EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
V	(ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.

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  
06/20/11 at 16:38:24

TSR Signing Reports: 134  
R5 - Desired TAT

Sample: L520524-01 Account: OXYGJCO Received: 06/11/11 09:00 Due Date: 06/17/11 00:00 RPT Date: 06/20/11 16:37  
Sample: L520524-02 Account: OXYGJCO Received: 06/11/11 09:00 Due Date: 06/17/11 00:00 RPT Date: 06/20/11 16:37  
Sample: L520524-03 Account: OXYGJCO Received: 06/11/11 09:00 Due Date: 06/17/11 00:00 RPT Date: 06/20/11 16:37  
Sample: L520524-04 Account: OXYGJCO Received: 06/11/11 09:00 Due Date: 06/17/11 00:00 RPT Date: 06/20/11 16:37





Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

### Report Summary

Monday June 20, 2011

Report Number: L519772

Samples Received: 06/08/11

Client Project:

Description: Oxy 6971628 Background

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.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

REPORT OF ANALYSIS

June 20, 2011

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

ESC Sample # : L519772-01

Date Received : June 08, 2011  
Description : Oxy 6971628 Background

Site ID :

Sample ID : BACKGROUND-1

Project # :

Collected By : CJB  
Collection Date : 06/03/11 11:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/14/11	1
Chromium, Trivalent	32.	0.17	2.0	mg/kg		Calc.	06/10/11	1
ORP	73.			mV		2580	06/15/11	1
pH	8.7			su		9045D	06/10/11	1
Sodium Adsorption Ratio	1.0					Calc.	06/10/11	1
Specific Conductance	120			umhos/cm		9050AMo	06/09/11	1
Mercury	0.031	0.0015	0.020	mg/kg		7471	06/10/11	1
Arsenic	4.7	0.32	1.0	mg/kg		6010B	06/10/11	1
Barium	280	0.050	0.25	mg/kg		6010B	06/10/11	1
Cadmium	1.6	0.040	0.25	mg/kg		6010B	06/10/11	1
Chromium	32.	0.085	0.50	mg/kg		6010B	06/10/11	1
Copper	21.	0.21	1.0	mg/kg		6010B	06/10/11	1
Lead	16.	0.090	0.25	mg/kg		6010B	06/10/11	1
Nickel	27.	0.26	1.0	mg/kg		6010B	06/10/11	1
Selenium	12.	0.32	1.0	mg/kg		6010B	06/10/11	1
Silver	U	0.16	0.50	mg/kg		6010B	06/10/11	1
Zinc	57.	0.34	1.5	mg/kg		6010B	06/10/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/09/11	5
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (FID)	103.			% Rec.		602/801	06/09/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/09/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/09/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/09/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/09/11	5
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	06/09/11	5
Dibromofluoromethane	107.			% Rec.		8260B	06/09/11	5
a, a, a-Trifluorotoluene	102.			% Rec.		8260B	06/09/11	5
4-Bromofluorobenzene	102.			% Rec.		8260B	06/09/11	5
TPH (GC/FID) High Fraction	1.1	0.77	4.0	mg/kg	J	3546/DR	06/12/11	1
Surrogate recovery(%) o-Terphenyl	66.3			% Rec.		3546/DR	06/12/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:40

L519772-01 (PH) - 8.7@20.6c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 08, 2011  
Description : Oxy 6971628 Background  
  
Sample ID : BACKGROUND-1  
  
Collected By : CJB  
Collection Date : 06/03/11 11:00

ESC Sample # : L519772-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	06/13/11	1
Acenaphthene	0.0037	0.00071	0.0060	mg/kg	J	8270C-S	06/13/11	1
Acenaphthylene	0.00082	0.00057	0.0060	mg/kg	J	8270C-S	06/13/11	1
Benzo(a)anthracene	0.0022	0.00092	0.0060	mg/kg	J	8270C-S	06/13/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	06/13/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	06/13/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	06/13/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	06/13/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	06/13/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	06/13/11	1
Fluoranthene	0.0018	0.0010	0.0060	mg/kg	J	8270C-S	06/13/11	1
Fluorene	0.0072	0.00055	0.0060	mg/kg		8270C-S	06/13/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	06/13/11	1
Naphthalene	0.020	0.00065	0.0060	mg/kg		8270C-S	06/13/11	1
Phenanthrene	0.019	0.00074	0.0060	mg/kg		8270C-S	06/13/11	1
Pyrene	0.0079	0.00059	0.0060	mg/kg		8270C-S	06/13/11	1
1-Methylnaphthalene	0.020	0.00079	0.0060	mg/kg		8270C-S	06/13/11	1
2-Methylnaphthalene	0.039	0.00059	0.0060	mg/kg		8270C-S	06/13/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	06/13/11	1
Surrogate Recovery								
Nitrobenzene-d5	49.5			% Rec.		8270C-S	06/13/11	1
2-Fluorobiphenyl	50.8			% Rec.		8270C-S	06/13/11	1
p-Terphenyl-d14	54.6			% Rec.		8270C-S	06/13/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:40  
L519772-01 (PH) - 8.7@20.6c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 08, 2011  
Description : Oxy 6971628 Background  
Sample ID : BACKGROUND-2  
Collected By : CJB  
Collection Date : 06/03/11 11:15

ESC Sample # : L519772-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/14/11	1
Chromium, Trivalent	31.	0.17	2.0	mg/kg		Calc.	06/10/11	1
ORP	100			mV		2580	06/20/11	1
pH	9.0			su		9045D	06/10/11	1
Sodium Adsorption Ratio	0.70					Calc.	06/10/11	1
Specific Conductance	230			umhos/cm		9050AMo	06/09/11	1
Mercury	0.023	0.0015	0.020	mg/kg		7471	06/10/11	1
Arsenic	20.	0.65	2.0	mg/kg		6010B	06/10/11	2
Barium	440	0.050	0.25	mg/kg		6010B	06/10/11	1
Cadmium	1.2	0.040	0.25	mg/kg		6010B	06/10/11	1
Chromium	31.	0.085	0.50	mg/kg		6010B	06/10/11	1
Copper	22.	0.21	1.0	mg/kg		6010B	06/10/11	1
Lead	19.	0.090	0.25	mg/kg		6010B	06/10/11	1
Nickel	29.	0.53	2.0	mg/kg		6010B	06/10/11	2
Selenium	13.	0.32	1.0	mg/kg		6010B	06/10/11	1
Silver	U	0.16	0.50	mg/kg		6010B	06/10/11	1
Zinc	56.	0.34	1.5	mg/kg		6010B	06/10/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/09/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	103.			% Rec.		602/801	06/09/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/09/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/09/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/09/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/09/11	5
Surrogate Recovery								
Toluene-d8	96.8			% Rec.		8260B	06/09/11	5
Dibromofluoromethane	111.			% Rec.		8260B	06/09/11	5
a,a,a-Trifluorotoluene	99.9			% Rec.		8260B	06/09/11	5
4-Bromofluorobenzene	105.			% Rec.		8260B	06/09/11	5
TPH (GC/FID) High Fraction	2.0	0.77	4.0	mg/kg	J	3546/DR	06/12/11	1
Surrogate recovery(%) o-Terphenyl	56.6			% Rec.		3546/DR	06/12/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:40  
L519772-02 (PH) - 9.0@20.9c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 20, 2011

Date Received : June 08, 2011  
Description : Oxy 6971628 Background  
  
Sample ID : BACKGROUND-2  
  
Collected By : CJB  
Collection Date : 06/03/11 11:15

ESC Sample # : L519772-02

Site ID :  
Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0076	0.060	mg/kg		8270C-S	06/14/11	10
Acenaphthene	0.034	0.0071	0.060	mg/kg	J	8270C-S	06/14/11	10
Acenaphthylene	U	0.0057	0.060	mg/kg		8270C-S	06/14/11	10
Benzo(a)anthracene	U	0.0092	0.060	mg/kg		8270C-S	06/14/11	10
Benzo(a)pyrene	U	0.0062	0.060	mg/kg		8270C-S	06/14/11	10
Benzo(b)fluoranthene	U	0.0082	0.060	mg/kg		8270C-S	06/14/11	10
Benzo(g,h,i)perylene	U	0.012	0.060	mg/kg		8270C-S	06/14/11	10
Benzo(k)fluoranthene	U	0.013	0.060	mg/kg		8270C-S	06/14/11	10
Chrysene	U	0.011	0.060	mg/kg		8270C-S	06/14/11	10
Dibenz(a,h)anthracene	U	0.011	0.060	mg/kg		8270C-S	06/14/11	10
Fluoranthene	0.015	0.010	0.060	mg/kg	J	8270C-S	06/14/11	10
Fluorene	0.072	0.0055	0.060	mg/kg		8270C-S	06/14/11	10
Indeno(1,2,3-cd)pyrene	U	0.012	0.060	mg/kg		8270C-S	06/14/11	10
Naphthalene	0.11	0.0065	0.060	mg/kg		8270C-S	06/14/11	10
Phenanthrene	0.18	0.0074	0.060	mg/kg		8270C-S	06/14/11	10
Pyrene	0.053	0.0059	0.060	mg/kg	J	8270C-S	06/14/11	10
1-Methylnaphthalene	0.14	0.0079	0.060	mg/kg		8270C-S	06/14/11	10
2-Methylnaphthalene	0.25	0.0059	0.060	mg/kg		8270C-S	06/14/11	10
2-Chloronaphthalene	U	0.0060	0.060	mg/kg		8270C-S	06/14/11	10
Surrogate Recovery								
Nitrobenzene-d5	50.0			% Rec.		8270C-S	06/14/11	10
2-Fluorobiphenyl	57.1			% Rec.		8270C-S	06/14/11	10
p-Terphenyl-d14	54.0			% Rec.		8270C-S	06/14/11	10

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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/20/11 16:37 Printed: 06/20/11 16:40  
L519772-02 (PH) - 9.0@20.9c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L519772-01	WG539462	SAMP	TPH (GC/FID) High Fraction	R1719949	J
	WG539568	SAMP	Acenaphthene	R1719432	J
	WG539568	SAMP	Acenaphthylene	R1719432	J
	WG539568	SAMP	Benzo(a)anthracene	R1719432	J
	WG539568	SAMP	Fluoranthene	R1719432	J
L519772-02	WG539462	SAMP	TPH (GC/FID) High Fraction	R1719949	J
	WG539568	SAMP	Acenaphthene	R1719432	J
	WG539568	SAMP	Fluoranthene	R1719432	J
	WG539568	SAMP	Pyrene	R1719432	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  
06/20/11 at 16:40:48

TSR Signing Reports: 134  
R5 - Desired TAT

Sample: L519772-01 Account: OXYGJCO Received: 06/08/11 09:00 Due Date: 06/20/11 00:00 RPT Date: 06/20/11 16:37

Sample: L519772-02 Account: OXYGJCO Received: 06/08/11 09:00 Due Date: 06/20/11 00:00 RPT Date: 06/20/11 16:37



<b>OXY USA Inc. - Grand Junction, CO</b> 760 Horizon Dr., Ste 101 Grand Junction, CO 81506				Alternate billing information:  CO Table 910				Analysis/Container/Preservative				<b>D112</b> Custody of <u>  </u>			
				Report to: Email to: <u>Blair_Rodriguez</u> <u>Daniel_Padilla @oxy.com</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				CoCode OXYGJCO (lab use only) Template/Prelogin Shipped Via:			
Project Description: <u>Oxy Background</u> City/State Collected: <u>Parachute</u>				Phone: (970) 263-3601 FAX:		Client Project #:						ESC Key:			
Collected by: <u>CSB</u>				Site/Facility ID#:		P.O.#:						Date Results Needed:			
Collected by (signature): <u>[Signature]</u>				<input checked="" type="checkbox"/> <b>Rush?</b> (Lab MUST Be Notified) ___ Same Day.....200% ___ Next Day.....100% ___ Two Day.....50%		Email? <u>No</u> <input checked="" type="checkbox"/> Yes FAX? <u>No</u> <input type="checkbox"/> Yes						No. of Cntrs			
Packed on Ice <u>N</u> <input checked="" type="checkbox"/>															
Sample ID	Comp/Grab	Matrix*	Depth	Date	Time		V8260BTEX, GRO	DRO, SV8270PAHSIM	SAR, SPCON, pH	MRCRA8 + Cu, Ni, Zn	CR3, CR6SS			Remarks/Contaminant	Sample # (lab only)
Background-1	Grab	SS	5'	6/3/11	1100	3	X	X	X	X	X			L519772	-01
Background-2	Grab	SS	6'	6/3/11	1115	3	X	X	X	X	X				-02

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

Remarks:

Relinquished by: (Signature) <u>[Signature]</u>	Date: <u>6/7/11</u>	Time: <u>5:00</u>	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier		Condition: (lab use only) <input checked="" type="checkbox"/>	
	Date:	Time:	Received by: (Signature)	Temp: <u>3.7°C</u>	Bottles Received: <u>6-002</u>		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: <u>6/8/11</u>	Time: <u>0900</u>	pH Checked:	NCF:

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

### Report Summary

Monday June 13, 2011

Report Number: L519132

Samples Received: 06/03/11

Client Project: 900546.0007.010

Description: 609-14-Annex

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.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 13, 2011

Date Received : June 03, 2011  
Description : 609-14-Annex  
Sample ID : BACKGROUND-2  
Collected By : CJB  
Collection Date : 06/02/11 12:14

ESC Sample # : L519132-01

Site ID :

Project # : 900546.0007.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/08/11	1
Chromium, Trivalent	52.	0.17	2.0	mg/kg		Calc.	06/07/11	1
ORP	110			mV		2580	06/07/11	1
pH	8.8			su		9045D	06/07/11	1
Sodium Adsorption Ratio	2.5					Calc.	06/08/11	1
Specific Conductance	120			umhos/cm		9050AMo	06/08/11	1
Mercury	0.029	0.0015	0.020	mg/kg		7471	06/08/11	1
Arsenic	20.	0.32	1.0	mg/kg	J3	6010B	06/07/11	1
Barium	310	0.050	0.25	mg/kg	V	6010B	06/07/11	1
Cadmium	0.24	0.040	0.25	mg/kg	J	6010B	06/07/11	1
Chromium	52.	0.085	0.50	mg/kg		6010B	06/07/11	1
Copper	19.	0.21	1.0	mg/kg		6010B	06/07/11	1
Lead	17.	0.090	0.25	mg/kg		6010B	06/07/11	1
Nickel	25.	0.26	1.0	mg/kg		6010B	06/07/11	1
Selenium	1.3	0.32	1.0	mg/kg		6010B	06/07/11	1
Silver	0.58	0.16	0.50	mg/kg	P1	6010B	06/07/11	1
Zinc	52.	0.34	1.5	mg/kg		6010B	06/07/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/07/11	5
Surrogate Recovery (70-130)								
a,a,a-Trifluorotoluene (FID)	99.9			% Rec.		602/801	06/07/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/05/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/05/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/05/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/05/11	5
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	06/05/11	5
Dibromofluoromethane	96.7			% Rec.		8260B	06/05/11	5
a,a,a-Trifluorotoluene	93.5			% Rec.		8260B	06/05/11	5
4-Bromofluorobenzene	95.4			% Rec.		8260B	06/05/11	5
TPH (GC/FID) High Fraction	10.	0.77	4.0	mg/kg		3546/DR	06/12/11	1
Surrogate recovery(%)								
o-Terphenyl	131.			% Rec.		3546/DR	06/12/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/13/11 12:46 Printed: 06/13/11 12:47

L519132-01 (PH) - 8.8@21.1c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 13, 2011

Date Received : June 03, 2011  
Description : 609-14-Annex  
Sample ID : BACKGROUND-2  
Collected By : CJB  
Collection Date : 06/02/11 12:14

ESC Sample # : L519132-01

Site ID :

Project # : 900546.0007.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	06/07/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	06/07/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	06/07/11	1
Benzo(a)anthracene	0.0010	0.00092	0.0060	mg/kg	J	8270C-S	06/07/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	06/07/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	06/07/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	06/07/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	06/07/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	06/07/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	06/07/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	06/07/11	1
Fluorene	0.0015	0.00055	0.0060	mg/kg	J	8270C-S	06/07/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	06/07/11	1
Naphthalene	0.0078	0.00065	0.0060	mg/kg		8270C-S	06/07/11	1
Phenanthrene	0.0035	0.00074	0.0060	mg/kg	J	8270C-S	06/07/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	06/07/11	1
1-Methylnaphthalene	0.0033	0.00079	0.0060	mg/kg	J	8270C-S	06/07/11	1
2-Methylnaphthalene	0.011	0.00059	0.0060	mg/kg		8270C-S	06/07/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	06/07/11	1
Surrogate Recovery								
Nitrobenzene-d5	69.7			% Rec.		8270C-S	06/07/11	1
2-Fluorobiphenyl	74.8			% Rec.		8270C-S	06/07/11	1
p-Terphenyl-d14	73.7			% Rec.		8270C-S	06/07/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/13/11 12:46 Printed: 06/13/11 12:47

L519132-01 (PH) - 8.8@21.1c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 13, 2011

Date Received : June 03, 2011  
Description : 609-14-Annex  
Sample ID : BACKGROUND-1  
Collected By : CJB  
Collection Date : 06/02/11 12:38

ESC Sample # : L519132-02  
Site ID :  
Project # : 900546.0007.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	06/08/11	1
Chromium, Trivalent	49.	0.17	2.0	mg/kg		Calc.	06/07/11	1
ORP	120			mV		2580	06/07/11	1
pH	8.5			su		9045D	06/07/11	1
Sodium Adsorption Ratio	2.5					Calc.	06/08/11	1
Specific Conductance	140			umhos/cm		9050AMo	06/08/11	1
Mercury	0.015	0.0015	0.020	mg/kg	J	7471	06/08/11	1
Arsenic	5.1	0.32	1.0	mg/kg		6010B	06/07/11	1
Barium	340	0.050	0.25	mg/kg		6010B	06/07/11	1
Cadmium	0.55	0.040	0.25	mg/kg		6010B	06/07/11	1
Chromium	49.	0.085	0.50	mg/kg		6010B	06/07/11	1
Copper	21.	0.21	1.0	mg/kg		6010B	06/07/11	1
Lead	15.	0.090	0.25	mg/kg		6010B	06/07/11	1
Nickel	28.	0.26	1.0	mg/kg		6010B	06/07/11	1
Selenium	0.68	0.32	1.0	mg/kg	J	6010B	06/07/11	1
Silver	0.45	0.16	0.50	mg/kg	J	6010B	06/07/11	1
Zinc	58.	0.34	1.5	mg/kg		6010B	06/07/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	06/07/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	101.			% Rec.		602/801	06/07/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	06/05/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	06/05/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	06/05/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	06/05/11	5
Surrogate Recovery								
Toluene-d8	99.8			% Rec.		8260B	06/05/11	5
Dibromofluoromethane	95.2			% Rec.		8260B	06/05/11	5
a,a,a-Trifluorotoluene	94.3			% Rec.		8260B	06/05/11	5
4-Bromofluorobenzene	97.6			% Rec.		8260B	06/05/11	5
TPH (GC/FID) High Fraction	5.1	0.77	4.0	mg/kg		3546/DR	06/08/11	1
Surrogate recovery(%) o-Terphenyl	123.			% Rec.		3546/DR	06/08/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/13/11 12:46 Printed: 06/13/11 12:47  
L519132-02 (PH) - 8.5@21.0c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

June 13, 2011

Date Received : June 03, 2011  
Description : 609-14-Annex

Sample ID : BACKGROUND-1

Collected By : CJB  
Collection Date : 06/02/11 12:38

ESC Sample # : L519132-02

Site ID :

Project # : 900546.0007.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	06/07/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	06/07/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	06/07/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	06/07/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	06/07/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	06/07/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	06/07/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	06/07/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	06/07/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	06/07/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	06/07/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	06/07/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	06/07/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	06/07/11	1
Phenanthrene	U	0.00074	0.0060	mg/kg		8270C-S	06/07/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	06/07/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	06/07/11	1
2-Methylnaphthalene	0.0025	0.00059	0.0060	mg/kg	J	8270C-S	06/07/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	06/07/11	1
Surrogate Recovery								
Nitrobenzene-d5	47.6			% Rec.		8270C-S	06/07/11	1
2-Fluorobiphenyl	66.4			% Rec.		8270C-S	06/07/11	1
p-Terphenyl-d14	68.9			% Rec.		8270C-S	06/07/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/13/11 12:46 Printed: 06/13/11 12:47

L519132-02 (PH) - 8.5@21.0c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L519132-01	WG539029	SAMP	Arsenic	R1715309	J3
	WG539029	SAMP	Barium	R1715309	V
	WG539029	SAMP	Cadmium	R1715309	J
	WG539029	SAMP	Silver	R1715309	P1
	WG539137	SAMP	Benzo (a) anthracene	R1714511	J
	WG539137	SAMP	Fluorene	R1714511	J
	WG539137	SAMP	Phenanthrene	R1714511	J
	WG539137	SAMP	1-Methylnaphthalene	R1714511	J
	WG539029	SAMP	Selenium	R1715309	J
L519132-02	WG539029	SAMP	Silver	R1715309	J
	WG538995	SAMP	Mercury	R1715830	J
	WG539137	SAMP	2-Methylnaphthalene	R1714511	J

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	(ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.

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.



<b>OXY USA Inc. - Grand Junction, CO</b> 760 Horizon Dr., Ste 101 Grand Junction, CO 81506				Alternate billing information:  CO Table 910				Analysis/Container/Preservative <div style="display: flex; justify-content: space-between;"> <div>V8260BTEX, GRO</div> <div>DRO, SV8270PAHSIM</div> <div>SAR, SPCON, pH</div> <div>MRCRA8 + Cu, Ni, Zn</div> <div>CR3, CR6SS</div> <div>Table 910 (see Attached!)</div> </div>				Chain of Custody Page <u>  1  </u> of <u>  1  </u>							
				Report to:  Email to: <u>blair-rollins@oxy.com</u> <u>daniel-pdilla@oxy.com</u>								Prepared by:  <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   <b>C004</b> </div>							
Project Description: <u>609-14-Anaer</u>				City/State Collected:				CoCode OXYGJCO (lab use only)  Template/Prelogin  Shipped Via:											
Phone: (970) 263-3601 FAX:		Client Project #: <u>900546.0007.010</u>		ESC Key:															
Collected by: <u>ESC Oak</u>		Site/Facility ID#:		P.O.#:															
Collected by (signature):		<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%		Date Results Needed: Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes		No. of Cntrs		Remarks/Contaminant											
Packed on Ice <input checked="" type="checkbox"/> N																			
Sample ID		Comp/Grab	Matrix*	Depth	Date	Time													
<u>Background - 2</u>		<u>Grab</u>	<u>SS</u>	<u>12'</u>	<u>6/1/11</u>	<u>12:14</u>	<u>3</u>												<u>1519132-01</u>
<u>Background - 1</u>		<u>Grab</u>	<u>SS</u>	<u>15'</u>	<u>6/1/11</u>	<u>12:38</u>	<u>3</u>												<u>02</u>

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

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

Remarks:

4341 9819 4946

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

Relinquished by: (Signature) 	Date: <u>6/2/11</u>	Time: <u>5:00</u>	Received by: (Signature) 	Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier		Condition: (lab use only)  <div style="text-align: center; font-size: 2em;">OK</div>	
	Relinquished by: (Signature)	Date:		Time:	Received by: (Signature)		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) 	Date: <u>06-03-11</u>	Time: <u>09:00</u>	pH Checked:	NCF:

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

### Report Summary

Thursday January 12, 2012

Report Number: L554226

Samples Received: 01/04/12

Client Project: 900546.0013.010

Description: Pond 11 Cap

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 - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

January 12, 2012

Date Received : January 04, 2012  
Description : Pond 11 Cap  
Sample ID : POND11-CAP-COMP  
Collected By : CJB  
Collection Date : 01/03/12 12:37

ESC Sample # : L554226-01

Site ID :

Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	0.72	0.71	2.0	mg/kg	JP1	3060A/7	01/11/12	1
Chromium, Trivalent	54.	0.17	0.50	mg/kg		Calc.	01/07/12	1
ORP	150			mV		2580	01/05/12	1
pH	7.6			su		9045D	01/05/12	1
Specific Conductance	1700			umhos/cm		9050AMo	01/05/12	1
Mercury	0.015	0.00080	0.020	mg/kg	J	7471	01/09/12	1
Arsenic	4.5	0.32	1.0	mg/kg		6010B	01/07/12	1
Barium	320	0.050	0.25	mg/kg		6010B	01/07/12	1
Cadmium	U	0.040	0.25	mg/kg		6010B	01/07/12	1
Chromium	55.	0.085	0.50	mg/kg		6010B	01/07/12	1
Copper	14.	0.21	1.0	mg/kg		6010B	01/07/12	1
Lead	12.	0.090	0.25	mg/kg		6010B	01/07/12	1
Nickel	29.	0.26	1.0	mg/kg		6010B	01/07/12	1
Selenium	1.1	0.32	1.0	mg/kg		6010B	01/07/12	1
Silver	U	0.16	0.50	mg/kg		6010B	01/07/12	1
Zinc	44.	0.34	1.5	mg/kg		6010B	01/07/12	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	01/06/12	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	108.			% Rec.		602/801	01/06/12	5
Benzene	U	0.0017	0.0050	mg/kg		8260B	01/05/12	5
Toluene	U	0.0016	0.025	mg/kg		8260B	01/05/12	5
Ethylbenzene	U	0.0019	0.0050	mg/kg		8260B	01/05/12	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	01/05/12	5
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	01/05/12	5
Dibromofluoromethane	96.9			% Rec.		8260B	01/05/12	5
a,a,a-Trifluorotoluene	103.			% Rec.		8260B	01/05/12	5
4-Bromofluorobenzene	107.			% Rec.		8260B	01/05/12	5
TPH (GC/FID) High Fraction	32.	0.77	4.0	mg/kg		3546/DR	01/05/12	1
Surrogate recovery(%) o-Terphenyl	86.5			% Rec.		3546/DR	01/05/12	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.0029	0.00076	0.0060	mg/kg	J	8270C-S	01/05/12	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 01/11/12 16:27 Revised: 01/12/12 09:41

L554226-01 (PH) - 7.57@18.2c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

January 12, 2012

Date Received : January 04, 2012  
Description : Pond 11 Cap  
Sample ID : POND11-CAP-COMP  
Collected By : CJB  
Collection Date : 01/03/12 12:37

ESC Sample # : L554226-01

Site ID :

Project # : 900546.0013.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acenaphthene	0.0029	0.00071	0.0060	mg/kg	J	8270C-S	01/05/12	1
Acenaphthylene	0.00060	0.00057	0.0060	mg/kg	J	8270C-S	01/05/12	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	01/05/12	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	01/05/12	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	01/05/12	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	01/05/12	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	01/05/12	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	01/05/12	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	01/05/12	1
Fluoranthene	0.0013	0.0010	0.0060	mg/kg	J	8270C-S	01/05/12	1
Fluorene	0.0076	0.00055	0.0060	mg/kg		8270C-S	01/05/12	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	01/05/12	1
Naphthalene	0.041	0.00065	0.0060	mg/kg		8270C-S	01/05/12	1
Phenanthrene	0.016	0.00074	0.0060	mg/kg		8270C-S	01/05/12	1
Pyrene	0.0050	0.00059	0.0060	mg/kg	J	8270C-S	01/05/12	1
1-Methylnaphthalene	0.041	0.00079	0.0060	mg/kg		8270C-S	01/05/12	1
2-Methylnaphthalene	0.076	0.00059	0.0060	mg/kg		8270C-S	01/05/12	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	01/05/12	1
Surrogate Recovery								
Nitrobenzene-d5	84.1			% Rec.		8270C-S	01/05/12	1
2-Fluorobiphenyl	78.0			% Rec.		8270C-S	01/05/12	1
p-Terphenyl-d14	86.8			% Rec.		8270C-S	01/05/12	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 01/11/12 16:27 Revised: 01/12/12 09:41

L554226-01 (PH) - 7.57@18.2c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L554226-01	WG573347	SAMP	Chromium, Hexavalent	R1996232	JP1
	WG572915	SAMP	Mercury	R1993273	J
	WG572719	SAMP	Anthracene	R1990253	J
	WG572719	SAMP	Acenaphthene	R1990253	J
	WG572719	SAMP	Acenaphthylene	R1990253	J
	WG572719	SAMP	Fluoranthene	R1990253	J
	WG572719	SAMP	Pyrene	R1990253	J

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

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  
01/12/12 at 09:41:55

TSR Signing Reports: 134  
R5 - Desired TAT

Sample: L554226-01 Account: OXYGJCO Received: 01/04/12 09:00 Due Date: 01/11/12 00:00 RPT Date: 01/11/12 16:27

<b>OXY USA WTP LP. -</b> <b>Grand Junction, CO</b> <b>760 Horizon Dr., Ste 101</b> <b>Grand Junction, CO 81506</b>				Alternate billing information:  CO Table 910				Analysis/Container/Preservative						Chain of Custody Page 1 of 1					
				Report to:				<div style="display: flex; justify-content: space-between;"> <div>V8260BTEX, GRO</div> <div>DRO, SV8270PAHSIM</div> <div>SAR, SPCON, pH</div> <div>MRCRA8 + Cu, Ni, Zn</div> <div>CR3, CR6SS</div> </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  <b>F176</b>					
				Email to: <u>Blair_Rollins</u> <u>Daniel_Paciolla @oxy.com</u>															
Project Description: <u>Pond 11 Cap</u>				City/State Collected: <u>Parachute</u>				CoCode OXYGJCO (lab use only) Template/Prelogin  Shipped Via:											
Phone: (970) 263-3601 FAX:		Client Project #: <u>900546.0013.010</u>		ESC Key:															
Collected by: <u>CSB</u>		Site/Facility ID#:		P.O.#:															
Collected by (signature): <u>[Signature]</u>		<input checked="" type="checkbox"/> <b>Rush?</b> (Lab MUST Be Notified) Same Day.....200% Next Day.....100% Two Day.....50%		Date Results Needed: Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes		No. of Cntrs		Remarks/Contaminant											
Packed on Ice N <u>(Y)</u>																			
Sample ID		Comp/Grab	Matrix*	Depth	Date	Time													
<u>Pond 11 - Cap - Comp</u>		<u>Comp</u>	<u>SS</u>	<u>6"</u>	<u>11/3/12</u>	<u>12:37</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>							<u>1554226.0</u>

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

Remarks: \_\_\_\_\_ Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature) <u>[Signature]</u>		Date: <u>11/3/12</u>	Time: <u>5:00</u>	Received by: (Signature) <u>[Signature]</u>		Samples returned via: <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> UPS <input type="checkbox"/> Courier		Condition: <u>JP</u> (lab use only) <u>(616)</u>	
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Temp: <u>56°</u>	Bottles Received: <u>3 802</u>		pH Checked: NCF:
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature) <u>[Signature]</u>		Date: <u>11/4/12</u>	Time: <u>0900</u>		





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

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

### Report Summary

Friday December 09, 2011

Report Number: L546244

Samples Received: 11/10/11

Client Project: 900546.0005.010

Description: 697-16D Background

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, PA - 68-02979

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.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 09, 2011

Date Received : November 10, 2011  
Description : 697-16D Background  
Sample ID : 697-16D-CS-N 15 IN  
Collected By : CJB  
Collection Date : 11/08/11 12:26

ESC Sample # : L546244-01  
Site ID :  
Project # : 900546.0005.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	11/17/11	1
Chromium, Trivalent	24.	0.17	2.0	mg/kg		Calc.	11/14/11	1
ORP	98.			mV	T8	2580	11/15/11	1
pH	8.2			su	T8	9045D	11/15/11	1
Sodium Adsorption Ratio	9.2					Calc.	11/14/11	1
Specific Conductance	13.			umhos/cm		9050AMo	11/16/11	1
Mercury	0.021	0.0015	0.020	mg/kg		7471	11/12/11	1
Arsenic	32.	0.32	1.0	mg/kg		6010B	11/14/11	1
Barium	310	0.050	0.25	mg/kg		6010B	11/14/11	1
Cadmium	U	0.040	0.25	mg/kg		6010B	11/16/11	1
Chromium	24.	0.085	0.50	mg/kg		6010B	11/14/11	1
Copper	27.	1.0	5.0	mg/kg		6010B	11/14/11	5
Lead	25.	0.45	1.3	mg/kg		6010B	11/14/11	5
Nickel	19.	0.26	1.0	mg/kg		6010B	11/14/11	1
Selenium	5.3	0.32	1.0	mg/kg		6010B	11/14/11	1
Silver	U	0.82	2.5	mg/kg	O	6010B	11/14/11	5
Zinc	46.	0.34	1.5	mg/kg		6010B	11/14/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	11/11/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	96.8			% Rec.		602/801	11/11/11	5
Benzene	U	0.0017	0.0050	mg/kg		8260B	11/13/11	5
Toluene	U	0.0016	0.025	mg/kg		8260B	11/13/11	5
Ethylbenzene	U	0.0019	0.0050	mg/kg		8260B	11/13/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	11/13/11	5
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/13/11	5
Dibromofluoromethane	107.			% Rec.		8260B	11/13/11	5
a,a,a-Trifluorotoluene	102.			% Rec.		8260B	11/13/11	5
4-Bromofluorobenzene	105.			% Rec.		8260B	11/13/11	5
TPH (GC/FID) High Fraction	24.	0.77	4.0	mg/kg		3546/DR	11/16/11	1
Surrogate recovery(%) o-Terphenyl	81.9			% Rec.		3546/DR	11/16/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 11/18/11 13:55 Revised: 12/09/11 10:55  
L546244-01 (PH) - 8.20@20.1c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 09, 2011

Date Received : November 10, 2011  
Description : 697-16D Background  
Sample ID : 697-16D-CS-N 15 IN  
Collected By : CJB  
Collection Date : 11/08/11 12:26

ESC Sample # : L546244-01  
Site ID :  
Project # : 900546.0005.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	11/12/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	11/12/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	11/12/11	1
Benzo(a)anthracene	0.0011	0.00092	0.0060	mg/kg	J	8270C-S	11/12/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	11/14/11	1
Benzo(b)fluoranthene	0.0013	0.00082	0.0060	mg/kg	J	8270C-S	11/14/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	11/14/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	11/14/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	11/12/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	11/14/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	11/12/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	11/12/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	11/14/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	11/12/11	1
Phenanthrene	U	0.00074	0.0060	mg/kg		8270C-S	11/12/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	11/12/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	11/12/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	11/12/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	11/12/11	1
Surrogate Recovery								
Nitrobenzene-d5	88.0			% Rec.		8270C-S	11/12/11	1
2-Fluorobiphenyl	73.5			% Rec.		8270C-S	11/12/11	1
p-Terphenyl-d14	126.			% Rec.		8270C-S	11/12/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 11/18/11 13:55 Revised: 12/09/11 10:55  
L546244-01 (PH) - 8.20@20.1c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 09, 2011

Date Received : November 10, 2011  
Description : 697-16D Background  
Sample ID : 697-16D-BG-NW 8 IN  
Collected By : CJB  
Collection Date : 11/08/11 12:43

ESC Sample # : L546244-02  
Site ID :  
Project # : 900546.0005.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	0.80	0.71	2.0	mg/kg	JJ6J3	3060A/7	11/17/11	1
Chromium, Trivalent	21.	0.17	2.0	mg/kg		Calc.	11/14/11	1
ORP	110			mV	T8	2580	11/15/11	1
pH	8.0			su	T8	9045D	11/15/11	1
Sodium Adsorption Ratio	3.0					Calc.	11/14/11	1
Specific Conductance	71.			umhos/cm		9050AMo	11/16/11	1
Mercury	0.024	0.0015	0.020	mg/kg		7471	11/12/11	1
Arsenic	20.	0.32	1.0	mg/kg		6010B	11/14/11	1
Barium	250	0.050	0.25	mg/kg		6010B	11/14/11	1
Cadmium	U	0.040	0.25	mg/kg		6010B	11/16/11	1
Chromium	22.	0.085	0.50	mg/kg		6010B	11/14/11	1
Copper	29.	1.0	5.0	mg/kg		6010B	11/14/11	5
Lead	25.	0.45	1.3	mg/kg		6010B	11/14/11	5
Nickel	17.	0.26	1.0	mg/kg		6010B	11/14/11	1
Selenium	5.3	0.32	1.0	mg/kg		6010B	11/14/11	1
Silver	U	0.82	2.5	mg/kg	O	6010B	11/14/11	5
Zinc	47.	0.34	1.5	mg/kg		6010B	11/14/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	11/11/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	95.4			% Rec.		602/801	11/11/11	5
Benzene	U	0.0017	0.0050	mg/kg		8260B	11/12/11	5
Toluene	U	0.0016	0.025	mg/kg		8260B	11/12/11	5
Ethylbenzene	U	0.0019	0.0050	mg/kg		8260B	11/12/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	11/12/11	5
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/12/11	5
Dibromofluoromethane	102.			% Rec.		8260B	11/12/11	5
a,a,a-Trifluorotoluene	103.			% Rec.		8260B	11/12/11	5
4-Bromofluorobenzene	102.			% Rec.		8260B	11/12/11	5
TPH (GC/FID) High Fraction	20.	0.77	4.0	mg/kg		3546/DR	11/16/11	1
Surrogate recovery(%) o-Terphenyl	86.4			% Rec.		3546/DR	11/16/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 11/18/11 13:55 Revised: 12/09/11 10:55

L546244-02 (PH) - 8.01@19.8c

L546244-02 (CR6) - Ms/Msd fails, sample is a reducer.



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 09, 2011

Date Received : November 10, 2011  
Description : 697-16D Background  
Sample ID : 697-16D-BG-NW 8 IN  
Collected By : CJB  
Collection Date : 11/08/11 12:43

ESC Sample # : L546244-02

Site ID :

Project # : 900546.0005.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	11/15/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	11/15/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	11/15/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	11/15/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	11/15/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	11/15/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	11/15/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	11/15/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	11/15/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	11/15/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	11/15/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	11/15/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	11/15/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	11/15/11	1
Phenanthrene	U	0.00074	0.0060	mg/kg		8270C-S	11/15/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	11/15/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	11/15/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	11/15/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	11/15/11	1
Surrogate Recovery								
Nitrobenzene-d5	80.1			% Rec.		8270C-S	11/15/11	1
2-Fluorobiphenyl	72.1			% Rec.		8270C-S	11/15/11	1
p-Terphenyl-d14	104.			% Rec.		8270C-S	11/15/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 11/18/11 13:55 Revised: 12/09/11 10:55

L546244-02 (PH) - 8.01@19.8c

L546244-02 (CR6) - Ms/Msd fails, sample is a reducer.



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 09, 2011

Date Received : November 10, 2011  
Description : 697-16D Background  
Sample ID : 697-16D-BG-W 2.5 FT  
Collected By : CJB  
Collection Date : 11/08/11 12:59

ESC Sample # : L546244-03

Site ID :

Project # : 900546.0005.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	0.80	0.71	2.0	mg/kg	J	3060A/7	11/17/11	1
Chromium, Trivalent	23.	0.17	2.0	mg/kg		Calc.	11/14/11	1
ORP	120			mV	T8	2580	11/15/11	1
pH	8.1			su	T8	9045D	11/15/11	1
Sodium Adsorption Ratio	0.44					Calc.	11/14/11	1
Specific Conductance	130			umhos/cm		9050AMo	11/16/11	1
Mercury	0.017	0.0015	0.020	mg/kg	J	7471	11/12/11	1
Arsenic	13.	0.32	1.0	mg/kg		6010B	11/14/11	1
Barium	340	0.050	0.25	mg/kg		6010B	11/14/11	1
Cadmium	0.096	0.040	0.25	mg/kg	J	6010B	11/16/11	1
Chromium	24.	0.085	0.50	mg/kg		6010B	11/14/11	1
Copper	30.	1.0	5.0	mg/kg		6010B	11/14/11	5
Lead	22.	0.45	1.3	mg/kg		6010B	11/14/11	5
Nickel	22.	0.26	1.0	mg/kg		6010B	11/14/11	1
Selenium	5.2	0.32	1.0	mg/kg		6010B	11/14/11	1
Silver	U	0.82	2.5	mg/kg	O	6010B	11/14/11	5
Zinc	73.	0.34	1.5	mg/kg		6010B	11/14/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	11/11/11	5
Surrogate Recovery (70-130)								
a,a,a-Trifluorotoluene (FID)	96.8			% Rec.		602/801	11/11/11	5
Benzene	U	0.0017	0.0050	mg/kg		8260B	11/12/11	5
Toluene	U	0.0016	0.025	mg/kg		8260B	11/12/11	5
Ethylbenzene	U	0.0019	0.0050	mg/kg		8260B	11/12/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	11/12/11	5
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/12/11	5
Dibromofluoromethane	99.4			% Rec.		8260B	11/12/11	5
a,a,a-Trifluorotoluene	101.			% Rec.		8260B	11/12/11	5
4-Bromofluorobenzene	97.9			% Rec.		8260B	11/12/11	5
TPH (GC/FID) High Fraction	8.0	0.77	4.0	mg/kg		3546/DR	11/14/11	1
Surrogate recovery(%)								
o-Terphenyl	53.3			% Rec.		3546/DR	11/14/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 11/18/11 13:55 Revised: 12/09/11 10:55

L546244-03 (PH) - 8.07@19.7c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 09, 2011

Date Received : November 10, 2011  
Description : 697-16D Background  
Sample ID : 697-16D-BG-W 2.5 FT  
Collected By : CJB  
Collection Date : 11/08/11 12:59

ESC Sample # : L546244-03

Site ID :

Project # : 900546.0005.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	11/12/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	11/12/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	11/12/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	11/12/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	11/12/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	11/12/11	1
Benzo(g,h,i)perylene	0.0019	0.0012	0.0060	mg/kg	J	8270C-S	11/12/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	11/12/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	11/12/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	11/12/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	11/12/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	11/12/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	11/12/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	11/12/11	1
Phenanthrene	U	0.00074	0.0060	mg/kg		8270C-S	11/12/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	11/12/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	11/12/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	11/12/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	11/12/11	1
Surrogate Recovery								
Nitrobenzene-d5	75.4			% Rec.		8270C-S	11/12/11	1
2-Fluorobiphenyl	69.6			% Rec.		8270C-S	11/12/11	1
p-Terphenyl-d14	92.5			% Rec.		8270C-S	11/12/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 11/18/11 13:55 Revised: 12/09/11 10:55  
L546244-03 (PH) - 8.07@19.7c



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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 09, 2011

Date Received : November 10, 2011  
Description : 697-16D Background  
Sample ID : 697-16D-BG-SW 6 IN  
Collected By : CJB  
Collection Date : 11/08/11 13:12

ESC Sample # : L546244-04

Site ID :

Project # : 900546.0005.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	1.7	0.71	2.0	mg/kg	J	3060A/7	11/17/11	1
Chromium, Trivalent	21.	0.17	2.0	mg/kg		Calc.	11/14/11	1
ORP	130			mV	T8	2580	11/15/11	1
pH	7.6			su	T8	9045D	11/15/11	1
Sodium Adsorption Ratio	0.54					Calc.	11/14/11	1
Specific Conductance	140			umhos/cm		9050AMo	11/16/11	1
Mercury	0.020	0.0015	0.020	mg/kg		7471	11/12/11	1
Arsenic	27.	0.32	1.0	mg/kg		6010B	11/14/11	1
Barium	350	0.050	0.25	mg/kg		6010B	11/14/11	1
Cadmium	U	0.040	0.25	mg/kg		6010B	11/16/11	1
Chromium	23.	0.085	0.50	mg/kg		6010B	11/14/11	1
Copper	26.	0.21	1.0	mg/kg		6010B	11/14/11	1
Lead	20.	0.090	0.25	mg/kg		6010B	11/14/11	1
Nickel	17.	0.26	1.0	mg/kg		6010B	11/14/11	1
Selenium	5.5	0.32	1.0	mg/kg		6010B	11/14/11	1
Silver	U	0.16	0.50	mg/kg		6010B	11/14/11	1
Zinc	62.	0.34	1.5	mg/kg		6010B	11/14/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	11/11/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	97.3			% Rec.		602/801	11/11/11	5
Benzene	U	0.0017	0.0050	mg/kg		8260B	11/13/11	5
Toluene	U	0.0016	0.025	mg/kg		8260B	11/13/11	5
Ethylbenzene	U	0.0019	0.0050	mg/kg		8260B	11/13/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	11/13/11	5
Surrogate Recovery								
Toluene-d8	109.			% Rec.		8260B	11/13/11	5
Dibromofluoromethane	119.			% Rec.		8260B	11/13/11	5
a,a,a-Trifluorotoluene	99.9			% Rec.		8260B	11/13/11	5
4-Bromofluorobenzene	99.5			% Rec.		8260B	11/13/11	5
TPH (GC/FID) High Fraction	39.	0.77	4.0	mg/kg		3546/DR	11/14/11	1
Surrogate recovery(%) o-Terphenyl	52.0			% Rec.		3546/DR	11/14/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 11/18/11 13:55 Revised: 12/09/11 10:55  
L546244-04 (PH) - 7.55@19.7c





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

# REPORT OF ANALYSIS

Blair Rollins  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

December 09, 2011

Date Received : November 10, 2011  
Description : 697-16D Background  
Sample ID : 697-16D-BG-SW 6 IN  
Collected By : CJB  
Collection Date : 11/08/11 13:12

ESC Sample # : L546244-04

Site ID :

Project # : 900546.0005.010

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg		8270C-S	11/17/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	11/17/11	1
Acenaphthylene	0.00089	0.00057	0.0060	mg/kg	J	8270C-S	11/17/11	1
Benzo(a)anthracene	0.0017	0.00092	0.0060	mg/kg	J	8270C-S	11/17/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	11/17/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	11/17/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	11/17/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	11/17/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	11/17/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	11/17/11	1
Fluoranthene	0.0012	0.0010	0.0060	mg/kg	J	8270C-S	11/17/11	1
Fluorene	0.0013	0.00055	0.0060	mg/kg	J	8270C-S	11/17/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	11/17/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	11/17/11	1
Phenanthrene	0.00077	0.00074	0.0060	mg/kg	J	8270C-S	11/17/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	11/17/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	11/17/11	1
2-Methylnaphthalene	0.0012	0.00059	0.0060	mg/kg	J	8270C-S	11/17/11	1
2-Chloronaphthalene	0.0011	0.00060	0.0060	mg/kg	J	8270C-S	11/17/11	1
Surrogate Recovery								
Nitrobenzene-d5	100.			% Rec.		8270C-S	11/17/11	1
2-Fluorobiphenyl	78.3			% Rec.		8270C-S	11/17/11	1
p-Terphenyl-d14	129.			% Rec.		8270C-S	11/17/11	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.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 11/18/11 13:55 Revised: 12/09/11 10:55  
L546244-04 (PH) - 7.55@19.7c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L546244-01	WG565134	SAMP	Silver	R1935293	O
	WG565580	SAMP	pH	R1932292	T8
	WG565106	SAMP	Benzo(a)anthracene	R1930692	J
	WG565106	SAMP	Benzo(b)fluoranthene	R1930692	J
	WG565448	SAMP	ORP	R1932960	T8
L546244-02	WG565134	SAMP	Silver	R1935293	O
	WG565775	SAMP	Chromium, Hexavalent	R1935553	JJ6J3
	WG565580	SAMP	pH	R1932292	T8
	WG565448	SAMP	ORP	R1932960	T8
L546244-03	WG565604	SAMP	Cadmium	R1934632	J
	WG565134	SAMP	Silver	R1935293	O
	WG565775	SAMP	Chromium, Hexavalent	R1935553	J
	WG565259	SAMP	Mercury	R1930273	J
	WG565580	SAMP	pH	R1932292	T8
	WG565106	SAMP	Benzo(g,h,i)perylene	R1930692	J
	WG565448	SAMP	ORP	R1932960	T8
	WG565775	SAMP	Chromium, Hexavalent	R1935553	J
L546244-04	WG565580	SAMP	pH	R1932292	T8
	WG565106	SAMP	Acenaphthylene	R1930692	J
	WG565106	SAMP	Benzo(a)anthracene	R1930692	J
	WG565106	SAMP	Fluoranthene	R1930692	J
	WG565106	SAMP	Fluorene	R1930692	J
	WG565106	SAMP	Phenanthrene	R1930692	J
	WG565106	SAMP	2-Methylnaphthalene	R1930692	J
	WG565106	SAMP	2-Chloronaphthalene	R1930692	J
	WG565448	SAMP	ORP	R1932960	T8

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
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.

B059

Chain of Custody  
Page 1 of 1

OXY USA WTP LP. -  
Grand Junction, CO  
760 Horizon Dr., Ste 101  
Grand Junction, CO 81506

Alternate billing information:

CO Table 910

Report to:

Email to:

*Daniel Padilla*  
*Blair Rollins @oxy.com*

Project  
Description: *697-160 Background*

City/State  
Collected *Parachute*

Phone: (970) 263-3601  
FAX:

Client Project #:  
*900546.0005.010*

ESC Key:

Collected by: *CR3*

Site/Facility ID#:

P.O.#:

Collected by (signature):

☒ Rush? (Lab MUST Be Notified)

\_\_\_ Same Day.....200%  
\_\_\_ Next Day.....100%  
\_\_\_ Two Day.....50%

Date Results Needed:

Email? ☒ No ☒ YesFAX? ☒ No ☒ Yes

No.  
of  
Cntrs

Packed on Ice ☒ N

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	V8260BTEX, GRO	DRO, SV8270PAHSIM	SAR, SPCON, pH	MRCRA8 + Cu, Ni, Zn	CR3, CR6SS	Remarks/Contaminant	Sample # (lab only)
697-160-CS-N	Grab	SS	15"	11/8/11	12:26	3	X	X	X	X	X		654624401
697-160-BG-NW	Grab	SS	8"	11/8/11	12:43	3	X	X	X	X	X		02
697-160-BG-W	Grab	SS	2.5'	11/8/11	12:59	3	X	X	X	X	X		03
697-160-BG-SW	Grab	SS	6"	11/8/11	13:12	3	X	X	X	X	X		04

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

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

Remarks:

*504006212954* Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature) <i>[Signature]</i>	Date: <i>11/9/11</i>	Time: <i>5:00</i>	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) <i>[Signature]</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: <i>AS</i> <i>3.2</i>	Bottles Received: <i>12-802</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <i>11/10/11</i>	Time: <i>0900</i>
				pH Checked:	NCF: