

FORM
4
Rev 12/05State of Colorado
Oil and Gas Conservation Commission

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



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.)

Received
9/18/2012 Rifle
COGCC

1. OGCC Operator Number: <u>66561</u>	4. Contact Name: <u>Daniel I. Padilla</u>	Complete the Attachment Checklist OP OGCC
2. Name of Operator: <u>OXY USA Inc.</u>	Phone: <u>970.263.3637</u>	
3. Address: <u>760 Horizon Drive, Suite 101</u> City: <u>Grand Junction</u> State: <u>CO</u> Zip: <u>81506</u>	Fax: <u>970.263.3694</u>	
5. API Number: <u>05-</u>	OGCC Facility ID Number: <u>334543</u>	Survey Plat
6. Well/Facility Name: <u>Hawkins Ranch (Reserve Pit)</u>	7. Well/Facility Number: <u>10-9</u>	Directional Survey
8. Location (Qtr/Qtr, Sec, Twp, Rng, Meridian): <u>NESE, Sec 10, T10S, R94W, 6th PM</u>		Surface Eqpm Diagram
9. County: <u>Mesa</u>	10. Field Name: <u>Plateau</u>	Technical Info Page
11. Federal, Indian or State Lease Number: _____		Other Lab Data, Maps

General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr 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"/> <input type="checkbox"/> attach directional survey
Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer	
Latitude: _____	Distance to nearest property line: _____ Distance to nearest bldg, public rd, utility or RR: _____
Longitude: _____	Distance to nearest lease line: _____ Is location in a High Density Area (rule 603b)? Yes/No: <input type="checkbox"/>
Ground Elevation: _____	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: _____ NUMBER: _____ 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 Method used: _____ Cementing tool setting/perf depth: _____ Cement volume: _____ Cement top: _____ Cement bottom: _____ Date: _____ *submit cbl and cement job summaries	
<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 Approximate Start Date: _____	<input type="checkbox"/> Report of Work Done 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: <u>Reserve Pit Closure</u>	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: [Signature] Date: 9/19/12 Email: daniel_padilla@oxy.com
Print Name: Daniel I. Padilla Title: Regulatory AdvisorCOGCC Approved: _____ Title: _____ Date: 10/17/2012

CONDITIONS OF APPROVAL, IF ANY:

Based on the information provided, the COGCC staff approves the pit closure. However, should future conditions at the site be discovered of contaminant concentrations in soils exceeding COGCC standards, or if ground water is found to be significantly impacted, then OXY may be required to conduct further investigation and/or remediation at the site."



TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

1. OGCC Operator Number: 66561	API Number:
2. Name of Operator: OXY USA Inc.	OGCC Facility ID # 334543
3. Well/Facility Name: Hawkins Ranch (Reserve Pit)	Well/Facility Number: 10-9
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NESE, Sec 10, T10S, R94W, 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 Inc. (Oxy) has completed reclamation of the above-mentioned reserve pit. Oxy identified post reclamation levels for Arsenic (As) to be below undisturbed background levels but above COGCC Table 910-1 concentration levels. Oxy 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 the attached sampling narrative, data table, analytical data, and sample location maps.

As consistent with closures of that time, the sampling method Oxy employed was to take a representative 5-point composite sample for the initial background sample, post reclaim sample, and fill sample. After the initial sampling, Oxy employed a random grab sampling method for all subsequent samples (Post reclaim re-sample 09/08/2010, and all background samples through 08/17/2012). The analytical concentrations table identifies the COGCC Table 910-1 concentration levels, Oxy's undisturbed background concentrations (10/25/2009 - 08/17/2012), and Oxy's post reclamation concentrations (Post Reclaim 10/25/2009), upon initial post reclamation As values, Oxy dug three bell holes and resampled the pit bottom for As concentrations (09/08/2010). Oxy conducted additional background sampling events to demonstrate environmental variability for As at varying depths within the area. Based on the background sample concentrations of As (08/17/2012) at depths relatively equal to those at the bottom of the reserve pit, Oxy's sundry notice requests to apply different standards to the COGCC Table 910-1 concentration levels. Please see attached Hawkins Ranch 10-9 Sampling Narrative for a more thorough sampling description.

Oxy also identified elevated concentrations of pH in post reclamation pit samples. Oxy has buried and capped the pit bottom contents below at least three feet of native material. The reclaimed pit was contoured to be level with active production pad surface, which includes proper stormwater run-on and runoff controls during the operational phase of the production pad. Oxy proposes to leave the reclaimed pit surface level with the working production pad surface until final pad reclamation occurs. At that time Oxy will re-sample the cap to ensure that table 910-1 standards are met. Oxy requests the closure of the Hawkins 10-9 reserve pit.

Hawkins Ranch 10-9 Reserve Pit (Location ID: 334543) Reclamation and Closure Sampling Narrative

This is Oxy's updated Hawkins Ranch 10-9 reserve pit sampling narrative. This is being provided in support of the Hawkins Ranch 10-9 Sundry Notice reserve pit closure documentation submitted in accordance with this narrative. The narrative details what closure, and background samples were taken, where they were taken and for what purpose.

Post Reclaim Samples 10/25/2009 (L429066, Accutest T40469)

- Oxy removed the pit liner and mixed the pit bottom with a back hoe. The initial post reclaim sample was a five point composite sample of the pit bottom, which was consistent with practices conducted at time of closure (2009). The initial post reclaim samples were taken along the length of the pit between 0-6 inches at the pit bottom, which was approximately 10' feet below the pad surface. The initial post reclaim samples are represented in the post reclaim tabulated data spreadsheet, in the first and second columns and labeled as "Post Reclaim" for Sample Type on the attached post reclaim table. Note that there are two "Post Reclaim" sample columns; this is due to that fact that two separate labs were used to process the samples. Lab sample L429066 analyzed the majority of the 910-1 constituents and the Accutest T40469 lab sample analyzed Barium and Boron. The initial post reclaim sample date was 10/25/2009 and the Sample ID from the data tabulation is Hawkins 10-9 Post Rec 0-6 IN. These samples are shown on the Hawkins 10-9 Reserve Pit Post Reclaim Sampling map as yellow dots and are referenced in the legend as Post Rec. Composite (10/25/2009). The lab data reports for these samples are attached. The sample values can be found on lab report L429066 on pages 3 and 4 and on Accutest T40469 pages 5 and 6 as sample ID Hawkins 10-9 Post Rec.
- Initial Post Reclaim values showed elevated concentrations for pH, and Arsenic (As).

Fill Samples 11/30/2009 (L434451)

- Oxy backfilled the pit with stockpiled native clean material to pad grade (6-10 feet deep). A five point composite sample was taken of the fill material and analyzed only for the analyte exceedances found in the initial post reclaim samples, specifically pH, as the fill material was meant to serve as a cap for the elevated value of pH found in the reclaimed pit bottom. The fill samples are represented in the tabulated data spreadsheet in the third column and labeled as "Fill" for Sample Type on the attached post reclaim table. The fill sample date was 11/30/2009 and the Sample ID from the data tabulation is Hawkins 10-9 Fill (0-12 IN). These samples are shown on the Hawkins 10-9 Reserve Pit Post Reclaim Sampling map as black dots and are referenced in the legend as Fill Samples (11/30/2009). The lab data reports for these samples are attached. The sample values can be found on lab report L434451 on page 2 as sample ID Hawkins 10-9 Fill.
- Fill samples were tested only for pH as this was the only analyte exceedance found in the initial post reclaim samples, other than As. All analytes were found to be below the COGCC's table 910-1 allowable concentrations.

Post Reclaim re-samples 09/08/2010 (L477988)

- Based on the initial post reclaim As analyte exceedances found, Oxy mobilized an excavator to dig three bell holes (east, west, and central) down to the pit bottom (6-10 feet) to collect three grab

samples. There were no other analyte exceedances found, Oxy suspected the elevated As concentration to be the result of naturally occurring As. The Post Reclaim re-sample is represented in the tabulated data spreadsheet in the 4th-6th columns and labeled as "Post Reclaim Resample" for Sample Type on the attached post reclaim table. The Post Reclaim re-sample date was 09/08/2010 and the Sample ID's from the data tabulation is Hawkins 10-9 PR-E (6-10FT), Hawkins 10-9 PR-CENT (6-10FT), Hawkins 10-9 PR-W (6-10FT). These samples are shown on the Sampling map as green dots and are referenced in the legend as Post Rec. Re-Samples 09/08/2010. The lab data report for these samples is attached. The sample values can be found on lab report L477998 on pages 2-4 as sample ID's, Hawkins 10-9 PR-E, Hawkins 10-9 PR-CENT, Hawkins 10-9 PR-W.

- Sample results yielded elevated concentrations of As.

Background Samples 10/25/2009 – 08/17/2012 (L429066 – L590753)

- In an effort to identify elevated concentrations of naturally occurring As similar to that which was previously identified in the Post Reclaim sample, Oxy collected multiple grab samples from native undisturbed areas around the pad and in the four major soil types in the area. The samples were collected at various depths ranging between 0 inches to 14 ft. Oxy collected one native background composite sample on 10/25/2009 from undisturbed locations around the pad at depths of 0-6 inches. Oxy collected 28 grab samples from native undisturbed locations at depths ranging from 0-14 feet on dates 05/06/2010, 06/30/2011, 06/07/2012, and 08/17/2012. Based on the many sampling events, Oxy identified As concentrations ranging between 1.0 – 28.0 mg/kg in native background locations. Oxy believes these results prove the As values found in the post reclaim samples of the pit bottom are naturally occurring and demonstrate the highly variable As values in this region. Oxy assumes the soil in the area is such that, As precipitates down through the soil profile where it meets a soil inclusion (likely bedrock) that catches or holds the As there. This would explain the higher As values found at pit bottom and at depths of 10-14 ft in background samples. Please reference the attached background sample spreadsheet. All Background samples are represented in the Background tabulated data spreadsheet.
- The initial composite background sample date was 10/25/2009 and can be found in the first column of the Background tabulated data. The Sample ID from the data tabulation is Hawkins 10-9 BG (0-6 IN). These samples are shown on the Hawkins 10-9 Reserve Pit Background Sampling maps as fuschia dots and are referenced in the legend as 10/25/2009 Composite BG's. The sample values can be found on lab report L429066 on page 2 as sample ID Hawkins 10-9 BG 0-6IN.
- The first set of grab background samples were collected on 05/06/2010 and can be found in the 2nd – 5th column of the Background tabulated data. The sample ID's from the data tabulation are BG-W (0-6 IN), BG-N (0-6 IN), BG-E (0-6 IN), BG-S (0-6 IN). These samples are shown on the Hawkins 10-9 Reserve Pit Background Sampling maps as yellow dots and are referenced in the legend as 05/06/2010 Grab BG's. The sample values can be found on lab report L458022 on pages 2-5 as sample ID's Hawkins 10-9 BG-W (0-6 IN), Hawkins 10-9 BG-N (0-6 IN), Hawkins 10-9 BG-E (0-6 IN), Hawkins 10-9 BG-S (0-6 IN).
- The next set of grab background samples were collected on 06/30/2011 and can be found in the 6th – 14th columns of the Background tabulated data. The sample ID's from the data tabulation are BG-SB-West (1 FT), BG-SB-Center (1 FT), BG-SB-East (1 FT), BG-EB-North (1 FT), BG-EB-South (1 FT), BG-NB-West (1 FT), BG-NB-Center (1 FT), BG-NB-East (1 FT), BG-NE (1 FT). These samples are shown on the

Hawkins 10-9 Reserve Pit Background Sampling maps as green dots and are referenced in the legend as 06/30/2011 Grab BG's. The sample values can be found on lab report L524086 on pages 2-11 and pages 16-23 as sample ID's BG-SB-West 1 FT, BG-SB-Center 1 FT, BG-SB-East 1 FT, BG-EB-North 1 FT, BG-EB-South 1 FT, BG-NB-West 1 FT, BG-NB-Center 1 FT, BG-NB-East 1 FT, BG-NE 1 FT.

- The next set of grab background samples were collected on 06/07/2012 and can be found in the 15th - 22nd columns of the Background tabulated data. Each sample was analyzed four separate times for As and you will find four values for As for each sample. Note these samples were collected from undisturbed areas of the four dominant soil types in the area; Soil type 1 (S1) Hesperus-Empedrado Moist –Pagoda Complex 35-55% slopes corresponds with the sample ID's that begin with S1. Soil type 2 (S2) Hesperus Pagoda Complex 3-12% slopes corresponds with the sample ID's that begin with S2. Soil type 3 (S3) Pagoda Hesperus Complex 12-40% slopes corresponds with the sample ID's that begin with S3. Soil type 4 (S4) Borpark Stony Loam 40-75% slopes corresponds with the sample ID's that begin with S4. The sample ID's from the data tabulation are S1-1-2.5-BG (2.5 FT), S1-2-5.0-BG (5.0 FT), S2-1-2.5-BG (2.5 FT), S2-2-5.0-BG (5.0 FT), S3-1-2.5-BG (2.5 FT), S3-2-4.0-BG (4.0 FT), S4-1-2.5-BG (2.5 FT), S4-2-5.0-BG (5.0 FT). These samples are shown on the Hawkins 10-9 Reserve Pit Background Sampling maps as blue dots and are referenced in the legend as 06/07/2012 Grab BG's. The sample values can be found on lab report L579427 on pages 2-41 as sample ID's S1-1-2.5-BG, S1-2-5.0-BG, S2-1-2.5-BG, S2-2-5.0-BG, S3-1-2.5-BG, S3-2-4.0-BG, S4-1-2.5-BG, S4-2-5.0-BG.
- The next set of grab background samples were collected on 08/17/2012 and can be found in the 23rd – 29th columns of the Background tabulated data. Each sample was analyzed twice for As and you will find two values for As for each sample. The sample ID's from the data tabulation are Hawkins 10-9 (2 FT), Hawkins 10-9 (4 FT), Hawkins 10-9 (6 FT), Hawkins 10-9 (8 FT), Hawkins 10-9 (10 FT), Hawkins 10-9 (12 FT), Hawkins 10-9 (14 FT). These samples are shown on the Hawkins 10-9 Reserve Pit Background Sampling maps as Orange dots and are referenced in the legend as 08/17/2012 Grab BG's. As these samples were taken in a vertical line the sampling map depicts this sampling point as one large orange dot. The sample values can be found on lab report L590753 on pages 2-15 as sample ID's Hawkins 10-9 2 FT, Hawkins 10-9 4 FT, Hawkins 10-9 6 FT, Hawkins 10-9 8 FT, Hawkins 10-9 10 FT, Hawkins 10-9 12 FT, Hawkins 10-9 14 FT.
- This sampling effort yielded background As concentrations above those found in Post Reclaim, and Post Reclaim Re-Samples (10/25/2009 & 09/08/2010).

In conclusion, this pit has been closed and meets both the COGCC 900 series and 1000 series rules for pit closure. All analyte concentrations were found to be below COGCC table 910-1 allowable concentrations, or were found to be below native background levels. Oxy will continue to monitor this site to ensure that the pit cap has not subsided and for stormwater compliance until final pad reclamation has occurred.

Pit Reclaims - Collbran

Pad #:	Hawkins 10-9
--------	--------------

Sample Identifications (mg/kg)

Lab Report #		L429066	T40469	L434451	L477998	L477998	L477998
Sample Date		10/25/2009	10/25/2009	11/30/2009	9/8/2010	9/8/2010	9/8/2010
Sample Type		Post Reclaim	Post Reclaim	Fill/Cap	Post Reclaim Resample	Post Reclaim Resample	Post Reclaim Resample
Sample ID		Hawkins 10-9 Post Rec (0-6 IN)	Hawkins 10-9 Post Rec (0-6 IN)	Hawkins 10-9 Fill (0-12 IN)	Hawkins 10-9 PR-E (6-10 FT)	Hawkins 10-9 PR-CENT (6-10 FT)	Hawkins 10-9 PR-W (6-10 FT)
Organics in Soil		MCL (mg/kg)					
TPH (GRO and DRO)	500	69.15		-	-	-	-
Benzene	0.17	U		-	-	-	-
Toluene	85	U		-	-	-	-
Ethylbenzene	100	U		-	-	-	-
Xylenes	175	U		-	-	-	-
Organics in Soil (PAH's)							
Acenaphthene	1000	U		-	-	-	-
Anthracene	1000	U		-	-	-	-
Benzo(A)anthracene	0.22	U		-	-	-	-
Benzo(B)fluoranthene	0.22	U		-	-	-	-
Benzo(K)fluoranthene	2.2	U		-	-	-	-
Benzo(A)pyrene	0.022	U		-	-	-	-
Chrysene	22	U		-	-	-	-
Dibenzo(A,H)anthracene	0.022	U		-	-	-	-
Fluoranthene	1000	U		-	-	-	-
Flourene	1000	0.011		-	-	-	-
Indeno(1,2,3,C,D)pyrene	0.22	U		-	-	-	-
Napthalene	23	0.05		-	-	-	-
Pyrene	1000	U		-	-	-	-
Inorganics in Soil							
EC	<4 mmhos/cm or 2X background	0.950		-	-	-	-
SAR	<12	10.0		-	-	-	-
pH	6-9	9.3		8.4	-	-	-
Metals in Soils							
Arsenic	0.39	7.8		-	6.4	8.6	6.1
Barium	15000	NA	138	-	-	-	-
Boron (Hot Water Soluble)	2 (mg/L)	NA	<0.20	-	-	-	-
Cadmium	70	1.6		-	-	-	-
Chromium	12000	20.0		-	-	-	-
Chromium VI	23	U		-	-	-	-
Copper	3100	24.0		-	-	-	-
Lead	400	26.0		-	-	-	-
Mercury	23	0.023		-	-	-	-
Nickel	1600	16.0		-	-	-	-
Selenium	390	1.10		-	-	-	-
Silver	390	1.4		-	-	-	-
Zinc	23000	40.0		-	-	-	-



Post Rec. Composite 10/25/2009	●
Fill/Cap Composite 11/30/2009	●
Post Rec. Re-Sample 09/08/2010	●
Approximate Location of Pit	■

Received 9/18/2012 Rifle COGCC

Pit Reclaims - Collbran	
Pad #:	Hawkins 10-9

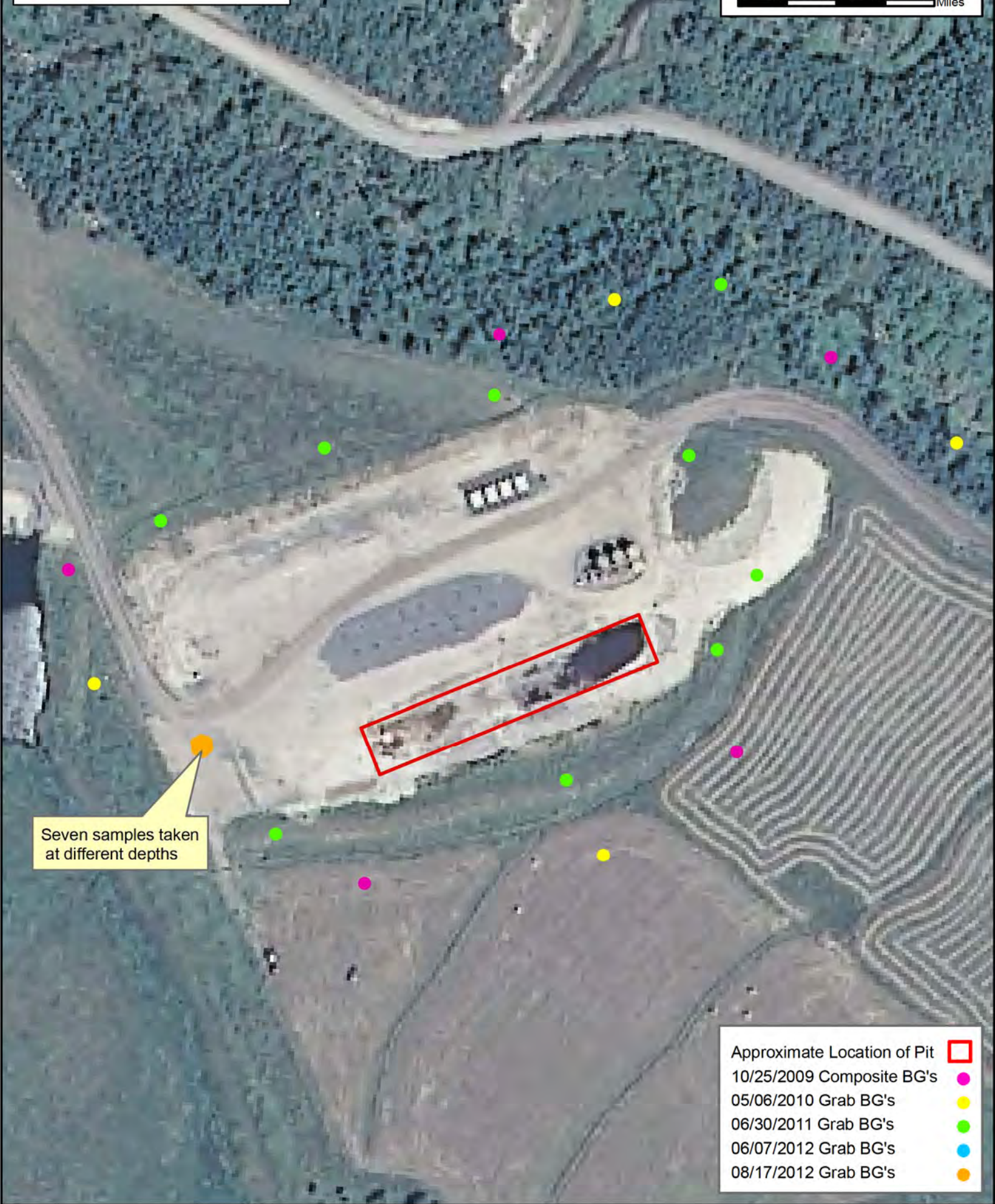
[illegible]



Hawkins Ranch 10-9

Hawkins Ranch 11-13

- Approximate Location of Pit 
- 10/25/2009 Composite BG's 
- 05/06/2010 Grab BG's 
- 06/30/2011 Grab BG's 
- 06/07/2012 Grab BG's 
- 08/17/2012 Grab BG's 



- Approximate Location of Pit
10/25/2009 Composite BG's ●
05/06/2010 Grab BG's ●
06/30/2011 Grab BG's ●
06/07/2012 Grab BG's ●
08/17/2012 Grab BG's ●



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859
Tax I.D. 62-0814289
Est. 1970

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

Grand Junction, CO 81506

Report Summary

Tuesday November 03, 2009

Report Number: L429066

Samples Received: 10/27/09

Client Project:

Description: Pit Reclaims - Collbran

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

Entire Report Reviewed By:

Laboratory Certification Numbers

Mark W. Beasley, ESC Representative

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

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

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



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 Inc - Grand Junction, CO
760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

November 03, 2009

Date Received : October 27, 2009
Description : Pit Reclaims - Collbran

Sample ID : HAWKINS 10-9 BG 0-6IN

Collected By : Brett Kennedy
Collection Date : 10/25/09 14:15

ESC Sample # : L429066-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
pH	7.8			su		9045D	10/27/09	1
Sodium Adsorption Ratio	0.39					Calc.	11/01/09	1
Specific Conductance	53.			umhos/cm		9050AMo	10/29/09	1
Arsenic	2.4	0.32	1.0	mg/kg		6010B	11/02/09	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: 11/03/09 13:08 Printed: 11/03/09 13:09
L429066-01 (PH) - 7.8@19.7c

REPORT OF ANALYSIS

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

November 03, 2009

Date Received : October 27, 2009
Description : Pit Reclaims - Collbran
Sample ID : HAWKINS 10-9 POST REC 0-6IN
Collected By : Brett Kennedy
Collection Date : 10/25/09 14:25

ESC Sample # : L429066-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Chromium, Hexavalent	U	0.10	2.0	mg/kg	J6	3060A/7	10/29/09	1
ORP	110			mV		2580	10/29/09	1
pH	9.3			su	J3	9045D	10/27/09	1
Sodium Adsorption Ratio	10.					Calc.	11/01/09	1
Specific Conductance	950			umhos/cm		9050A Mo	10/29/09	1
Mercury	0.023	0.0025	0.020	mg/kg		7471	10/29/09	1
Arsenic	7.8	0.32	1.0	mg/kg		6010B	11/02/09	1
Cadmium	1.6	0.040	0.25	mg/kg		6010B	11/02/09	1
Chromium	20.	0.085	0.50	mg/kg		6010B	11/02/09	1
Copper	24.	0.21	1.0	mg/kg		6010B	11/02/09	1
Lead	26.	0.090	0.25	mg/kg		6010B	11/02/09	1
Nickel	16.	0.26	1.0	mg/kg		6010B	11/02/09	1
Selenium	1.1	0.32	1.0	mg/kg		6010B	11/02/09	1
Silver	1.4	0.16	0.50	mg/kg		6010B	11/02/09	1
Zinc	40.	0.34	1.5	mg/kg		6010B	11/02/09	1
Benzene	U	0.00090	0.0025	mg/kg		8021/80	10/31/09	5
Toluene	U	0.0015	0.025	mg/kg		8021/80	10/31/09	5
Ethylbenzene	U	0.0013	0.0025	mg/kg		8021/80	10/31/09	5
Total Xylene	U	0.0028	0.0075	mg/kg		8021/80	10/31/09	5
TPH (GC/FID) Low Fraction	0.15	0.14	0.50	mg/kg	J	GRO	10/31/09	5
Surrogate Recovery-%								
a,a,a-Trifluorotoluene (FID)	98.9			% Rec.		8021/80	10/31/09	5
a,a,a-Trifluorotoluene (PID)	103.			% Rec.		8021/80	10/31/09	5
TPH (GC/FID) High Fraction	69.	1.3	4.0	mg/kg		3546/DR	10/30/09	1
Surrogate recovery(%)								
o-Terphenyl	84.9			% Rec.		3546/DR	10/30/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0093	0.033	mg/kg		8270C	10/30/09	1
Acenaphthene	U	0.011	0.033	mg/kg		8270C	10/30/09	1
Acenaphthylene	U	0.011	0.033	mg/kg	J3	8270C	10/30/09	1
Benzo(a)anthracene	U	0.0077	0.033	mg/kg		8270C	10/30/09	1
Benzo(a)pyrene	U	0.0074	0.033	mg/kg	J3	8270C	10/30/09	1
Benzo(b)fluoranthene	U	0.0078	0.033	mg/kg		8270C	10/30/09	1
Benzo(g,h,i)perylene	U	0.0095	0.033	mg/kg	J3	8270C	10/30/09	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: 11/03/09 13:08 Printed: 11/03/09 13:09
L429066-02 (PH) - 9.3819.3c



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

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

November 03, 2009

Date Received : October 27, 2009
Description : Pit Reclaims - Collbran
Sample ID : HAWKINS 10-9 POST REC 0-6IN
Collected By : Brett Kennedy
Collection Date : 10/25/09 14:25

ESC Sample # : L429066-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Benzo(k)fluoranthene	U	0.012	0.033	mg/kg		8270C	10/30/09	1
Chrysene	U	0.0091	0.033	mg/kg		8270C	10/30/09	1
Dibenz(a,h)anthracene	U	0.011	0.033	mg/kg	J3	8270C	10/30/09	1
Fluoranthene	U	0.0079	0.033	mg/kg		8270C	10/30/09	1
Fluorene	0.011	0.0095	0.033	mg/kg	J	8270C	10/30/09	1
Indeno(1,2,3-cd)pyrene	U	0.011	0.033	mg/kg		8270C	10/30/09	1
Naphthalene	0.050	0.016	0.033	mg/kg		8270C	10/30/09	1
Phenanthrene	0.020	0.0073	0.033	mg/kg	J	8270C	10/30/09	1
Pyrene	U	0.0089	0.033	mg/kg		8270C	10/30/09	1
Surrogate Recovery								
Nitrobenzene-d5	47.7			% Rec.		8270C	10/30/09	1
2-Fluorobiphenyl	61.6			% Rec.		8270C	10/30/09	1
p-Terphenyl-d14	64.5			% Rec.		8270C	10/30/09	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: 11/03/09 13:08 Printed: 11/03/09 13:09
L429066-02 (PH) - 9.3@19.3c

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L429066-02	WG447681	SAMP	pH	R969969	J3
	WG448443	SAMP	TPH (GC/FID) Low Fraction	R979088	J
	WG447938	SAMP	Chromium, Hexavalent	R973068	J6
	WG448111	SAMP	Acenaphthylene	R975950	J3
	WG448111	SAMP	Benzo(a)pyrene	R975950	J3
	WG448111	SAMP	Benzo(g,h,i)perylene	R975950	J3
	WG448111	SAMP	Dibenz(a,h)anthracene	R975950	J3
	WG448111	SAMP	Fluorene	R975950	J
	WG448111	SAMP	Phenanthrene	R975950	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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low

Qualifier Report Information

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

Definitions

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

Summary of Remarks For Samples Printed
11/03/09 at 13:09:06

TSR Signing Reports: 134
R5 - Desired TAT

Sample: L429066-01 Account: OXYGJCO Received: 10/27/09 09:00 Due Date: 11/03/09 00:00 RPT Date: 11/03/09 13:08

Sample: L429066-02 Account: OXYGJCO Received: 10/27/09 09:00 Due Date: 11/03/09 00:00 RPT Date: 11/03/09 13:08

Company Name/Address:

OXY USA - Grand Junction, CO760 Horizon Dr.. Ste. 101
Grand Junction.CO 81506

Alternate billing information:

Analysis/Container/Preservative

Chain of Custody
Page 1 of 1

B109

**ENVIRONMENTAL
SCIENCE CORP.**12065 Lebanon Road
Mt. Juliet, TN 37122

Phone (615) 758-5858

Phone (800) 767-5859

FAX (615) 758-5859

Report to: *Brett Kennedy*Email to: *brett.kennedy@oxy.com*Project Description: *Pit Reclaim - Colbran*City/State
Collected: *—*

Phone: (970) 263-3601

Client Project #:

ESC Key: *—*

FAX:

Collected by: *Brett Kennedy*Site/Facility ID#: *—*P.O.#: *—*

Collected by (signature):

Brett Kennedy
Immediately
Packed on Ice N *—* Y *—***Rush?** (Lab MUST Be Notified)*—* Same Day.....200%*—* Next Day.....100%*—* Two Day.....50%*—* Three Day.....25%

Date Results Needed:

Email? *—* No *—* YesFAX? *—* No *—* YesNo.
of
Cntrs

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time
Hawkins 10-9 BG	Comp	SS	0-6"	10/25/09	1415
Hawkins 10-9 Post Rec	↓	↓	↓	↓	1405

BTEX *GRDRO* *SAR/EC/pH* *As* *Ca, Cr, Cu, Pb, Hg, Ni, Se, Ag, Zn* *CR DL* *PAH*

CoCode: **OXYGJCO** (lab use only)

Template/Prelogin

Shipped Via:

Remarks/Contaminant

Sample # (lab only)

1429066-01
*-02**Matrix: **SS** - Soil/Solid **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other _____

pH _____ Temp _____

Remarks:

9632 62589546 *low* Other _____

Relinquished by: (Signature) <i>Brett Kennedy</i>	Date: <i>10/26/09</i>	Time: <i>0745</i>	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) <i>OK</i>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <i>3.8°C</i>	Bottles Received: <i>3-800</i>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>Kenn Waler</i>	Date: <i>10/27/09</i>	Time: <i>0900</i>
				pH Checked:	NCF:



11/09/09

Technical Report for

Oxy USA Inc.

Colibran - Pit Reclaims

Accutest Job Number: T40469

Sampling Date: 10/25/09

Report to:

Oxy USA Inc.
760 Horizon DR, Suite 101
Grand Junction, CO 81506
Brett_Kennedy@oxy.com

ATTN: Brett Kennedy

Total number of pages in report: 20



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Paul Canevaro
Laboratory Director

Client Service contact: Marianne Walker 713-271-4700

Certifications: TX (T104704220-06-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004)
OK (9103) UT(7132714700)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

Table of Contents

Sections:

1

2

3

4

-1-

Section 1: Sample Summary	3
Section 2: Sample Results	4
2.1: T40469-1: HAWKINS 10-9 POST REC	5
2.2: T40469-1A: HAWKINS 10-9 POST REC	6
Section 3: Misc. Forms	7
3.1: Chain of Custody	8
Section 4: Metals Analysis - QC Data Summaries	11
4.1: Prep QC MP10561: Ba	12
4.2: Prep QC MP10562: B	16



Sample Summary

Oxy USA Inc.

Job No: T40469

Colibran - Pit Reclaims

Sample Number	Collected		Time By	Received	Matrix		Client Sample ID
	Date				Code	Type	
T40469-1	10/25/09		14:25 BK	10/27/09	SO	Soil	HAWKINS 10-9 POST REC
T40469-1A	10/25/09		14:25 BK	10/27/09	SO	Soil	HAWKINS 10-9 POST REC

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



Sample Results

Report of Analysis

Report of Analysis

Page 1 of 1

Client Sample ID:	HAWKINS 10-9 POST REC	Date Sampled:	10/25/09
Lab Sample ID:	T40469-1	Date Received:	10/27/09
Matrix:	SO - Soil	Percent Solids:	83.7
Project:	Colibran - Pit Reclaims		

Total True Barium Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Barium	138	11	mg/kg	1	10/30/09	11/07/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4382

(2) Prep QC Batch: MP10561

RL = Reporting Limit

Report of Analysis

Page 1 of 1

Client Sample ID:	HAWKINS 10-9 POST REC	Date Sampled:	10/25/09
Lab Sample ID:	T40469-1A	Date Received:	10/27/09
Matrix:	SO - Soil	Percent Solids:	83.7
Project:	Colibran - Pit Reclaims		

Hot Water Soluble Boron Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Boron	< 0.20	0.20	mg/l	1	10/30/09	10/31/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4365

(2) Prep QC Batch: MP10562

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SAMPLE INSPECTION FORM

Accutest Job Number: T40469 Client: OXY USA, Inc. Date/Time Received: 10/27/09 0915

of Coolers Received: 1 Thermometer #: 12-1 Temperature Adjustment Factor: +0.4

Cooler Temps: #1: 18.6 #2: #3: #4: #5: #6: #7: #8:

Method of Delivery: FEDEX UPS Accutest Courier Greyhound Delivery Other

Airbill Numbers:

COOLER INFORMATION

- ☐ Custody seal missing or not intact
- ☐ Temperature criteria not met
- ☐ Wet ice received in cooler

CHAIN OF CUSTODY

- ☐ Chain of Custody not received
- ☐ Sample D/T unclear or missing
- ☐ Analyses unclear or missing
- ☐ COC not properly executed

SAMPLE INFORMATION

- ☐ Sample containers received broken
- ☐ VOC vials have headspace
- ☐ Sample labels missing or illegible
- ☐ ID on COC does not match label(s)
- ☐ D/T on COC does not match label(s)
- ☐ Sample/Bottles rcvd but no analysis on COC
- ☐ Sample listed on COC, but not received
- ☐ Bottles missing for requested analysis
- ☐ Insufficient volume for analysis
- ☐ Sample received improperly preserved

TRIP BLANK INFORMATION

- ☐ Trip Blank on COC but not received
- ☐ Trip Blank received but not on COC
- ☐ Trip Blank not intact
- ☐ Received Water Trip Blank
- ☐ Received Soil TB

Number of Encores?

Number of 5035 kits?

Number of lab-filtered metals?

Summary of Discrepancies:

NO ICE

TECHNICIAN SIGNATURE/DATE: [Signature]

INFORMATION AND SAMPLE LABELING VERIFIED BY: [Signature]

CORRECTIVE ACTIONS

Client Representative Notified: Date:

By Accutest Representative: Via: Phone Email

Client Instructions:

i:\nwalker\forms\samplermanagement

T40469: Chain of Custody

Page 2 of 3

SAMPLE RECEIPT LOG

JOB #: 740469 DATE/TIME RECEIVED: 10/27/09 0915

CLIENT: ONY USA, Inc. INITIALS: FE

[illegible]

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other

LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer

Rev 8/13/01 ewp

T40469: Chain of Custody

Page 3 of 3



Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T40469
Account: OXYCOGJ - Oxy USA Inc.
Project: Colibran - Pit Reclaims

QC Batch ID: MP10561
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/30/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.82	2.2		
Antimony	0.50	.11	.14		
Arsenic	0.50	.089	.1		
Barium	10	.007	.03	0.10	<10
Beryllium	0.25	.0055	.01		
Boron	5.0	.054	.11		
Cadmium	0.25	.013	.05		
Calcium	250	.27	.86		
Chromium	0.50	.055	.035		
Cobalt	2.5	.025	.09		
Copper	1.3	.029	.065		
Iron	5.0	.65	1.1		
Lead	0.50	.079	.2		
Magnesium	250	.34	.58		
Manganese	0.75	.01	.035		
Molybdenum	0.50	.048	.075		
Nickel	2.0	.048	.065		
Potassium	250	2.7	16		
Selenium	0.50	.16	.12		
Silver	0.50	.043	.04		
Sodium	250	6.5	13		
Strontium	1.0	.0085	.025		
Thallium	0.50	.16	.25		
Tin	1.0	.09	.12		
Titanium	1.0	.015	.045		
Vanadium	2.5	.03	.06		
Zinc	1.0	.025	.2		

Associated samples MP10561: T40469-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

4.1.1
4

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T40469
 Account: OXYCOGJ - Oxy USA Inc.
 Project: Colibran - Pit Reclaims

QC Batch ID: MP10561
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 10/30/09

Metal	T40469-1 Original	DUP	RPD	QC Limits
-------	----------------------	-----	-----	--------------

Aluminum				
Antimony				
Arsenic				
Barium	138	126	9.1	0-20
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP10561: T40469-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

4.1.2
4

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T40469
Account: OXYCOGJ - Oxy USA Inc.
Project: Colibran - Pit Reclaims

QC Batch ID: MP10561
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/30/09 10/30/09

Metal	BSP Result	Spikelot MPTW4	% Rec	QC Limits	ESD Result	Spikelot MPTW4	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic									
Barium	21.0	20	105.0	80-120	21.9	20	109.5	4.2	
Beryllium									
Boron									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

Associated samples MP10561: T40469-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

4.1.3
4

SERIAL DILUTION RESULTS SUMMARY

Login Number: T40469
 Account: OXYCOGJ - Oxy USA Inc.
 Project: Colibran - Pit Reclaims

QC Batch ID: MP10561
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/30/09

Metal	T40469-1	Original	SDL 1:5	%DIF	QC Limits
-------	----------	----------	---------	------	-----------

Aluminum					
Antimony					
Arsenic					
Barium	2470	2700	9.4		0-10
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP10561: T40469-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

4.1.4
 4

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T40469
Account: OXYCOGJ - Oxy USA Inc.
Project: Colibran - Pit Reclaims

QC Batch ID: MP10562
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/30/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	400	33	34		
Antimony	10	4.5	6		
Arsenic	10	3.5	4		
Barium	400	.28	5.4		
Beryllium	10	.22	.4		
Boron	200	2.2	4.2	-12	<200
Cadmium	8.0	.5	.6		
Calcium	10000	11	70		
Chromium	20	2.2	3.8		
Cobalt	100	1	1.6		
Copper	50	1.2	12		
Iron	200	26	26		
Lead	6.0	3.2	3.4		
Magnesium	10000	13	16		
Manganese	30	.4	15		
Molybdenum	20	1.9	2.6		
Nickel	80	1.9	6.4		
Potassium	10000	110	110		
Selenium	10	6.5	6.4		
Silver	20	1.7	1.6		
Sodium	10000	260	270		
Strontium	40	.34	.8		
Thallium	20	6.5	5.2		
Tin	40	3.6	5.8		
Titanium	40	.6	.6		
Vanadium	100	1.2	1.2		
Zinc	40	.98	8.2		

Associated samples MP10562: T40469-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

4.2.1
4

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T40469
Account: OXYCOGJ - Oxy USA Inc.
Project: Colibran - Pit Reclaims

QC Batch ID: MP10562
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/30/09 10/30/09

Metal	T39947-1A Original	DUP	RPD	QC Limits	T39947-1A Original MS	Spikelot MPTW4	% Rec	QC Limits
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Boron	256	246	4.0	0-20	256	2090	1000	94.2 80-120
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Molybdenum								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Strontium								
Thallium								
Tin								
Titanium								
Vanadium								
Zinc								

Associated samples MP10562: T40469-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

4.2.2
4

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T40469
 Account: OXYCOGJ - Oxy USA Inc.
 Project: Colibran - Pit Reclaims

QC Batch ID: MP10562
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/30/09

Metal	T39947-1A Original MSD	Spikelot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron	256	2090	1000	91.6	0.0 20
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP10562: T40469-1A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

4.2.2
4

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T40469
 Account: OXYCOGJ - Oxy USA Inc.
 Project: Colibran - Pit Reclaims

QC Batch ID: MP10562
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/30/09

Metal	BSP Result	Spikelot MPTW4	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron	2060	1000	102.8	80-120
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP10562: T40469-1A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

4.2.3
4

SERIAL DILUTION RESULTS SUMMARY

Login Number: T40469
 Account: OXYCOGJ - Oxy USA Inc.
 Project: Colibran - Pit Reclaims

QC Batch ID: MP10562
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/30/09

T39947-1A		QC	
Metal	Original SDL 1:5	%DIF	Limits

Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Boron	131	126	3.8 0-10
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Molybdenum			
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Strontium			
Thallium			
Tin			
Titanium			
Vanadium			
Zinc			

Associated samples MP10562: T40469-1A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

4.2.4
4



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

Tax I.D. 62-0814289

Est. 1970

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

Grand Junction, CO 81506

Report Summary

Thursday December 03, 2009

Report Number: L434451

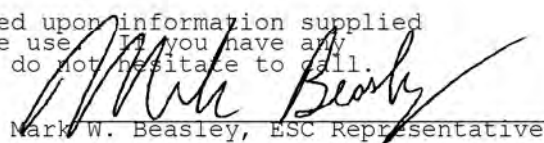
Samples Received: 12/02/09

Client Project:

Description: Pit Reclaims - Collbran

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

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

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

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



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 Inc - Grand Junction, CO
760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

December 03, 2009

Date Received : December 02, 2009
Description : Pit Reclaims - Collbran

Sample ID : HAWKINS 10-9 FILL

Collected By : Brett Kennedy
Collection Date : 11/30/09 11:20

ESC Sample # : L434451-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
pH	8.4		su	9045D	12/03/09	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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: 12/03/09 12:22 Printed: 12/03/09 13:46
L434451-01 (PH) - 8.4@17.0c

Summary of Remarks For Samples Printed
12/03/09 at 13:46:49

TSR Signing Reports: 134
R5 - Desired TAT

Sample: L434451-01 Account: OXYGJCO Received: 12/02/09 09:00 Due Date: 12/09/09 00:00 RPT Date: 12/03/09 12:22

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

Report Summary

Monday September 13, 2010

Report Number: L477998

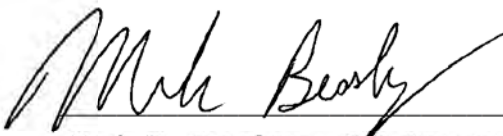
Samples Received: 09/10/10

Client Project:

Description: Pit Reclaims - Collbran

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 Inc - Grand Junction, CO
760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

September 13, 2010

Date Received : September 10, 2010
Description : Pit Reclaims - Collbran

Sample ID : HAWKINS 10-9-PR-E

Collected By : Brett Kennedy
Collection Date : 09/08/10 12:40

ESC Sample # : L477998-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Arsenic	6.4	0.32	1.0	mg/kg		6010B	09/12/10	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: 09/13/10 11:23 Printed: 09/13/10 11:23



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 Inc - Grand Junction, CO
760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

September 13, 2010

Date Received : September 10, 2010
Description : Pit Reclaims-Collbran

Sample ID : HAWKINS 10-9-PR-CENT

Collected By : Brett Kennedy
Collection Date : 09/08/10 12:50

ESC Sample # : L477998-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Arsenic	8.6	0.32	1.0	mg/kg		6010B	09/12/10	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: 09/13/10 11:23 Printed: 09/13/10 11:23



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 Inc - Grand Junction, CO
760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

September 13, 2010

Date Received : September 10, 2010
Description : Pit Reclaims-Collbran

Sample ID : HAWKINS 10-9-PR-W

Collected By : Brett Kennedy
Collection Date : 09/08/10 13:05

ESC Sample # : L477998-03

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Arsenic	6.1	0.32	1.0	mg/kg		6010B	09/12/10	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: 09/13/10 11:23 Printed: 09/13/10 11:23

Summary of Remarks For Samples Printed
09/13/10 at 11:23:21

TSR Signing Reports: 134
R4 - Rush: Three Day

Sample: L477998-01 Account: OXYGJCO Received: 09/10/10 09:00 Due Date: 09/15/10 00:00 RPT Date: 09/13/10 11:23

Sample: L477998-02 Account: OXYGJCO Received: 09/10/10 09:00 Due Date: 09/15/10 00:00 RPT Date: 09/13/10 11:23

Sample: L477998-03 Account: OXYGJCO Received: 09/10/10 09:00 Due Date: 09/15/10 00:00 RPT Date: 09/13/10 11:23

Company Name/Address: OXY USA - Grand Junction, CO 760 Horizon Dr.. Ste. 101 Grand Junction.CO 81506				Alternate billing information:				Analysis/Container/Preservative				E171 ENVIRONMENTAL SCIENCE CORP. 12065 Lebanon Road Mt. Juliet, TN 37122 Phone (615) 758-5858 Phone (800) 767-5859 FAX (615) 758-5859	
Report to: <u>Brett Kennedy</u>				Email to: <u>brett-kennedy@oay.com</u>									
Project Description: <u>Pit Reclaims - Colbran</u>				City/State Collected: <u>-</u>									
Phone: (970) 263-3601		Client Project #:		ESC Key:									
FAX:													
Collected by: <u>Brett Kennedy</u>		Site/Facility ID#:		P.O.#:									
Collected by (signature): <u>Brett Kennedy</u>		<input checked="" type="checkbox"/> Rush? (Lab MUST Be Notified) _____ Same Day.....200% _____ Next Day.....100% _____ Two Day.....50% <input checked="" type="checkbox"/> Three Day.....25%		Date Results Needed: Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		No. of Cntrs							
Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>													
Sample ID	Comp/Grab	Matrix*	Depth	Date	Time							Remarks/Contaminant	Sample # (lab only)
Hawkins 10-9-PR-E	Grab	SS	6-10'	9/18/10	1240	1	✓						1477998-01
Hawkins 10-9-PR-Cent	↓	↓	4-6'	↓	1250	1	✓						02
Hawkins 10-9-PR-W	↓	↓	6-8'	↓	1305	1	✓						

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

pH _____ Temp _____

Remarks:

4/34/ 9807 / 1688

Flow _____ Other _____

Relinquished by: (Signature) <u>Brett Kennedy</u>	Date: 9/19/10	Time: 1630	Received by: (Signature) <u>[Signature]</u>	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier		Condition: (lab use only) <u>OK</u>	
	Date:	Time:		Received by: (Signature)	Temp: 3.52	Bottles Received: 3-802	CoC Seals Intact <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <u>Ken Wren</u>	Date: 9/10/10	Time: 0900	pH Checked:	NCF:

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

Report Summary

Tuesday May 11, 2010

Report Number: L458022

Samples Received: 05/08/10

Client Project:

Description: Pit Reclaims - Collbran

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

Entire Report Reviewed By:



Mark W. Beasley, ESC Representative

Laboratory Certification Numbers

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

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

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

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 Inc - Grand Junction, CO
760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

May 11, 2010

Date Received : May 08, 2010
Description : Pit Reclaims - Collbran
Sample ID : HAWKINS 10-9 BG-W 0-6 IN
Collected By : Brett Kennedy
Collection Date : 05/06/10 14:21

ESC Sample # : L458022-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Arsenic	2.9	0.32	1.0	mg/kg		6010B	05/10/10	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: 05/11/10 09:16 Printed: 05/11/10 09:16



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 Inc - Grand Junction, CO
760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

May 11, 2010

Date Received : May 08, 2010
Description : Pit Reclaims - Collbran
Sample ID : HAWKINS 10-9 BG-N 0-6 IN
Collected By : Brett Kennedy
Collection Date : 05/06/10 14:26

ESC Sample # : L458022-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Arsenic	3.6	0.32	1.0	mg/kg		6010B	05/10/10	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: 05/11/10 09:16 Printed: 05/11/10 09:16



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 Inc - Grand Junction, CO
760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

May 11, 2010

Date Received : May 08, 2010
Description : Pit Reclaims - Collbran
Sample ID : HAWKINS 10-9 BG-E 0-6 IN
Collected By : Brett Kennedy
Collection Date : 05/06/10 14:30

ESC Sample # : L458022-03

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Arsenic	1.9	0.32	1.0	mg/kg		6010B	05/10/10	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: 05/11/10 09:16 Printed: 05/11/10 09:16



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 Inc - Grand Junction, CO
760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

May 11, 2010

Date Received : May 08, 2010
Description : Pit Reclaims - Collbran
Sample ID : HAWKINS 10-9 BG-S 0-6 IN
Collected By : Brett Kennedy
Collection Date : 05/06/10 14:35

ESC Sample # : L458022-04

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Arsenic	3.0	0.32	1.0	mg/kg		6010B	05/10/10	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: 05/11/10 09:16 Printed: 05/11/10 09:16

Summary of Remarks For Samples Printed
05/11/10 at 09:16:57

TSR Signing Reports: 134
R4 - Rush: Three Day

Sample: L458022-01 Account: OXYGJCO Received: 05/08/10 09:00 Due Date: 05/12/10 00:00 RPT Date: 05/11/10 09:16
Sample: L458022-02 Account: OXYGJCO Received: 05/08/10 09:00 Due Date: 05/12/10 00:00 RPT Date: 05/11/10 09:16
Sample: L458022-03 Account: OXYGJCO Received: 05/08/10 09:00 Due Date: 05/12/10 00:00 RPT Date: 05/11/10 09:16
Sample: L458022-04 Account: OXYGJCO Received: 05/08/10 09:00 Due Date: 05/12/10 00:00 RPT Date: 05/11/10 09:16

Company Name/Address: OXY USA - Grand Junction, CO 760 Horizon Dr., Ste. 101 Grand Junction, CO 81506			Alternate billing information:			Analysis/Container/Preservative			Chain of Custody Page <u>1</u> of <u> </u> Prepared by: D235 ENVIRONMENTAL SCIENCE CORP. 12065 Lebanon Road Mt. Juliet, TN 37122 Phone (615) 758-5858 Phone (800) 767-5859 FAX (615) 758-5859		
Report to: <u>Brett Kennedy</u>			Email to: <u>brett.kennedy@oxy.com</u>								
Project Description: <u>Pit Reclaims - Lollbran</u>			City/State Collected: <u> </u>								
Phone: (970) 263-3601		Client Project #:		ESC Key:							
FAX:											
Collected by: <u>Brett Kennedy</u>		Site/Facility ID#:		P.O.#:							
Collected by (signature): <u>Brett Kennedy</u>		<input checked="" type="checkbox"/> Rush? (Lab MUST Be Notified) Same Day.....200% Next Day.....100% Two Day.....50% Three Day.....25%		Date Results Needed: Email? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		No. of Cntrs					
Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>											
Sample ID	Comp/Grab	Matrix*	Depth	Date	Time						
Hawkins 10-9 B6-W	Grab	SS	0-6"	5/6/10	1421	1	✓				
Hawkins 10-9 B6-N	↓	↓	↓	↓	1426	1	✓				
Hawkins 10-9 B6-E	↓	↓	↓	↓	1430	1	✓				
Hawkins 10-9 B6-S	↓	↓	↓	↓	1435	1	✓				

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

pH _____ Temp _____

Remarks:

Flow _____ Other _____

Relinquished by: (Signature) <u>Brett Kennedy</u>	Date: <u>5/7/10</u>	Time: <u>1628</u>	Received by: (Signature) <u>[Signature]</u>	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only) <u>OK</u>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <u>3.4</u>	Bottles Received: <u>4 402</u>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <u>[Signature]</u>	Date: <u>5-8-10</u>	Time: <u>0900</u>
				CoC Seals Intact <input type="checkbox"/> Y <input checked="" type="checkbox"/> N	pH Checked: <input type="checkbox"/> NCF: <input type="checkbox"/>

8681 2177 9676

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

Report Summary

Monday July 11, 2011

Report Number: L524086

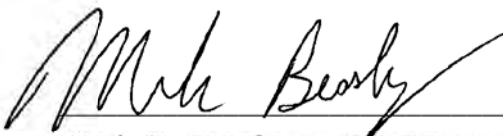
Samples Received: 07/01/11

Client Project:

Description: Hawkins 10-9

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

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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-SB-WEST 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 06:00

ESC Sample # : L524086-01

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	5.2	3.5	10.	mg/kg	J	3060A/7	07/08/11	5
Chromium, Trivalent	14.	0.17	0.50	mg/kg		Calc.	07/04/11	1
ORP	200			mV		2580	07/06/11	1
pH	6.5			su		9045D	07/08/11	1
Sodium Adsorption Ratio	1.0					Calc.	07/03/11	1
Specific Conductance	94.			umhos/cm		9050AMo	07/06/11	1
Mercury	0.011	0.0015	0.020	mg/kg	J	7471	07/05/11	1
Arsenic	3.2	0.32	1.0	mg/kg		6010B	07/04/11	1
Barium	160	0.050	0.25	mg/kg		6010B	07/04/11	1
Cadmium	0.28	0.040	0.25	mg/kg		6010B	07/04/11	1
Chromium	19.	0.085	0.50	mg/kg		6010B	07/04/11	1
Copper	16.	0.21	1.0	mg/kg		6010B	07/04/11	1
Lead	9.8	0.090	0.25	mg/kg		6010B	07/04/11	1
Nickel	13.	0.26	1.0	mg/kg		6010B	07/04/11	1
Selenium	U	0.32	1.0	mg/kg		6010B	07/04/11	1
Silver	0.59	0.16	0.50	mg/kg		6010B	07/04/11	1
Zinc	49.	0.34	1.5	mg/kg		6010B	07/04/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg	J5J3	8015D/G	07/02/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	104.			% Rec.		602/801	07/02/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	07/04/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	07/04/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	07/04/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	07/04/11	5
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	07/04/11	5
Dibromofluoromethane	97.7			% Rec.		8260B	07/04/11	5
a,a,a-Trifluorotoluene	108.			% Rec.		8260B	07/04/11	5
4-Bromofluorobenzene	93.3			% Rec.		8260B	07/04/11	5
TPH (GC/FID) High Fraction	1.2	0.77	4.0	mg/kg	J	3546/DR	07/07/11	1
Surrogate recovery(%) o-Terphenyl	63.8			% Rec.		3546/DR	07/07/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-01 (PH) - 6.5@21.3c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-SB-WEST 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 06:00

ESC Sample # : L524086-01

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	07/08/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	07/08/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	07/08/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	07/08/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	07/08/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	07/08/11	1
Phenanthrene	U	0.00074	0.0060	mg/kg		8270C-S	07/08/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	07/08/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	07/08/11	1
Surrogate Recovery								
Nitrobenzene-d5	77.8			% Rec.		8270C-S	07/08/11	1
2-Fluorobiphenyl	85.9			% Rec.		8270C-S	07/08/11	1
p-Terphenyl-d14	107.			% Rec.		8270C-S	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-01 (PH) - 6.5@21.3c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-SB-CENTER 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 06:18

ESC Sample # : L524086-02

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	15.	7.1	20.	mg/kg	J	3060A/7	07/08/11	10
Chromium, Trivalent	0.91	0.17	0.50	mg/kg		Calc.	07/04/11	1
ORP	200			mV		2580	07/06/11	1
pH	6.7			su		9045D	07/08/11	1
Sodium Adsorption Ratio	0.53					Calc.	07/03/11	1
Specific Conductance	90.			umhos/cm		9050AMo	07/06/11	1
Mercury	0.014	0.0015	0.020	mg/kg	J	7471	07/05/11	1
Arsenic	2.5	0.32	1.0	mg/kg		6010B	07/04/11	1
Barium	150	0.050	0.25	mg/kg		6010B	07/04/11	1
Cadmium	0.24	0.040	0.25	mg/kg	J	6010B	07/04/11	1
Chromium	16.	0.085	0.50	mg/kg		6010B	07/04/11	1
Copper	15.	0.21	1.0	mg/kg		6010B	07/04/11	1
Lead	7.7	0.090	0.25	mg/kg		6010B	07/04/11	1
Nickel	14.	0.26	1.0	mg/kg		6010B	07/04/11	1
Selenium	0.56	0.32	1.0	mg/kg	J	6010B	07/04/11	1
Silver	U	0.16	0.50	mg/kg		6010B	07/04/11	1
Zinc	43.	0.34	1.5	mg/kg		6010B	07/04/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	07/03/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	104.			% Rec.		602/801	07/03/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	07/04/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	07/04/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	07/04/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	07/04/11	5
Surrogate Recovery								
Toluene-d8	97.9			% Rec.		8260B	07/04/11	5
Dibromofluoromethane	96.0			% Rec.		8260B	07/04/11	5
a,a,a-Trifluorotoluene	106.			% Rec.		8260B	07/04/11	5
4-Bromofluorobenzene	90.8			% Rec.		8260B	07/04/11	5
TPH (GC/FID) High Fraction	2.5	0.77	4.0	mg/kg	J	3546/DR	07/07/11	1
Surrogate recovery(%) o-Terphenyl	70.8			% Rec.		3546/DR	07/07/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-02 (PH) - 6.7@20.8c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-SB-CENTER 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 06:18

ESC Sample # : L524086-02

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	07/08/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	07/08/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	07/08/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	07/08/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	07/08/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	07/08/11	1
Phenanthrene	U	0.00074	0.0060	mg/kg		8270C-S	07/08/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	07/08/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	07/08/11	1
Surrogate Recovery								
Nitrobenzene-d5	77.6			% Rec.		8270C-S	07/08/11	1
2-Fluorobiphenyl	78.2			% Rec.		8270C-S	07/08/11	1
p-Terphenyl-d14	86.6			% Rec.		8270C-S	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-02 (PH) - 6.7@20.8c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-SB-EAST 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 06:30

ESC Sample # : L524086-03

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	9.9	3.5	10.	mg/kg	J	3060A/7	07/08/11	5
Chromium, Trivalent	6.2	0.17	0.50	mg/kg		Calc.	07/04/11	1
ORP	210			mV		2580	07/06/11	1
pH	6.5			su		9045D	07/08/11	1
Sodium Adsorption Ratio	0.67					Calc.	07/03/11	1
Specific Conductance	69.			umhos/cm		9050AMo	07/06/11	1
Mercury	0.013	0.0015	0.020	mg/kg	J	7471	07/05/11	1
Arsenic	2.8	0.32	1.0	mg/kg		6010B	07/04/11	1
Barium	150	0.050	0.25	mg/kg		6010B	07/04/11	1
Cadmium	0.31	0.040	0.25	mg/kg		6010B	07/04/11	1
Chromium	16.	0.085	0.50	mg/kg		6010B	07/04/11	1
Copper	15.	0.21	1.0	mg/kg		6010B	07/04/11	1
Lead	9.3	0.090	0.25	mg/kg		6010B	07/04/11	1
Nickel	14.	0.26	1.0	mg/kg		6010B	07/04/11	1
Selenium	U	0.32	1.0	mg/kg		6010B	07/04/11	1
Silver	U	0.16	0.50	mg/kg		6010B	07/04/11	1
Zinc	48.	0.34	1.5	mg/kg		6010B	07/04/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	07/03/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	102.			% Rec.		602/801	07/03/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	07/04/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	07/04/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	07/04/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	07/04/11	5
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	07/04/11	5
Dibromofluoromethane	103.			% Rec.		8260B	07/04/11	5
a,a,a-Trifluorotoluene	108.			% Rec.		8260B	07/04/11	5
4-Bromofluorobenzene	92.2			% Rec.		8260B	07/04/11	5
TPH (GC/FID) High Fraction	2.4	0.77	4.0	mg/kg	J	3546/DR	07/07/11	1
Surrogate recovery(%) o-Terphenyl	83.3			% Rec.		3546/DR	07/07/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-03 (PH) - 6.5@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

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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-SB-EAST 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 06:30

ESC Sample # : L524086-03

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	07/08/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	07/08/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)anthracene	0.00096	0.00092	0.0060	mg/kg	J	8270C-S	07/08/11	1
Benzo(a)pyrene	0.00084	0.00062	0.0060	mg/kg	JV3	8270C-S	07/08/11	1
Benzo(b)fluoranthene	0.00099	0.00082	0.0060	mg/kg	JV3	8270C-S	07/08/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	07/08/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	07/08/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	07/08/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	07/08/11	1
Phenanthrene	0.00091	0.00074	0.0060	mg/kg	J	8270C-S	07/08/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	07/08/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	07/08/11	1
Surrogate Recovery								
Nitrobenzene-d5	75.7			% Rec.		8270C-S	07/08/11	1
2-Fluorobiphenyl	70.8			% Rec.		8270C-S	07/08/11	1
p-Terphenyl-d14	128.			% Rec.		8270C-S	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-03 (PH) - 6.5@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

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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-EB-NORTH 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 06:55

ESC Sample # : L524086-04

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	9.2	3.5	10.	mg/kg	J	3060A/7	07/08/11	5
Chromium, Trivalent	8.3	0.17	0.50	mg/kg		Calc.	07/04/11	1
ORP	190			mV		2580	07/06/11	1
pH	6.8			su		9045D	07/08/11	1
Sodium Adsorption Ratio	0.82					Calc.	07/03/11	1
Specific Conductance	120			umhos/cm		9050AMo	07/06/11	1
Mercury	0.014	0.0015	0.020	mg/kg	J	7471	07/05/11	1
Arsenic	2.1	0.32	1.0	mg/kg		6010B	07/04/11	1
Barium	150	0.050	0.25	mg/kg		6010B	07/04/11	1
Cadmium	0.30	0.040	0.25	mg/kg		6010B	07/04/11	1
Chromium	18.	0.085	0.50	mg/kg		6010B	07/04/11	1
Copper	16.	0.21	1.0	mg/kg		6010B	07/04/11	1
Lead	9.5	0.090	0.25	mg/kg		6010B	07/04/11	1
Nickel	10.	0.26	1.0	mg/kg		6010B	07/04/11	1
Selenium	U	0.32	1.0	mg/kg		6010B	07/04/11	1
Silver	0.95	0.16	0.50	mg/kg		6010B	07/04/11	1
Zinc	50.	0.34	1.5	mg/kg		6010B	07/04/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	07/03/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	104.			% Rec.		602/801	07/03/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	07/06/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	07/06/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	07/06/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	07/06/11	5
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	07/06/11	5
Dibromofluoromethane	96.0			% Rec.		8260B	07/06/11	5
a,a,a-Trifluorotoluene	106.			% Rec.		8260B	07/06/11	5
4-Bromofluorobenzene	95.7			% Rec.		8260B	07/06/11	5
TPH (GC/FID) High Fraction	2.6	0.77	4.0	mg/kg	J	3546/DR	07/07/11	1
Surrogate recovery(%) o-Terphenyl	66.5			% Rec.		3546/DR	07/07/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-04 (PH) - 6.8@20.8c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-EB-NORTH 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 06:55

ESC Sample # : L524086-04

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	07/08/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	07/08/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	07/08/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	07/08/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	07/08/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	07/08/11	1
Phenanthrene	0.0010	0.00074	0.0060	mg/kg	J	8270C-S	07/08/11	1
Pyrene	0.0048	0.00059	0.0060	mg/kg	J	8270C-S	07/08/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	07/08/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	07/08/11	1
Surrogate Recovery								
Nitrobenzene-d5	77.6			% Rec.		8270C-S	07/08/11	1
2-Fluorobiphenyl	73.0			% Rec.		8270C-S	07/08/11	1
p-Terphenyl-d14	147.			% Rec.	J1	8270C-S	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-04 (PH) - 6.8@20.8c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-EB-SOUTH 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 06:45

ESC Sample # : L524086-05

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	11.	7.1	20.	mg/kg	J	3060A/7	07/08/11	10
Chromium, Trivalent	5.2	0.17	0.50	mg/kg		Calc.	07/04/11	1
ORP	210			mV		2580	07/06/11	1
pH	7.0			su		9045D	07/08/11	1
Sodium Adsorption Ratio	0.50					Calc.	07/03/11	1
Specific Conductance	190			umhos/cm		9050AMo	07/06/11	1
Mercury	0.014	0.0015	0.020	mg/kg	J	7471	07/05/11	1
Arsenic	3.1	0.32	1.0	mg/kg		6010B	07/04/11	1
Barium	150	0.050	0.25	mg/kg		6010B	07/04/11	1
Cadmium	0.25	0.040	0.25	mg/kg	J	6010B	07/04/11	1
Chromium	16.	0.085	0.50	mg/kg		6010B	07/04/11	1
Copper	16.	0.21	1.0	mg/kg		6010B	07/04/11	1
Lead	8.8	0.090	0.25	mg/kg		6010B	07/04/11	1
Nickel	14.	0.26	1.0	mg/kg		6010B	07/04/11	1
Selenium	0.51	0.32	1.0	mg/kg	J	6010B	07/04/11	1
Silver	U	0.16	0.50	mg/kg		6010B	07/04/11	1
Zinc	46.	0.34	1.5	mg/kg		6010B	07/04/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	07/03/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	104.			% Rec.		602/801	07/03/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	07/06/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	07/06/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	07/06/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	07/06/11	5
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	07/06/11	5
Dibromofluoromethane	96.0			% Rec.		8260B	07/06/11	5
a,a,a-Trifluorotoluene	105.			% Rec.		8260B	07/06/11	5
4-Bromofluorobenzene	94.3			% Rec.		8260B	07/06/11	5
TPH (GC/FID) High Fraction	6.9	0.77	4.0	mg/kg		3546/DR	07/08/11	1
Surrogate recovery(%) o-Terphenyl	76.5			% Rec.		3546/DR	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-05 (PH) - 7.0@20.7c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-EB-SOUTH 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 06:45

ESC Sample # : L524086-05

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	07/08/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	07/08/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)anthracene	0.00099	0.00092	0.0060	mg/kg	J	8270C-S	07/08/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	07/08/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	07/08/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	07/08/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	07/08/11	1
Phenanthrene	0.0012	0.00074	0.0060	mg/kg	J	8270C-S	07/08/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	07/08/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	07/08/11	1
Surrogate Recovery								
Nitrobenzene-d5	77.8			% Rec.		8270C-S	07/08/11	1
2-Fluorobiphenyl	70.7			% Rec.		8270C-S	07/08/11	1
p-Terphenyl-d14	144.			% Rec.	J1	8270C-S	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-05 (PH) - 7.0@20.7c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : SPOIL-WEST 3-6IN

Collected By : Travis Brophy
Collection Date : 06/30/11 07:10

ESC Sample # : L524086-06

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	7.0	3.5	10.	mg/kg	J	3060A/7	07/08/11	5
Chromium, Trivalent	11.	0.17	0.50	mg/kg		Calc.	07/03/11	1
ORP	210			mV		2580	07/06/11	1
pH	7.5			su		9045D	07/08/11	1
Sodium Adsorption Ratio	0.56					Calc.	07/03/11	1
Specific Conductance	190			umhos/cm		9050AMo	07/06/11	1
Mercury	0.017	0.0015	0.020	mg/kg	J	7471	07/05/11	1
Arsenic	4.5	0.32	1.0	mg/kg		6010B	07/03/11	1
Barium	170	0.050	0.25	mg/kg	J6	6010B	07/03/11	1
Cadmium	0.18	0.040	0.25	mg/kg	JP1	6010B	07/03/11	1
Chromium	18.	0.085	0.50	mg/kg		6010B	07/03/11	1
Copper	18.	0.21	1.0	mg/kg		6010B	07/03/11	1
Lead	7.7	0.090	0.25	mg/kg		6010B	07/03/11	1
Nickel	14.	0.26	1.0	mg/kg		6010B	07/03/11	1
Selenium	0.80	0.32	1.0	mg/kg	JP1	6010B	07/03/11	1
Silver	U	0.16	0.50	mg/kg		6010B	07/03/11	1
Zinc	46.	0.34	1.5	mg/kg		6010B	07/03/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	07/03/11	5
Surrogate Recovery (70-130)								
a,a,a-Trifluorotoluene (FID)	105.			% Rec.		602/801	07/03/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	07/06/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	07/06/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	07/06/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	07/06/11	5
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	07/06/11	5
Dibromofluoromethane	96.7			% Rec.		8260B	07/06/11	5
a,a,a-Trifluorotoluene	106.			% Rec.		8260B	07/06/11	5
4-Bromofluorobenzene	94.7			% Rec.		8260B	07/06/11	5
TPH (GC/FID) High Fraction	13.	0.77	4.0	mg/kg		3546/DR	07/08/11	1
Surrogate recovery(%)								
o-Terphenyl	86.4			% Rec.		3546/DR	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-06 (PH) - 7.5@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

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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : SPOIL-WEST 3-6IN

Collected By : Travis Brophy
Collection Date : 06/30/11 07:10

ESC Sample # : L524086-06

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	07/08/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	07/08/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)anthracene	0.00097	0.00092	0.0060	mg/kg	J	8270C-S	07/08/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	07/08/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	07/08/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	07/08/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	07/08/11	1
Phenanthrene	U	0.00074	0.0060	mg/kg		8270C-S	07/08/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	07/08/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	07/08/11	1
Surrogate Recovery								
Nitrobenzene-d5	76.9			% Rec.		8270C-S	07/08/11	1
2-Fluorobiphenyl	72.4			% Rec.		8270C-S	07/08/11	1
p-Terphenyl-d14	120.			% Rec.		8270C-S	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-06 (PH) - 7.5@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

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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : SPOIL-EAST 3-6IN

Collected By : Travis Brophy
Collection Date : 06/30/11 07:20

ESC Sample # : L524086-07

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	11.	7.1	20.	mg/kg	J	3060A/7	07/08/11	10
Chromium, Trivalent	0.78	0.17	0.50	mg/kg		Calc.	07/03/11	1
ORP	200			mV		2580	07/06/11	1
pH	7.3			su		9045D	07/08/11	1
Sodium Adsorption Ratio	0.28					Calc.	07/03/11	1
Specific Conductance	310			umhos/cm		9050AMo	07/06/11	1
Mercury	0.013	0.0015	0.020	mg/kg	J	7471	07/05/11	1
Arsenic	2.7	0.32	1.0	mg/kg		6010B	07/03/11	1
Barium	100	0.050	0.25	mg/kg		6010B	07/03/11	1
Cadmium	1.3	0.040	0.25	mg/kg		6010B	07/03/11	1
Chromium	12.	0.085	0.50	mg/kg		6010B	07/03/11	1
Copper	13.	0.21	1.0	mg/kg		6010B	07/03/11	1
Lead	7.2	0.090	0.25	mg/kg		6010B	07/03/11	1
Nickel	11.	0.26	1.0	mg/kg		6010B	07/03/11	1
Selenium	U	1.6	5.0	mg/kg	O	6010B	07/03/11	5
Silver	U	0.16	0.50	mg/kg		6010B	07/03/11	1
Zinc	36.	0.34	1.5	mg/kg		6010B	07/03/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	07/03/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	104.			% Rec.		602/801	07/03/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	07/06/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	07/06/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	07/06/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	07/06/11	5
Surrogate Recovery								
Toluene-d8	99.1			% Rec.		8260B	07/06/11	5
Dibromofluoromethane	98.6			% Rec.		8260B	07/06/11	5
a,a,a-Trifluorotoluene	104.			% Rec.		8260B	07/06/11	5
4-Bromofluorobenzene	93.6			% Rec.		8260B	07/06/11	5
TPH (GC/FID) High Fraction	6.4	0.77	4.0	mg/kg		3546/DR	07/08/11	1
Surrogate recovery(%) o-Terphenyl	75.1			% Rec.		3546/DR	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-07 (PH) - 7.3@21.2c



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

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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : SPOIL-EAST 3-6IN

Collected By : Travis Brophy
Collection Date : 06/30/11 07:20

ESC Sample # : L524086-07

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	07/08/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	07/08/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	07/08/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	07/08/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	07/08/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	07/08/11	1
Phenanthrene	U	0.00074	0.0060	mg/kg		8270C-S	07/08/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	07/08/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	07/08/11	1
Surrogate Recovery								
Nitrobenzene-d5	77.8			% Rec.		8270C-S	07/08/11	1
2-Fluorobiphenyl	72.0			% Rec.		8270C-S	07/08/11	1
p-Terphenyl-d14	129.			% Rec.		8270C-S	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-07 (PH) - 7.3@21.2c



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

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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-NB-WEST 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 07:30

ESC Sample # : L524086-08

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	07/08/11	1
Chromium, Trivalent	19.	0.17	0.50	mg/kg		Calc.	07/03/11	1
ORP	200			mV		2580	07/06/11	1
pH	7.7			su		9045D	07/08/11	1
Sodium Adsorption Ratio	0.46					Calc.	07/03/11	1
Specific Conductance	220			umhos/cm		9050AMo	07/06/11	1
Mercury	0.017	0.0015	0.020	mg/kg	J	7471	07/05/11	1
Arsenic	6.0	0.32	1.0	mg/kg		6010B	07/03/11	1
Barium	170	0.050	0.25	mg/kg		6010B	07/03/11	1
Cadmium	1.7	0.040	0.25	mg/kg		6010B	07/03/11	1
Chromium	19.	0.085	0.50	mg/kg		6010B	07/03/11	1
Copper	16.	0.21	1.0	mg/kg		6010B	07/03/11	1
Lead	9.7	0.090	0.25	mg/kg		6010B	07/03/11	1
Nickel	15.	0.26	1.0	mg/kg		6010B	07/03/11	1
Selenium	4.9	1.6	5.0	mg/kg	J	6010B	07/03/11	5
Silver	U	0.16	0.50	mg/kg		6010B	07/03/11	1
Zinc	46.	0.34	1.5	mg/kg		6010B	07/03/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	07/03/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	104.			% Rec.		602/801	07/03/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	07/06/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	07/06/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	07/06/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	07/06/11	5
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	07/06/11	5
Dibromofluoromethane	94.8			% Rec.		8260B	07/06/11	5
a,a,a-Trifluorotoluene	104.			% Rec.		8260B	07/06/11	5
4-Bromofluorobenzene	98.0			% Rec.		8260B	07/06/11	5
TPH (GC/FID) High Fraction	7.5	0.77	4.0	mg/kg		3546/DR	07/08/11	1
Surrogate recovery(%) o-Terphenyl	80.9			% Rec.		3546/DR	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-08 (PH) - 7.7@20.8c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-NB-WEST 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 07:30

ESC Sample # : L524086-08

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	07/08/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	07/08/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	07/08/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Fluoranthene	U	0.0010	0.0060	mg/kg		8270C-S	07/08/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	07/08/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	07/08/11	1
Phenanthrene	U	0.00074	0.0060	mg/kg		8270C-S	07/08/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	07/08/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	07/08/11	1
Surrogate Recovery								
Nitrobenzene-d5	74.8			% Rec.		8270C-S	07/08/11	1
2-Fluorobiphenyl	69.4			% Rec.		8270C-S	07/08/11	1
p-Terphenyl-d14	103.			% Rec.		8270C-S	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-08 (PH) - 7.7@20.8c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : RG-NB-CENTER 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 07:40

ESC Sample # : L524086-09

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	U	0.71	2.0	mg/kg		3060A/7	07/08/11	1
Chromium, Trivalent	16.	0.17	0.50	mg/kg		Calc.	07/05/11	1
ORP	190			mV		2580	07/06/11	1
pH	7.4			su		9045D	07/08/11	1
Sodium Adsorption Ratio	0.20					Calc.	07/03/11	1
Specific Conductance	220			umhos/cm		9050AMo	07/06/11	1
Mercury	0.015	0.0015	0.020	mg/kg	J	7471	07/05/11	1
Arsenic	3.7	0.32	1.0	mg/kg		6010B	07/05/11	1
Barium	170	0.050	0.25	mg/kg		6010B	07/05/11	1
Cadmium	0.050	0.040	0.25	mg/kg	J	6010B	07/05/11	1
Chromium	16.	0.085	0.50	mg/kg		6010B	07/05/11	1
Copper	14.	0.21	1.0	mg/kg		6010B	07/05/11	1
Lead	10.	0.090	0.25	mg/kg		6010B	07/05/11	1
Nickel	14.	0.26	1.0	mg/kg		6010B	07/05/11	1
Selenium	U	0.32	1.0	mg/kg		6010B	07/05/11	1
Silver	U	0.16	0.50	mg/kg		6010B	07/05/11	1
Zinc	48.	0.34	1.5	mg/kg		6010B	07/05/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	07/03/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	104.			% Rec.		602/801	07/03/11	5
Benzene	U	0.0021	0.0050	mg/kg	J3	8260B	07/05/11	5
Toluene	U	0.0017	0.025	mg/kg	J3	8260B	07/05/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg	J3	8260B	07/05/11	5
Total Xylenes	U	0.0023	0.015	mg/kg	J3	8260B	07/05/11	5
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	07/05/11	5
Dibromofluoromethane	110.			% Rec.		8260B	07/05/11	5
a,a,a-Trifluorotoluene	101.			% Rec.		8260B	07/05/11	5
4-Bromofluorobenzene	92.7			% Rec.		8260B	07/05/11	5
TPH (GC/FID) High Fraction	6.7	0.77	4.0	mg/kg		3546/DR	07/08/11	1
Surrogate recovery(%) o-Terphenyl	77.9			% Rec.		3546/DR	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-09 (PH) - 7.4@20.7c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : RG-NB-CENTER 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 07:40

ESC Sample # : L524086-09

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	07/08/11	1
Acenaphthene	U	0.00071	0.0060	mg/kg		8270C-S	07/08/11	1
Acenaphthylene	U	0.00057	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)anthracene	U	0.00092	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg		8270C-S	07/08/11	1
Chrysene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg		8270C-S	07/08/11	1
Fluoranthene	0.0013	0.0010	0.0060	mg/kg	J	8270C-S	07/08/11	1
Fluorene	U	0.00055	0.0060	mg/kg		8270C-S	07/08/11	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg		8270C-S	07/08/11	1
Naphthalene	U	0.00065	0.0060	mg/kg		8270C-S	07/08/11	1
Phenanthrene	0.0018	0.00074	0.0060	mg/kg	J	8270C-S	07/08/11	1
Pyrene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg		8270C-S	07/08/11	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg		8270C-S	07/08/11	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg		8270C-S	07/08/11	1
Surrogate Recovery								
Nitrobenzene-d5	65.8			% Rec.		8270C-S	07/08/11	1
2-Fluorobiphenyl	60.1			% Rec.		8270C-S	07/08/11	1
p-Terphenyl-d14	138.			% Rec.		8270C-S	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-09 (PH) - 7.4@20.7c



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

July 11, 2011

Date Received : July 01, 2011
Description : Hawkins 10-9

Sample ID : BG-NB-EAST 1FT

Collected By : Travis Brophy
Collection Date : 06/30/11 07:45

ESC Sample # : L524086-10

Site ID :

Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium, Hexavalent	8.4	3.5	10.	mg/kg	J	3060A/7	07/08/11	5
Chromium, Trivalent	5.1	0.17	0.50	mg/kg		Calc.	07/05/11	1
ORP	180			mV		2580	07/06/11	1
pH	7.3			su		9045D	07/08/11	1
Sodium Adsorption Ratio	0.25					Calc.	07/03/11	1
Specific Conductance	160			umhos/cm		9050AMo	07/06/11	1
Mercury	0.013	0.0015	0.020	mg/kg	J	7471	07/05/11	1
Arsenic	2.9	0.32	1.0	mg/kg		6010B	07/05/11	1
Barium	150	0.050	0.25	mg/kg		6010B	07/05/11	1
Cadmium	0.12	0.040	0.25	mg/kg	J	6010B	07/05/11	1
Chromium	14.	0.085	0.50	mg/kg		6010B	07/05/11	1
Copper	14.	0.21	1.0	mg/kg		6010B	07/05/11	1
Lead	11.	0.090	0.25	mg/kg		6010B	07/05/11	1
Nickel	14.	0.26	1.0	mg/kg		6010B	07/05/11	1
Selenium	U	0.32	1.0	mg/kg		6010B	07/05/11	1
Silver	U	0.16	0.50	mg/kg		6010B	07/05/11	1
Zinc	44.	0.34	1.5	mg/kg		6010B	07/05/11	1
TPH (GC/FID) Low Fraction	U	0.25	0.50	mg/kg		8015D/G	07/03/11	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	104.			% Rec.		602/801	07/03/11	5
Benzene	U	0.0021	0.0050	mg/kg		8260B	07/05/11	5
Toluene	U	0.0017	0.025	mg/kg		8260B	07/05/11	5
Ethylbenzene	U	0.0016	0.0050	mg/kg		8260B	07/05/11	5
Total Xylenes	U	0.0023	0.015	mg/kg		8260B	07/05/11	5
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	07/05/11	5
Dibromofluoromethane	109.			% Rec.		8260B	07/05/11	5
a,a,a-Trifluorotoluene	99.9			% Rec.		8260B	07/05/11	5
4-Bromofluorobenzene	89.6			% Rec.		8260B	07/05/11	5
TPH (GC/FID) High Fraction	4.6	0.77	4.0	mg/kg		3546/DR	07/08/11	1
Surrogate recovery(%) o-Terphenyl	76.5			% Rec.		3546/DR	07/08/11	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: 07/11/11 14:44 Printed: 07/11/11 14:44
L524086-10 (PH) - 7.3@20.8c