

FORM  
**27**  
Rev 6/99

State of Colorado  
Oil and Gas Conservation Commission



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

#6118

FOR OGCC USE ONLY

**RECEIVED**  
8/18/2011

OGCC Employee:

Spill  Complaint  
 Inspection  NOAV

Tracking No:

**SITE INVESTIGATION AND REMEDIATION WORKPLAN**

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

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

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

OGCC Operator Number: <u>66571</u>	Contact Name and Telephone: <u>Daniel I. Padilla</u>
Name of Operator: <u>OXY USA WTP LP</u>	No: <u>970-263-3637</u>
Address: <u>760 Horizon Dr. #101</u>	Fax: <u>970-263-3694</u>
City: <u>Grand Junction</u> State: <u>CO</u> Zip: <u>81506</u>	
API Number: <u>05-045-10201</u> County: <u>Garfield</u>	
Facility Name: <u>MCM/83-92 (Pit)</u> Facility Number: <u>273645</u>	
Well Name: <u>Cascade Creek</u> Well Number: <u>609-14</u>	
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWSW, Sec 9, T6S, R97W, 6 PM</u> Latitude: <u>39.531847</u> Longitude: <u>-108.231731</u>	

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Not Applicable

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

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Non-crop land rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Parachute-Rhone Loams 5-30% slopes.

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Nearest surface water is an intermittent unnamed stream ~ 1094' to the Southwest.

Nearest natural drainage is ~ 480' to the South.

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

Impacted Media (check):	Extent of Impact:	How Determined:
<input type="checkbox"/> Soils	<u>N/A</u>	<u>Laboratory analytical results</u>
<input type="checkbox"/> Vegetation	<u>N/A</u>	<u>Visual</u>
<input type="checkbox"/> Groundwater	<u>N/A</u>	<u>Visual inspection below pit liner</u>
<input type="checkbox"/> Surface Water	<u>N/A</u>	<u>Visual</u>

**REMEDIATION WORKPLAN**

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

Oxy permitted the pit as a blowdown pit in August of 2004. Oxy closed this pit in late 2008 and is providing this pit closure form/plan for COGCC review/approval.

Describe how source is to be removed:

Oxy removed liquids from inside the pit; no solids were encountered. Liquids removed from the pit were disposed of at the Black Mountain Disposal Facility located near Debeque, Colorado. Oxy disposed of the pit liner at Garfield County Landfill for disposal. Based on the sampling results of the pit bottom, all analytes are found to be below allowable concentration levels except for As and sodium adsorption ratio (SAR). Although the As concentrations are above the COGCC regulated concentration, Oxy collected background samples in undisturbed locations which identified elevated concentrations of As to be above concentrations found in the pit bottom. To account for the elevated SAR the pit bottom was buried below a cap of three feet to ensure a sufficient agronomic zone is achieved.

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

Liquids were removed from the pit and no solids were encountered. Liquids present in the pit and the 30-mil high-density polyethylene liner were removed appropriately (see above). Analytical concentrations found in the pit bottom are below the COGCC's table 910-1 concentrations, except for As and SAR. The elevated concentrations of As have been found to be below As concentrations found in background samples. Oxy has submitted a Form 4 Sundry to account for this allowance. Oxy backfilled the pit with cuttings generated on-site. To account for SAR, Oxy then covered the cuttings with at least 3 ft of soil to allow for a proper agronomic zone for revegetation, this was then capped with at least 6 inches topsoil to ensure a proper seed bed. The backfilled pit was contoured to be level with the existing pad grade to minimize stormwater erosion.

Submit Page 2 with Page 1

FORM  
27  
Rev 6/99

State of Colorado  
Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
(303)694-2100 Fax: (303)694-2109



Tracking Number: \_\_\_\_\_  
Name of Operator: \_\_\_\_\_  
OGCC Operator No: \_\_\_\_\_  
Received Date: \_\_\_\_\_  
Well Name & No: \_\_\_\_\_  
Facility Name & No: \_\_\_\_\_

Page 2  
**REMEDIATION WORKPLAN (Cont.)**

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

**If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):**  
No groundwater was impacted by the pit. The pit was lined with a 30-mil HDPE liner. This pit was used as a blowdown pit and no solids were encountered in the pit during closure activities. During excavation of the pit liner, an Oxy contractor was present to observe the soil below the liner. The Oxy contractor collected soil samples from below the pit liner to ensure environmental impacts were not present. Laboratory analytical results are included which identify the approximate sampling location within the pit at depth and compliance with the COGCC Table 910-1 allowable concentrations, except for arsenic and SAR. Oxy collected background samples in undisturbed locations which identified elevated concentrations of arsenic to be above concentrations found in the pit bottom. To address elevated concentrations of SAR, Oxy buried the pit bottom below a cap of at least three feet of native material to ensure a sufficient agronomic zone.

**Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.**  
The pit was constructed at grade with Oxy's Cascade Creek 609-14 well pad, and was approximately 15 feet deep. The pit liner was sent to the Garfield County Landfill for disposal. The reclaimed pit was contoured to be level with the pad grade to minimize stormwater runoff. Final pad reclamation will occur at the end of the life of the pad.

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

Is further site investigation required?  Y  N If yes, describe:  
Oxy will monitor the site for stormwater compliance and will follow up during the next growing season to determine if revegetation efforts were successful.

**Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):**  
Oxy removed all liquids within the pit and disposed of them at the Black Mountain Disposal Facility located near Debeque, Colorado. No solids were encountered during removal of the liquids from the pit. Note that the pit liner was disposed of at the Garfield County Landfill.

**IMPLEMENTATION SCHEDULE**

Date Site Investigation Began: 10/15/2008	Date Site Investigation Completed: 12/2/2008	Date Remediation Plan Submitted: _____
Remediation Start Date: 10/29/2008	Anticipated Completion Date: _____	Actual Completion Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.  
Print Name: Daniel I. Padilla Signed: [Signature]  
Title: Regulatory Advisor Date: 8/18/11

OGCC Approved: [Signature] Title: FOR Date: 08/31/2011  
Chris Canfield  
EPS NW Region

State of Colorado  
Oil and Gas Conservation Commission



1123 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)694-2100 Fax: (303)694-2109

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.)

1. OGCC Operator Number: <u>66571</u>	4. Contact Name: <u>Daniel I. Padilla</u>	Complete the Attachment Checklist  OP OGCC
2. Name of Operator: <u>OXY USA WTP LP</u>	Phone: <u>970.263.3637</u>	
3. Address: <u>780 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>05-045-10201</u>	OGCC Facility ID Number: <u>273645</u>	Survey Plat
6. Well/Facility Name: <u>MCM/83-92 (PH)</u>	7. Well/Facility Number: <u>609-14</u>	Directional Survey
8. Location (Qtr/Ctr, Sec, Twp, Rng, Meridian): <u>SWSW, Sec 9, T6S, R97W, 6</u>		Surface Eqpt Diagram
9. County: <u>Garfield</u>	10. Field Name: <u>Grand Valley</u>	Technical Info Page <input checked="" type="checkbox"/>
11. Federal, Indian or State Lease Number: _____		Other Lab data, map <input checked="" type="checkbox"/>

General Notice

CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/ctr is substantive and requires a new permit)

Change of Surface Footage from Exterior Section Lines:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change of Surface Footage to Exterior Section Lines:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change of Bottomhole Footage from Exterior Section Lines:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change of Bottomhole Footage to Exterior Section Lines:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Bottomhole location Qtr/Ctr, 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   
 Ground Elevation \_\_\_\_\_ Distance to nearest well same formation \_\_\_\_\_ Surface owner consultation date: \_\_\_\_\_

GPS DATA:  
 Date of Measurement \_\_\_\_\_ PDOP Reading \_\_\_\_\_ Instrument Operator's Name \_\_\_\_\_

CHANGE SPACING UNIT  
 Formation \_\_\_\_\_ Formation Code \_\_\_\_\_ Spacing order number \_\_\_\_\_ Unit Acreage \_\_\_\_\_ Unit configuration \_\_\_\_\_  
 Remove from surface bond  
 Signed surface use agreement attached

CHANGE OF OPERATOR (prior to drilling):  
 Effective Date: \_\_\_\_\_  
 Plugging Bond:  Blanket  Individual

CHANGE WELL NAME NUMBER  
 From: \_\_\_\_\_  
 To: \_\_\_\_\_  
 Effective Date: \_\_\_\_\_

ABANDONED LOCATION:  
 Was location ever built?  Yes  No  
 Is site ready for inspection?  Yes  No  
 Date Ready for inspection: \_\_\_\_\_

NOTICE OF CONTINUED SHUT IN STATUS  
 Date well shut in or temporarily abandoned: \_\_\_\_\_  
 Has Production Equipment been removed from site?  Yes  No  
 MIT required if shut in longer than two years. Date of last MIT \_\_\_\_\_

SPUD DATE: \_\_\_\_\_  
 REQUEST FOR CONFIDENTIAL STATUS (if not from date casing set)

SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK \*submit cbl and cement job summaries  
 Method used \_\_\_\_\_ Cementing tool setting/perf depth \_\_\_\_\_ Cement volume \_\_\_\_\_ Cement top \_\_\_\_\_ Cement bottom \_\_\_\_\_ Date \_\_\_\_\_

RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.  
 Final reclamation will commence on approximately \_\_\_\_\_  Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

Notice of Intent Approximate Start Date: \_\_\_\_\_  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: Apply different standard for Spills and Releases	

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

Signed: [Signature] Date: 8/18/11 Email: daniel\_padilla@oxy.com  
 Print Name: Daniel I. Padilla Title: Regulatory Advisor

COGCC Approved: [Signature] Title: FOR Date: 08/31/2011

CONDITIONS OF APPROVAL, IF ANY:

Ihvis Canfield  
EPS NW Region

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

- 1. OGCC Operator Number: 66571 API Number: 05-045-10201
- 2. Name of Operator: OXY USA WTP LP OGCC Facility ID # 273645
- 3. Well/Facility Name: MCM/83-92 (Pit) Well/Facility Number: 609-14
- 4. Location (QtrQtr, Sec, Twp, Rng, Meridian): SWSW, Sec 9, T6S, R97W, 6 PM

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

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

OXY USA WTP LP (Oxy) has completed reclamation of the above-mentioned blowdown pit and will apply a different standard (see table on next page) to the COGCC Table 910-1 concentration levels for Arsenic (As). Based on post reclamation levels for As being below undisturbed background levels, Oxy's sundry will waive the COGCC Table 910-1 concentration for As. In this particular situation, the below the pit liner (Post Reclaim 9/02/2008) concentration for As is above COGCC Table 910-1 standards, but is below undisturbed background levels (see sampling locations on included location map).

The sampling method Oxy employed was to take a representative random grab sample for each background sample location. The analytical concentrations table identifies the COGCC Table 910-1 concentration levels, Oxy's undisturbed background concentrations, and Oxy's post reclamation concentrations (Post Reclaim 9/02/2008). Based on the background sample concentrations, Oxy's sundry notice request to apply different standards to the COGCC Table 910-1 concentration levels due to elevated background concentrations for As.



OXY USA WTP LP

760 Horizon Drive, Suite 101  
Grand Junction, CO 81506

# 609-14 Blowdown Pit Sampling Figure

Revised: July 14, 2011 Garfield County, Colorado



- Approximate Location of Blowdown Pit
- Post Reclaim sample location
- Background sample location another project

## Pit Reclaims - Collbran

Pad #:	609-14
Sample Date:	12/30/2008
Clearance Achieved Date:	

	MCL (mg/kg)	Sample Identifications (mg/kg)				
		Post Reclaim	Background 12/13/2010	Background 12/13/2010	Background 12/13/2010	Background 12/13/2010
Organics in Soil			609-14 North	609-14 West	609-14 South	609-14 South East
TPH (GRO and DRO) - Sen Area	500		-	-	-	-
Benzene	0.17		-	-	-	-
Toluene	85		-	-	-	-
Ethylbenzene	100		-	-	-	-
Xylenes	175		-	-	-	-
Organics in Soil (PAH's)						
Acenaphthene	1000		-	-	-	-
Anthracene	1000		-	-	-	-
Benzo(A)anthracene	0.22		-	-	-	-
Benzo(B)fluoranthene	0.22		-	-	-	-
Benzo(K)fluoranthene	2.2		-	-	-	-
Benzo(A)pyrene	0.022		-	-	-	-
Chrysene	22		-	-	-	-
Dibenzo(A,H)anthracene	0.022		-	-	-	-
Fluoranthene	1000		-	-	-	-
Flourene	1000		-	-	-	-
Indeno(1,2,3,C,D)pyrene	0.22		-	-	-	-
Napthalene	23		-	-	-	-
Pyrene	1000		-	-	-	-
Inorganics in Soil						
EC	<4 mmhos/cm or 2X background		0.035	0.040	0.047	0.063
SAR	<12		0.8	0.7	0.7	0.8
pH	6-9		6.8	6.8	7.0	6.9
Metals in Soils						
Arsenic	0.39		3.7	4.3	2.0	2.3
Barium (LDNR True Total)	15000		-	-	-	-
Boron (Hot Water Soluble)	2 (mg/L)		-	-	-	-
Cadmium	70		-	-	-	-
Chromium	12000		-	-	-	-
Chromium VI	23		-	-	-	-
Copper	3100		-	-	-	-
Lead	400		-	-	-	-
Mercury	23		-	-	-	-
Molybenum	(3) - See Below		-	-	-	-
Nickel	1600		-	-	-	-
Selenium	(3)/390		-	-	-	-
Silver	390		-	-	-	-
Zinc	23000		-	-	-	-

(3) - Per the Old COGCC Rules, "Considerations are dependent on site specific conditions"



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

Tax I.D. 62-0814289

Est. 1970

David Spencer  
Walsh Env.- Grand Junction  
535 Grand Avenue

Grand Junction, CO 81501

Report Summary

Monday November 03, 2008

Report Number: L370646

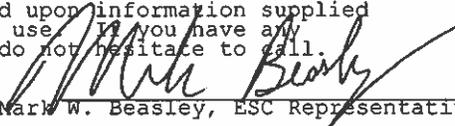
Samples Received: 10/17/08

Client Project: 7830-220

Description: Pit Bottom Sampling

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, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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

4 Samples Reported: 11/03/08 14:50 Printed: 11/03/08 15:43

Page 1 of 7



**ENVIRONMENTAL  
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**REPORT OF ANALYSIS**

David Spencer  
Walsh Env.- Grand Junction  
535 Grand Avenue  
Grand Junction, CO 81501

November 03, 2008

Date Received : October 17, 2008  
Description : Pit Bottom Sampling

ESC Sample # : L370646-01

Sample ID : 609-14

Site ID :

Collected By : David Spencer  
Collection Date : 10/15/08 12:25

Project # : 7830-220

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
pH	8.3		su	9045D	10/18/08	1
Sodium Adsorption Ratio	3.6			Calc.	10/27/08	1
Specific Conductance	1200		umhos/cm	9050AMod	10/22/08	1
Mercury	BDL	0.020	mg/kg	7471	10/24/08	1
Arsenic	1.2	1.0	mg/kg	6010B	10/21/08	1
Beryllium	0.60	0.10	mg/kg	6010B	10/21/08	1
Cadmium	0.50	0.25	mg/kg	6010B	10/21/08	1
Chromium	23.	0.50	mg/kg	6010B	10/21/08	1
Copper	14.	1.0	mg/kg	6010B	10/21/08	1
Lead	12.	0.25	mg/kg	6010B	10/21/08	1
Molybdenum	0.80	0.25	mg/kg	6010B	10/21/08	1
Nickel	12.	1.0	mg/kg	6010B	10/21/08	1
Selenium	1.4	1.0	mg/kg	6010B	10/21/08	1
Silver	BDL	0.50	mg/kg	6010B	10/21/08	1
Zinc	39.	1.5	mg/kg	6010B	10/21/08	1
Benzene	BDL	0.0025	mg/kg	8021/8015	10/23/08	5
Toluene	BDL	0.025	mg/kg	8021/8015	10/23/08	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	10/23/08	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	10/23/08	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	10/23/08	5
Surrogate Recovery-%						
a, a, a-Trifluorotoluene (FID)	93.3		% Rec.	8021/8015	10/23/08	5
a, a, a-Trifluorotoluene (PID)	101.		% Rec.	8021/8015	10/23/08	5
TPH (GC/FID) High Fraction	46.	4.0	mg/kg	3546/DRO	10/23/08	1
Surrogate recovery(%)						
o-Terphenyl	76.4		% Rec.	3546/DRO	10/23/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 11/03/08 14:50 Printed: 11/03/08 15:43  
L370646-01 (PH) - 8.3@21.1c



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REPORT OF ANALYSIS

David Spencer  
Walsh Env.- Grand Junction  
535 Grand Avenue  
Grand Junction, CO 81501

November 03, 2008

Date Received : October 17, 2008  
Description : Pit Bottom Sampling  
Sample ID : 609-14  
Collected By : David Spencer  
Collection Date : 10/15/08 12:25

ESC Sample # : L370646-02  
Site ID :  
Project # : 7830-220

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
SPLP Extraction	-			1312	10/22/08	1
Boron	0.35	0.25	mg/l	6010B	10/25/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 11/03/08 14:50 Printed: 11/03/08 15:43



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

### Report Summary

Friday December 24, 2010

Report Number: L493786

Samples Received: 12/15/10

Client Project:

Description: 609-14

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

Entire Report Reviewed By:

Mark W. Beasley, ESC Representative

#### Laboratory Certification Numbers

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

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

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

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REPORT OF ANALYSIS

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

December 24, 2010

Date Received : December 15, 2010  
 Description : 609-14  
 Sample ID : 609-14-NB-121310  
 Collected By : Jake Harris  
 Collection Date : 12/13/10 12:00

ESC Sample # : L493786-01  
 Site ID :  
 Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
pH	6.8			su		9045D	12/18/10	1
Sodium Adsorption Ratio	0.83					Calc.	12/20/10	1
Specific Conductance	35.			umhos/cm		9050AMo	12/20/10	1
Arsenic	3.7	0.32	1.0	mg/kg		6010B	12/22/10	1

U = ND (Not Detected)  
 MDL = Minimum Detection Limit = LOD  
 RDL = Reported Detection Limit = LOQ = PQL = EQL  
 Note:  
 The reported analytical results relate only to the sample submitted.  
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Reported: 12/24/10 15:08 Printed: 12/24/10 15:09  
 L493786-01 (PH) - 6.8@18.0c



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

REPORT OF ANALYSIS

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

December 24, 2010

Date Received : December 15, 2010  
 Description : 609-14  
 Sample ID : 609-14-WB-121310  
 Collected By : Jake Harris  
 Collection Date : 12/13/10 12:10

ESC Sample # : L493786-02  
 Site ID :  
 Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
pH	6.8			su		9045D	12/18/10	1
Sodium Adsorption Ratio	0.74					Calc.	12/20/10	1
Specific Conductance	40.			umhos/cm		9050AMo	12/20/10	1
Arsenic	4.3	0.32	1.0	mg/kg		6010B	12/22/10	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Reported: 12/24/10 15:08 Printed: 12/24/10 15:09  
 L493786-02 (PH) - 6.8@17.9c



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 Mt. Juliet, TN 37122  
 (615) 758-5858  
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 Est. 1970

REPORT OF ANALYSIS

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

December 24, 2010

Date Received : December 15, 2010  
 Description : 609-14  
 Sample ID : 609-14-SB-121310  
 Collected By : Jake Harris  
 Collection Date : 12/13/10 12:20

ESC Sample # : L493786-03  
 Site ID :  
 Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
pH	7.0			su		9045D	12/18/10	1
Sodium Adsorption Ratio	0.72					Calc.	12/20/10	1
Specific Conductance	47.			umhos/cm		9050AMo	12/20/10	1
Arsenic	2.0	0.32	1.0	mg/kg		6010B	12/24/10	1

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

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Reported: 12/24/10 15:08 Printed: 12/24/10 15:09  
 L493786-03 (PH) - 7.0@17.6c



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

REPORT OF ANALYSIS

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

December 24, 2010

Date Received : December 15, 2010  
 Description : 609-14  
 Sample ID : 609-14-SEB-121310  
 Collected By : Jake Harris  
 Collection Date : 12/13/10 12:30

ESC Sample # : L493786-04  
 Site ID :  
 Project # :

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
pH	6.9			su		9045D	12/18/10	1
Sodium Adsorption Ratio	0.78					Calc.	12/20/10	1
Specific Conductance	63.			umhos/cm		9050AMo	12/20/10	1
Arsenic	2.3	0.32	1.0	mg/kg		6010B	12/24/10	1

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

Note:  
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Reported: 12/24/10 15:08 Printed: 12/24/10 15:09  
 L493786-04 (PH) - 6.9@17.6c

Summary of Remarks For Samples Printed  
12/24/10 at 15:09:17

TSR Signing Reports: 134  
R5 - Desired TAT

Sample: L493786-01 Account: OXYWTPGJCO Received: 12/15/10 09:00 Due Date: 12/22/10 00:00 RPT Date: 12/24/10 15:08

Sample: L493786-02 Account: OXYWTPGJCO Received: 12/15/10 09:00 Due Date: 12/22/10 00:00 RPT Date: 12/24/10 15:08

Sample: L493786-03 Account: OXYWTPGJCO Received: 12/15/10 09:00 Due Date: 12/22/10 00:00 RPT Date: 12/24/10 15:08

Sample: L493786-04 Account: OXYWTPGJCO Received: 12/15/10 09:00 Due Date: 12/22/10 00:00 RPT Date: 12/24/10 15:08

Company Name/Address:  
**Oxy USA WTP LP - Grand Junction, CO**  
 760 Horizon Dr., Ste. 101  
 Grand Junction, CO 81506

Billing Information:  
 Accounts Payable  
 760 Horizon Dr., Ste. 101  
 Grand Junction, CO 81506

Analysis/Container/Preservativ

G008

Chain of Custody  
 Page 1 of 1



12065 Lebanon Road  
 Mt. Juliet, TN 37122

Phone: (800) 767-5859  
 Phone: (615) 758-5858  
 Fax: (615) 758-5859

Report to: **Brett Kennedy**

Email to: **Brett\_kennedy@oxy.com**

Project Description: **609-14**

City/State Collected: **Colorado**

Phone: (970) 263-3601  
 FAX: (970) 201-2305

Client Project #: \_\_\_\_\_  
 ESC Key: \_\_\_\_\_

Collected by (print): **Jake Hennis**

Site/Facility ID#: \_\_\_\_\_  
 P.O.#: \_\_\_\_\_

Collected by (signature): *[Signature]*  
 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  Yes  
 FAX?  No \_\_\_ Yes

	SAR	EC	PH	ARSENIC
No. of Cntrs	1	1	1	1

CoCode **OXYWTPGJ** (lab use only)  
 Template/Prelogin  
 Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	SAR	EC	PH	ARSENIC
609-14-N13-121310	Grab	SS		12/13/10	1200	1	X	X	X	X
609-14-WB-121310	Grab	SS		12/13/10	1210	1	X	X	X	X
609-14-SB-121310	Grab	SS		12/13/10	1220	1	X	X	X	X
609-14-SEB-121310	Grab	SS		12/13/10	1230	1	X	X	X	X

Remarks/Contaminant	Sample # (lab only)
	1493786-01
	02
	03
	04

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

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

Remarks:

434158114712 Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature) <i>[Signature]</i>	Date: 12/14/10	Time: 1400	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> UPS <input type="checkbox"/> Courier	Condition: (lab use only) <b>OK</b>
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: 3.2°C	Bottles Received: 4-852
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 12/15/10	Time: 0900

CoC Seals Intact \_\_\_ Y \_\_\_ N  NA  
 pH Checked: \_\_\_\_\_ NCF: \_\_\_\_\_