

State of Colorado
Oil and Gas Conservation Commission



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

FOR OGCC USE ONLY
Document 2315381
Received 9/1/2015

REM 7820

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>Blair K. Rollins</u> |
| Name of Operator: <u>OXY USA WTP LP</u> | No: <u>(970) 263-3637</u> |
| Address: <u>760 Horizon Drive, Suite 101</u> | Fax: <u>(970) 263-3694</u> |
| City: <u>Grand Junction</u> State: <u>CO</u> Zip: <u>81506</u> | |

| | |
|---|--|
| API Number: <u>05-045-10345</u> | County: <u>Garfield</u> |
| Facility Name: <u>CC 705-22-43 well pad</u> | Facility Number: <u>335186 (REM #7820)</u> |
| Well Name: <u>N/A</u> | Well Number: <u>N/A</u> |
| Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SENW, Sec 5, T7S, R97W, 6th PM</u> Latitude: <u>39.47766</u> Longitude: <u>-108.24353</u> | |

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Condensate and produced water

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

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

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Happle-Rock outcrop association, 25-65% slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Nearest water well is ~970' southwest, nearest surface water is ~1,238' to the west, depth to the shallowest groundwater is ~100'

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>Please refer to document number 2147354 and 1733935</u> | _____ |
| <input type="checkbox"/> Vegetation | _____ | _____ |
| <input type="checkbox"/> Groundwater | _____ | _____ |
| <input type="checkbox"/> Surface Water | _____ | _____ |

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):
Please reference document numbers 1733935 and 2147354 for initial action taken and proposed remediation by Soil Vapor Extraction (SVE) system installation.

Describe how source is to be removed:
Please reference document numbers 1733935 and 2147354 for remediation workplan and source removal by SVE installation. The source was removed by installation of an SVE extraction system to include SVE wells throughout the subsurface plume area to remove hydrocarbon impacts within the soil. Please see attached report prepared by Olsson Associates.

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.:
After installation, the SVE system was operated for approximately 11 months during favorable weather and site conditions. Please see attached report prepared by Olsson Associates.



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.): Oxy collected quarterly surface water and water well samples throughout the life of the project, see attached water analytical results table. To date, no impacts have been identified at the cross-gradient or downgradient Conn Creek sample locations, or the domestic water well location. Please see attached report prepared by Olsson Associates.

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. Following approval of this Remediation Project closure document, Oxy will plug and abandon the SVE wells using bentonite. Oxy will disconnect and remove the SVE trailer. Oxy will backfill any holes or depressions to the active working surface of the pad location and continue use the well pad until closure and final reclamation of the well pad is completed.

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 [x] N If yes, describe: Following approved document number 1733935, Oxy drilled two soil borings within the delineated area of original impact to assess remediation activities. Please see attached report prepared by Olsson Associates.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.): Please see attached report prepared by Olsson Associates. Oxy completed SVE remediation of the impacted soil and is requesting closure and no further action for Remediation Project number 7820.

IMPLEMENTATION SCHEDULE

Table with 3 columns: Date Site Investigation Began, Date Site Investigation Completed, Date Remediation Plan Submitted, Remediation Start Date, 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: Blair K. Rollins Signed: [Signature] Title: HES Specialist Date: 7/31/2015

OGCC Approved: Title: EPS Northwest Date: 9/1/15

Based on review of information presented, it appears that no further action is necessary at this time, and COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if ground water is found to be significantly impacted, then further investigation and/or remediation activities may be required at the site.



Blair Rollins
HES Specialist
OXY USA, Inc.
760 Horizon Drive, Suite 101
Grand Junction, CO 81506

July 27, 2015

**RE: Remediation Progress Report
Oxy CC 705-22-43
Garfield County, Colorado
REM# 7820**

Dear Mr. Rollins,

Following is a summary of events regarding the January 2013 release of produced water and condensate at OXY USA, Incorporated's Cascade Creek (CC) 705-22-43 wellpad (the site) site characterization, monitoring, and remediation efforts.

SITE SETTING

The site is an active oil and gas production well site located in the southeast quarter of the northwest quarter of Section 5, Township 7 South, Range 97 West, Sixth Principle Meridian in Garfield County, Colorado (39.47766 north latitude and -108.24353 west longitude). Conn Creek, at its closest point, is approximately 0.23 miles west of the site. A commercial water well permitted to Oxy is located approximately 0.5 miles south-southwest (down gradient) of the site. The site's location is shown in **Figure 1**.

BACKGROUND

On January 11, 2013, it was discovered by Oxy that a valve failed due to freezing conditions on one of the two production tanks on the site resulting in the release of approximately 180 barrels (bbls) of produced water and condensate into the unlined soil secondary containment area. The Colorado Oil and Gas Conservation Commission (COGCC) was verbally notified of the release on January 12, 2013. Approximately one bbl breached the containment area and flowed to the north along the site access road for approximately 50 feet. The remaining released fluid was adsorbed by the soil within the secondary containment. On January 11, 2013 the impacted soil outside the secondary containment was excavated and temporarily stockpiled within the secondary containment area for future disposal.

CHARACTERIZATION AND MONITORING ACTIVITIES

An investigation using hydro-excavation to pothole select locations at the site were conducted on January 15, 2013 showed no indications of petroleum impacted soils between 6 feet to 12 feet below ground surface (ft-bgs) at three locations (PH1, PH2, and PH3).

Five soil borings (BH1, BH2, BH3, BH4, and BH9) were advanced on February 8, 2013.

Seven soil boring (BH5-BH12) were advanced on July 16-18, 2013 which revealed petroleum-impacted soil limited to the area south and west of the above ground storage tanks in the vicinity

of the surface spill at boring locations BH1, BH2, BH3, BH5, BH6 and BH7. The highest TPH concentration was observed in a soil sample collected from boring BH8 at 15 to 20 ft-bgs at 4,860 milligrams per kilogram (mg/kg).

Groundwater was not observed in any of the site borings. Surface and well water have been monitored at three nearby locations: Conn Creek immediately west of the site (aka 797-06-07 approximately 1,100 feet west-southwest of the site), Cascade Creek Field Office located approximately 2,300 feet south-southwest of the site, and at the Oxy Cascade Creek Guard shack located approximately 3,900 feet south-southwest of the site. All locations are down gradient from the site. Benzene, toluene, ethylbenzene, and xylene (BTEX) constituents have not been detected in any sample collected at the locations since the release. Analytical results from the time of release discovery to the first quarter of 2015 are included in **Table 3**.

Soil vapor extraction (SVE) pilot testing was conducted on February 27, 2014 on BH5, BH8, BH10, BH11, and BH12 with test results showing adequate soil vapor communication and total petroleum hydrocarbon soil vapor analyses of up to 786,000 parts per billion by volume.

Three additional soil vapor extraction wells (BH13, BH14, and BH15) were installed on June 12, 2014 in the west portion of the planned remediation area.

REMEDIATION ACTIVITIES

SVE piping was plumbed from BH5, BH8, BH13, BH14, and BH15 to an SVE trailer at the Site in July 2014. The SVE system consists of five vacuum lines coupled to a 4" manifold, 117-gallon knockout tank, Roots URAI 59 positive displacement rotary blower powered by a 10 horsepower electric motor, and all electrical systems needed to heat, cool, operate, and monitor SVE functions. A rented diesel generator was used to power the SVE system. The SVE system began operation on July 28, 2014 and ran for 5,915 hours through June 11, 2015. Periodic shut downs of the system occurred primarily for two weeks in October 2014 for support generator malfunctions and for two weeks in January 2015 for support generator replacement.

The SVE system was programmed to run continuously with exhaust flows ranging from 480-500 cubic feet per minute from system startup to February 2015. Vacuum was applied at 50-inches of mercury ("Hg) to BH5, BH8, BH14, and BH15 and BH13 had a maximum vacuum capacity of 22-"Hg likely due to being in a fractured shale formation.

Seven SVE effluent monitoring events were performed to monitor for BTEX and TPH. Benzene concentrations were initially monitored at 3,290 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and were reduced to 8.5 $\mu\text{g}/\text{m}^3$ in May 2015. TPH concentrations were initially measured at 209 mg/m^3 , had a high measurement of 356 mg/m^3 in August 2014, and were reduced to 2.4 mg/m^3 in May 2015. Laboratory analyses of SVE effluent and select soil-vapor sample results are summarized in **Table 2**.

The SVE system was shut down on June 11, 2015 in anticipation of performing soil confirmation sampling in accordance with the supplemental form 27 (Soil Vapor Extraction Remediation Work Plan and System Design: COGCC document #1733935) dated August 7, 2014.

CONFIRMATION SAMPLING

On July 2, 2015 two soil borings were advanced near the BH2 and BH8 locations to a depth of 25 ft-bgs to capture soil conditions identified to be the most contaminated during site characterization activities. Soil sample SB-1 was advanced approximately four feet northwest of

the BH2 location and SB-2 was advanced approximately two feet west of the BH8 location. Soil borings were screened for odor, soil staining, and for VOCs using a PID to read head-space samples. Soil vapor readings of 150-160 parts per million were recorded at the 20-25 ft-bgs interval. Soil samples were submitted for laboratory analysis of COGCC Table 910-1 standards. Soil samples from the 20-25 ft-bgs interval were collected in laboratory-provided containers, placed on ice and shipped overnight with a chain of custody form to Environmental Science Corporation in Mount Juliet, Tennessee. Copies of the analytical reports are included in Attachment A. Soil sample locations are included on **Figure 2** and analytical results of investigation and confirmation activities are summarized in **Table 1**.

The analytical results from the soil boring confirmation samples are summarized in Table 1 and highlighted here:

- Arsenic concentrations in both soil borings exceed the Table 910-1 standard of 0.39 mg/kg (SB-1 @ 10.2 mg/kg and Sb-2 @ 8.4 mg/kg) at a depth of 20-25 ft-bgs within native materials.

No other Table 910-1 analytes exceeded their respective MCLs in confirmation soil samples.

SUMMARY AND CONCLUSIONS

Confirmation sampling was conducted on July 2, 2015. Based on water monitoring surrounding the site contamination has not impacted groundwater, SVE effluent monitoring shows negligible BTEX and TPH concentrations remain in soil gas, and confirmation soil samples show that the impacted source material has been remediated below Table 910-1 standards.

No action should be required for elevated arsenic concentrations because OXY has collected BG samples with concentrations higher than those seen in SB-1 and SB-2 from the 797-06-07 location directly west of the site: surface arsenic concentrations of 24 mg/kg were identified at that location on 4/17/2012. See **Figure 1** for background arsenic in soil sample locations.

Based on laboratory results from water, SVE effluent, and soil confirmation sampling results and observed field conditions, OXY requests that REM# 7820 be closed.

Thank you for allowing Olsson Associates the opportunity to complete this work for OXY. Please call me if you have any questions.

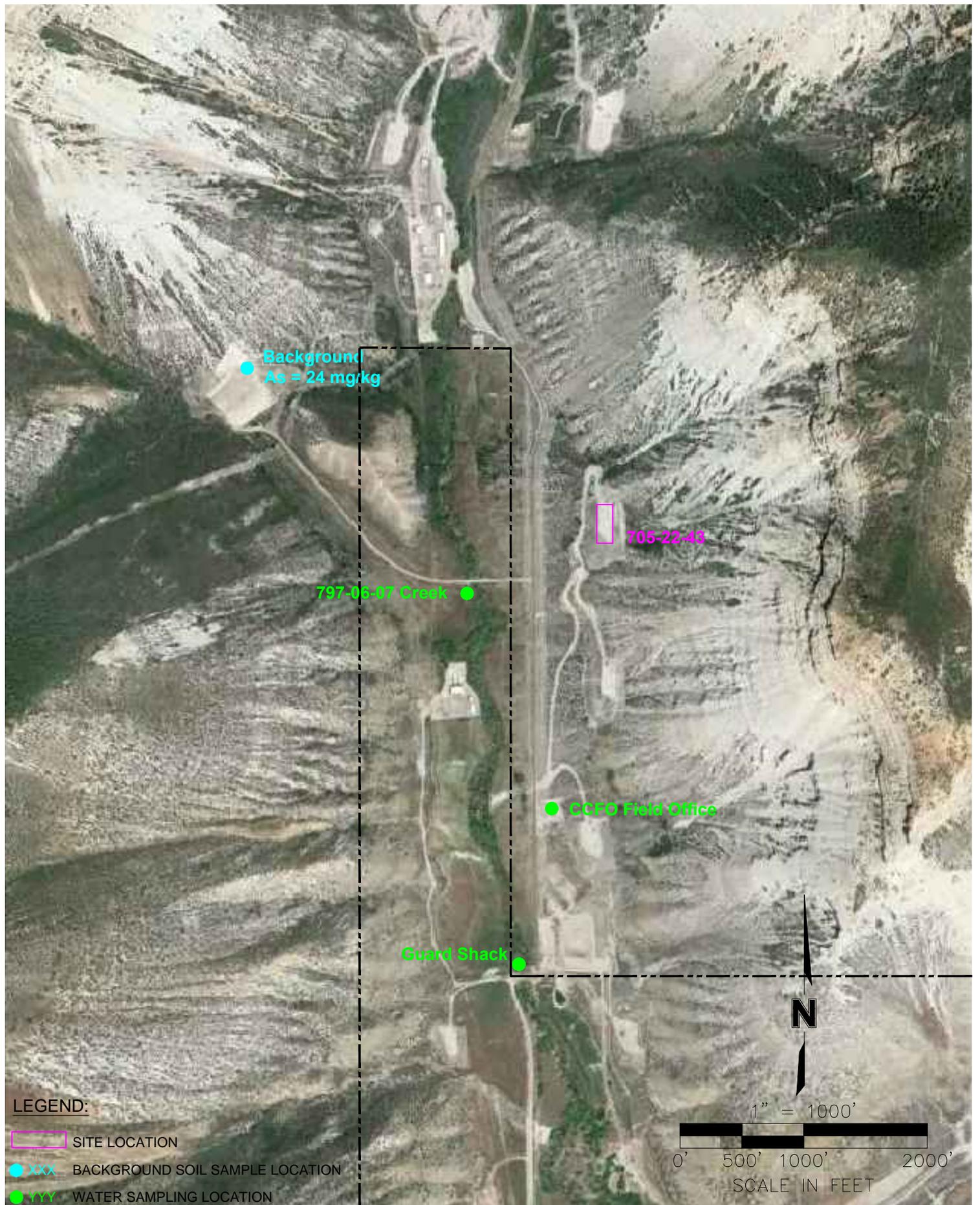
Sincerely,

Olsson Associates



Robert A. Stockton
Project Scientist

| | | |
|--------------|----------|--------------------------|
| Attachments: | Table 1 | Soil Sample Summary |
| | Table 2 | SVE Monitoring Summary |
| | Table 3 | Water Monitoring Summary |
| | Figure 1 | Location Map |
| | Figure 2 | Soil Sample Location Map |



PROJECT NO: 013-0242
 DRAWN BY: RAS
 DATE: 07/27/2015

SITE MAP - REM# 7820
 705-22-43
 GARFIELD COUNTY, COLORADO



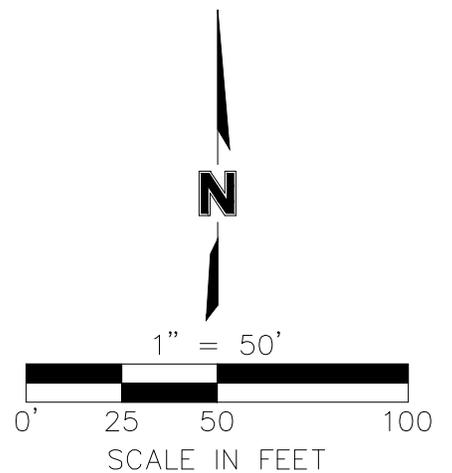
760 Horizon Drive, Suite 102
 Grand Junction, CO 81506
 TEL 970.263.7800
 FAX 970.263.7456

FIGURE
 1



LEGEND:

- SVE REMEDIATION PIPING
- SOIL BORINGS COMPLETED AND PLUMBED AS REMEDIATION WELLS
- SOIL BORINGS COMPLETED AS POTENTIAL REMEDIATION WELLS
- HYDRO-EXCAVATION BORING LOCATIONS
- 2/13-7/13 SOIL BORING LOCATIONS



PROJECT NO: 013-0242
 DRAWN BY: RAS
 DATE: 07/27/2015

SITE MAP - REM# 7820
 705-22-43
 GARFIELD COUNTY, COLORADO



760 Horizon Drive, Suite 102
 Grand Junction, CO 81506
 TEL 970.263.7800
 FAX 970.263.7456

FIGURE
 1

**Table 1
OXY USA WTP LP
CC 705-22-43
Soil Sample Summary**

| SAMPLE SUMMARY | |
|----------------------|--------------------------|
| Location Description | OXY USA WTP CC 705-22-43 |

| LABORATORY DATA SUMMARY | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|--------|--------|
| Sample ID | BH 1 | BH 1 | BH 2 | BH 2 | BH 3 | BH 3 | BH 4 | BH5 | BH5 | BH6 | BH6 | BH7 | BH7 | BH8 | BH8 | BH 9 | BH 9 | BH10 | BH10 | BH11 | BH11 | BH12 | BH12 | SB-1 | SB-2 |
| Depth | 25-30' | 32-35' | 25-30' | 37-38' | 15-20' | 20-22' | 10-14' | 10-15' | 45-50' | 10-15' | 45-50' | 10-15' | 45-50' | 15-20' | 45-50' | 15-20' | 30-34' | 20-25' | 45-50' | 40-45' | 45-50' | 30-35' | 40-45' | 20-25' | 20-25' |
| Date | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 2/8/13 | 7/16/13 | 7/16/13 | 7/16/13 | 7/16/13 | 7/16/13 | 7/16/13 | 7/2/15 | 7/2/15 |

| Organics | | COGCC MCL (mg/kg) | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------|-------------------|---------|------|------|-------|-------|-------|-------|--------|-------|--------|-------|--------|------|--------|---------|-------|-------|---------|---------|---------|---------|---------|--------|---------|---------|
| Total TPH | 500 | 640 | 137 | 3500 | 1140 | 790 | 393 | 128 | 860 | 690 | 1120 | <500 | 800 | 163 | 4860 | <406.8 | 16.59 | 38.9 | 9.3 | 131.8 | 34.1 | 8.2 | 201 | 18.6 | 152.2 | <160.5 | |
| TPH-GRO | 480 | 97 | 3000 | 1000 | 610 | 300 | 62 | 700 | 440 | 860 | 300 | 670 | 3 | 4500 | 6.8 | 0.59 | 7.9 | 5.2 | 1.8 | 1.1 | <0.0050 | <0.0050 | 0.053 | <0.0050 | 0.04 | 0.053 | <0.0050 |
| TPH-DRO | 160 | 40 | 500 | 140 | 180 | 93 | 66 | 160 | 250 | 260 | <200 | 130 | 160 | 360 | <400 | 16 | 31 | 4.1 | 130 | 33 | 6 | 51 | 16 | 150 | 160 | | |
| Benzene | 0.17 | 0.28 | <0.0050 | 5.2 | 0.83 | <0.50 | <0.20 | <0.50 | <0.50 | <0.050 | <0.50 | <0.050 | <0.50 | 0.011 | 2.4 | 0.046 | 0.0067 | 0.067 | 0.011 | <0.0050 | <0.0050 | 0.053 | <0.0050 | 0.04 | 0.053 | <0.0050 | |
| Toluene | 85 | 17 | 0.05 | 82 | 4.6 | 7.7 | 4 | 1.8 | 4.1 | <0.25 | 3.4 | <0.25 | <2.5 | <0.025 | 44 | 0.35 | 0.049 | 1.1 | 0.33 | <0.025 | <0.025 | 0.11 | <0.025 | 0.044 | 0.825 | <0.025 | |
| Ethylbenzene | 100 | 4.7 | 0.11 | 14 | 4.4 | 1.7 | 0.95 | 0.38 | 1.2 | 0.27 | 0.79 | <0.050 | <0.50 | <0.005 | 4.1 | 0.052 | <0.0050 | 0.12 | 0.099 | <0.0050 | <0.0050 | <0.0050 | 0.016 | 0.037 | 0.0622 | <0.0050 | |
| Total Xylene | 175 | 44 | 0.46 | 230 | 57 | 31 | 16 | 6.5 | 20 | 1.4 | 24 | 0.2 | 23 | 0.028 | 170 | 0.56 | 0.046 | 1.9 | 1.8 | <0.015 | 0.026 | <0.015 | 0.33 | 0.31 | 1.4 | <0.015 | |

| Polynuclear Aromatic Hydrocarbons | | COGCC MCL (mg/kg) | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------|-------------------|---------|---------|--------|--------|---------|---------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|
| Anthracene | 1,000 | <0.0060 | <0.0060 | 0.0073 | <0.060 | <0.060 | <0.0060 | <0.0060 | <0.030 | <0.0060 | 0.0086 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.012 | <0.0060 |
| Acenaphthene | 1,000 | 0.0081 | <0.0060 | 0.027 | <0.060 | <0.060 | <0.0060 | <0.0060 | <0.030 | <0.0060 | 0.014 | <0.0060 | <0.0060 | 0.011 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.012 | <0.0060 |
| Benzo(a)anthracene | 0.22 | <0.0060 | <0.0060 | <0.0060 | <0.060 | <0.060 | <0.0060 | <0.0060 | <0.030 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.012 | <0.0060 |
| Benzo(a)pyrene | 0.022 | <0.0060 | <0.0060 | <0.0060 | <0.060 | <0.060 | <0.0060 | <0.0060 | <0.030 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.003 | <0.0060 |
| Benzo(b)fluoranthene | 0.22 | <0.0060 | <0.0060 | <0.0060 | <0.060 | <0.060 | <0.0060 | <0.0060 | <0.030 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.030 | <0.0060 |
| Benzo(k)fluoranthene | 2.2 | <0.0060 | <0.0060 | <0.0060 | <0.060 | <0.060 | <0.0060 | <0.0060 | <0.030 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.030 | <0.0060 |
| Chrysene | 22 | <0.0060 | <0.0060 | <0.0060 | <0.060 | <0.060 | <0.0060 | <0.0060 | <0.030 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.012 | <0.0060 |
| Dibenzo(a,h)anthracene | 0.022 | <0.0060 | <0.0060 | <0.0060 | <0.060 | <0.060 | <0.0060 | <0.0060 | <0.030 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.003 | <0.0060 |
| Fluoranthene | 1,000 | <0.0060 | <0.0060 | <0.0060 | <0.060 | <0.060 | <0.0060 | <0.0060 | <0.030 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.012 | <0.0060 |
| Fluorene | 1,000 | 0.016 | <0.0060 | 0.054 | <0.060 | <0.060 | <0.0060 | <0.0060 | <0.030 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | 0.021 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | 0.0062 | <0.0060 | <0.012 | <0.0060 |
| Indeno(1,2,3-cd)pyrene | 0.22 | <0.0060 | <0.0060 | <0.0060 | <0.060 | <0.060 | <0.0060 | <0.0060 | <0.030 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.030 | <0.0060 |
| Naphthalene | 23 | 0.4 | 0.074 | 1.5 | 0.2 | 0.48 | 0.12 | 0.017 | 0.19 | 0.32 | 0.2 | 0.19 | 0.21 | 0.037 | 0.64 | <0.20 | <0.0060 | <0.0060 | 0.26 | <0.020 | <0.020 | <0.020 | 0.14 | <0.020 | 0.079 | 0.0802 |
| Phenanthrene | NA | 0.014 | 0.0071 | 0.032 | <0.060 | <0.060 | 0.0062 | 0.0096 | 0.024 | 0.046 | 0.025 | 0.066 | 0.011 | 0.024 | 0.014 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.040 | 0.00722 |
| Pyrene | 1,000 | <0.0060 | <0.0060 | <0.0060 | <0.060 | <0.060 | <0.0060 | <0.0060 | 0.0079 | 0.053 | 0.0068 | 0.055 | <0.0060 | 0.012 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.0060 | <0.040 | <0.0060 |

| Metals | | COGCC MCL (mg/kg) | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---------|-------------------|--------|--------|--------|-------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|-------|-------|------|
| Chromium, Hexavalent | 23 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <10 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| Chromium, Trivalent | 120,000 | 12 | 12 | 14 | 10 | 9.5 | 12 | 11 | 9.2 | 8.2 | 7.6 | 11 | 17 | 10 | 14 | 8.4 | 15 | 16 | 11 | 13 | 21 | 18 | 9.8 | 10 | 4.4 | 7.4 |
| Arsenic | 0.39 | 6.6 | 1.3 | 8.8 | <0.38 | 5.5 | 5.8 | 6.4 | 6.6 | 7.1 | 5.8 | 24 | 8 | 6.6 | 11 | 7.7 | 9.4 | 10 | 8 | 14 | 13 | 12 | 3.6 | 89 | 10.2 | 8.4 |
| Barium | 15,000 | 350 | 200 | 260 | 280 | 350 | 240 | 240 | 200 | 150 | 150 | 1500 | 260 | 780 | 220 | 320 | 300 | 320 | 250 | 580 | 320 | 420 | 190 | 260 | 232 | 270 |
| Cadmium | 70 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | 0.26 | <0.25 | <0.25 | 0.5 | 0.39 | 0.5 | <0.25 | 0.26 | <0.25 | <0.25 | <0.25 | 0.32 | <0.25 | <0.25 | 0.37 | <1.2 | 0.573 | ND |
| Chromium | NA | 12 | 12 | 14 | 10 | 9.5 | 12 | 11 | 9.2 | 8.2 | 7.6 | 11 | 17 | 10 | 14 | 8.4 | 15 | 16 | 11 | 13 | 21 | 18 | 9.8 | 10 | 4.45 | 7.4 |
| Copper | 3,100 | 14 | 20 | 16 | 12 | 9.2 | 15 | 14 | 15 | 22 | 11 | 33 | 18 | 16 | 12 | 13 | 16 | 16 | 10 | 30 | 26 | 17 | 9.6 | 22 | 13.4 | 14 |
| Lead | 400 | 12 | 15 | 9.4 | 6 | 6.7 | 13 | 6.2 | 7.6 | 9 | 5.8 | 13 | 8.8 | 6.7 | 8 | 5.4 | 9.5 | 8.2 | 6.8 | 12 | 13 | 9.6 | 5.6 | 18 | 9.22 | 9.2 |
| Nickel | 1,600 | 12 | 16 | 12 | 8.7 | 11 | 12 | 13 | 14 | 13 | 11 | 19 | 17 | 14 | 13 | 11 | 11 | 11 | 9.9 | 21 | 18 | 15 | 12 | 29 | 13.8 | 14 |
| Mercury | 1,600 | 0.024 | <0.020 | <0.020 | <0.020 | 0.031 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | 0.033 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | 0.051 | <0.020 | <0.020 | <0.020 | 0.11 | ND | ND |
| Selenium | 390 | 3.7 | 4 | 2.2 | 3.7 | 2.4 | 3.8 | 2.4 | <1.0 | <1.0 | <1.0 | <1.0 | 1.9 | <1.0 | 1.4 | <1.0 | 2.2 | 1.7 | <1.0 | 1.9 | 1.3 | 1.1 | <1.0 | 5.7 | ND | ND |
| Silver | 390 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | <2.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | ND | ND |
| Zinc | 23,000 | 64 | 76 | 57 | 58 | 55 | 70 | 61 | 52 | 46 | 40 | 59 | 64 | 59 | 47 | 42 | 54 | 53 | 40 | 66 | 59 | 56 | 48 | 68 | 52.9 | 46 |

| General Chemistry | | COGCC MCL (mg/kg) | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-----|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| pH | 6-9 | 8.4 | 9.1 | 8.4 | 9.1 | 8.8 | 9.1 | 8.8 | 8 | 8.7 | 8.1 | 8.5 | 8.7 | 8.8 | 8.2 | 8.6 | 8.5 | 8.4 | 8.4 | 8.1 | 8.3 | 8.1 | 8.8 | 8.3 | 8.48 | 8.58 |
| Sodium Adsorption Ratio | <12 | 5.8 | 7.9 | 3 | 9.1 | 1.8 | 6 | 1.4 | 4.2 | 6.7 | 2.6 | 5.8 | 5.6 | 6 | 1.5 | 5.2 | 2.6 | 4.4 | 9.2 | 6.3 | 3 | 4.6 | 5.6 | 4.4 | 1.9 | 1.7 |
| Specific Conductivity | | | | | | | | | | | | | | | | | | | | | | | | | | |

Table 2
OXY USA WTP LP
CC 705-22-43
SVE Monitoring Summary

| Date | Exhaust Flow (cfm) | Sample Results | | | | | SVE Hours | Total Pounds Benzene Removed | Total Pounds TPH Removed |
|-----------|--------------------|---------------------------|---------------------------|--------------------------------|--------------------------|--------------------------|-----------|------------------------------|--------------------------|
| | | Benzene ug/m ³ | Toluene ug/m ³ | Ethylbenzene ug/m ³ | Xylene ug/m ³ | TPH (mg/m ³) | | | |
| 7/28/2014 | 500 | | | | | | 22227 | | |
| 7/31/2014 | 480 | 3290 | 6900 | 169 | 3710 | 209 | 22292 | 0.10 | 0.1 |
| 8/6/2014 | 500 | 1600 | 5300 | 330 | 4800 | 356 | 22392 | 0.68 | 90.98 |
| 8/13/2014 | 480 | 1000 | 4100 | 480 | 2700 | 232 | 22569 | 1.00 | 164.74 |
| 8/20/2014 | 480 | 1100 | 5700 | 430 | 5200 | 279 | 22735 | 1.33 | 247.94 |
| 10/3/2014 | 480 | 300 | 1000 | 310 | 1000 | 58.9 | 23144 | 1.55 | 291.21 |
| 1/13/2015 | 460 | 260 | 870 | 350 | 4800 | 92.2 | 25469 | 2.59 | 660.23 |
| 5/19/2015 | 420 | 8.5 | 41 | 3.4 | 300 | 2.4 | 28142 | 2.63 | 670.31 |

italics - indicates analyte was not detected by the laboratory and the detection limit was used for the calculation

BH8 Comparative Soil Vapor Results

| Date | ppbV | | | | |
|-----------------------------|---------|---------|--------------|--------|---------|
| | Benzene | Toluene | Ethylbenzene | Xylene | TPH |
| 2/27/2014 (pilot test) | 8870 | 4770 | <800 | 3520 | 2251000 |
| 1/30/2015 (progress sample) | 3.3 | 33 | 3.9 | 45 | 17000 |

BTEX / TPH Removal - Calculated from Analytical Data

Table 3
 OXY USA WTP LP
 CC 705-22-43
 Water Monitoring Summary

| Location / Date Sampled | Organics | | | | | Inorganics | | | Field Parameters | | | | |
|---------------------------------|----------|-----------------------------------|---------------------------------|--------------------------------------|----------------------------------|-----------------------------|-----------------------------------|----------------------------------|------------------|------|----------------------|---------------------------|-----------------|
| | TPH | Benzene, mg/L (MCL=0.005 mg/L) | Toluene, mg/L (MCL=1.0 mg/L) | Ethylbenzene, mg/L (MCL=0.7 mg/L) | Xylenes, mg/L (MCL=10.0 mg/L) | TDS, mg/L (MCL=<1.25xBG) | Chlorides, mg/L (MCL=<1.25xBG) | Sulfates, mg/L (MCL=<1.25xBG) | TDS, mS/cm | pH | Specific Conductance | Dissolved Oxygen, mg/L | Temperature, °C |
| Conn Creek - Guard Shack | | | | | | | | | | | | | |
| 1/11/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 810 | 85 | 170 | 900 | 8.28 | 1.16 | | 6.6 |
| 1/12/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 750 | 84 | 170 | | 8.48 | 1.12 | | 5.2 |
| 1/13/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 760 | 84 | 180 | 900 | 8.69 | 1.14 | | 5.4 |
| 1/14/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 770 | 83 | 170 | 900 | 9.23 | 1.14 | | 3.4 |
| 1/15/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 770 | 83 | 170 | 900 | 8.49 | 1.16 | | 5.0 |
| 1/16/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 820 | 85 | 180 | 900 | 8.62 | 1.16 | | 5.0 |
| 1/17/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 730 | 83 | 170 | 619 | 7.88 | 1.24 | 10.0 | 6.2 |
| 1/18/2013 | | | | | | | | | 1000 | 8.62 | 1.15 | | 5.5 |
| 1/21/2013 | | | | | | | | | 900 | 8.39 | 1.16 | | 4.5 |
| 1/23/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 760 | 83 | 180 | 900 | 8.69 | 1.15 | 18.1 | 9.0 |
| 1/25/2013 | | | | | | | | | 900 | 8.50 | 1.13 | 18.3 | 7.0 |
| 1/28/2013 | | | | | | | | | 800 | 8.41 | 1.14 | 13.6 | 6.7 |
| 1/30/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 800 | 82 | 170 | 1000 | 8.73 | 1.18 | 19.3 | 4.0 |
| 2/1/2013 | | | | | | | | | 900 | 8.42 | 1.17 | 19.0 | 5.3 |
| 2/4/2013 | | | | | | | | | 900 | 8.31 | 1.15 | 18.6 | 7.2 |
| 2/6/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 720 | 78 | 170 | 900 | 8.49 | 1.07 | 14.1 | 8.4 |
| 2/8/2013 | | | | | | | | | 800 | 8.53 | 1.16 | 10.1 | 5.1 |
| 2/11/2013 | | | | | | | | | 900 | 8.49 | 1.14 | 19.0 | 5.9 |
| 2/13/2013 | 0.11 | <0.001 | <0.005 | <0.001 | <0.003 | 750 | 83 | 170 | 1000 | 8.65 | 1.11 | 14.0 | 8.6 |
| 2/15/2013 | | | | | | | | | 900 | 8.52 | 0.14 | 18.6 | 6.3 |
| 2/18/2013 | | | | | | | | | 900 | 8.49 | 1.12 | 18.0 | 7.2 |
| 2/20/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 770 | 84 | 180 | 900 | 7.21 | 1.14 | 16.4 | 8.7 |
| 2/22/2013 | | | | | | | | | 800 | 7.74 | 1.17 | 16.9 | 6.0 |
| 2/25/2013 | | | | | | | | | 800 | 8.08 | 1.15 | | 8.3 |
| 2/27/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 780 | 84 | 180 | 1000 | 8.54 | 1.14 | | 8.2 |
| 3/1/2013 | | | | | | | | | 1000 | 8.64 | 1.16 | 14.4 | 7.7 |
| 3/4/2013 | | | | | | | | | 800 | 8.38 | 1.11 | 14.4 | 9.9 |
| 3/6/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 1000 | 83 | 180 | 900 | 8.65 | 1.13 | 18.1 | 11.4 |
| 3/13/2013 | | | | | | | | | 800 | 8.20 | 1.09 | 16.3 | 12.5 |
| 3/20/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 760 | 82 | 170 | 900 | 8.31 | 1.13 | 6.6 | 10.6 |
| 3/27/2013 | | | | | | | | | 800 | 8.31 | 1.09 | 9.5 | 12.0 |
| 4/3/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 500 | 84 | 180 | 900 | 7.95 | 1.09 | 8.0 | 14.8 |
| 4/10/2013 | | | | | | | | | 800 | 8.35 | 1.10 | 3.4 | 11.1 |
| 4/17/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 720 | 84 | 170 | 900 | 8.45 | 1.14 | 9.2 | 9.7 |
| 4/24/2013 | | | | | | | | | 800 | 8.31 | 1.15 | 8.5 | 13.8 |
| 5/1/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 740 | 80 | 170 | 900 | 7.69 | 1.19 | 8.4 | 12.8 |

Table 3
 OXY USA WTP LP
 CC 705-22-43
 Water Monitoring Summary

| Location / Date Sampled | Organics | | | | | Inorganics | | | Field Parameters | | | | |
|---------------------------------------|----------|-----------------------------------|---------------------------------|--------------------------------------|----------------------------------|-----------------------------|-----------------------------------|----------------------------------|------------------|------|----------------------|---------------------------|-----------------|
| | TPH | Benzene, mg/L (MCL=0.005 mg/L) | Toluene, mg/L (MCL=1.0 mg/L) | Ethylbenzene, mg/L (MCL=0.7 mg/L) | Xylenes, mg/L (MCL=10.0 mg/L) | TDS, mg/L (MCL=<1.25xBG) | Chlorides, mg/L (MCL=<1.25xBG) | Sulfates, mg/L (MCL=<1.25xBG) | TDS, mS/cm | pH | Specific Conductance | Dissolved Oxygen, mg/L | Temperature, °C |
| 5/8/2013 | | | | | | | | | 900 | 8.23 | 1.15 | 6.6 | 11.4 |
| 5/15/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 720 | 81 | 180 | 900 | 8.32 | 1.13 | 5.2 | 16.7 |
| 5/22/2013 | | | | | | | | | 800 | 8.41 | 1.14 | 5.1 | 16.5 |
| 5/30/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 770 | 80 | 170 | 800 | 8.49 | 1.15 | 5.6 | 11.7 |
| 6/5/2013 | | | | | | | | | 900 | 8.25 | 1.13 | 5.7 | 12.3 |
| 6/12/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 770 | 80 | 170 | 700 | 8.25 | 0.34 | 5.2 | 15.9 |
| 7/19/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 780 | 82 | 180 | 800 | 8.22 | 1.14 | 4.0 | 18.8 |
| 9/12/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 740 | 74 | 160 | 800 | 9.02 | 1.13 | 5.1 | 14.4 |
| 10/18/2013 | | | | | | | | | 800 | 8.35 | 0.16 | | 11.2 |
| 11/13/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 740 | 75 | 160 | 700 | 7.79 | | 3.6 | 11.2 |
| 12/10/2013 | | | | | | | | | 900 | 8.10 | 1.14 | 4.0 | 8.6 |
| 1/8/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 720 | 73 | 160 | 800 | 7.30 | 1.14 | 7.1 | 7.3 |
| 5/21/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | NA | 69 | 160 | 806 | 8.22 | 1.25 | 6.9 | 12.1 |
| 8/28/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | N/A | 73 | 160 | 773 | 8.25 | 1.19 | 8.1 | 11.9 |
| 10/21/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | N/A | 74 | 160 | 813 | 8.35 | 1.25 | 6.2 | 11.0 |
| 12/3/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 800 | 93 | 160 | 799 | 8.22 | 1.23 | 8.5 | 8.2 |
| 1/21/2015 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | N/A | 85 | 160 | 839 | 8.30 | 1.29 | 10.2 | 6.4 |
| Water Well - CCFO Field Office | | | | | | | | | | | | | |
| 1/11/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 640 | 7 | 180 | | | | | |
| 1/12/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 680 | 7 | 180 | | 8.93 | 0.94 | | 9.4 |
| 1/13/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 670 | 7 | 180 | | 8.11 | 1.50 | | 10.7 |
| 1/14/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 660 | 7 | 190 | 800 | 8.33 | 0.95 | | 13.0 |
| 1/15/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 600 | 7 | 180 | 800 | 7.87 | 0.89 | | 9.2 |
| 1/16/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 660 | 8 | 190 | 800 | 8.49 | 1.04 | | 9.0 |
| 1/17/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 650 | 7 | 180 | 572 | 7.66 | 1.06 | 13.4 | 10.1 |
| 1/18/2013 | | | | | | | | | 800 | 8.50 | 1.01 | | 11.2 |
| 1/21/2013 | | | | | | | | | 800 | 8.28 | 0.92 | | 11.6 |
| 1/23/2013 | 0.089 | <0.001 | <0.005 | <0.001 | <0.003 | 640 | 7 | 180 | 900 | 8.39 | 0.95 | 9.5 | 13.3 |
| 1/25/2013 | | | | | | | | | 800 | 7.21 | 0.97 | 17.7 | 10.7 |
| 1/28/2013 | | | | | | | | | 800 | 8.31 | 0.96 | 16.6 | 12.7 |
| 1/30/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 650 | 7 | 170 | 800 | 8.55 | 0.96 | 18.5 | 10.0 |
| 2/1/2013 | | | | | | | | | 800 | 8.49 | 0.97 | | 10.1 |
| 2/4/2013 | | | | | | | | | 700 | 9.66 | 0.86 | 11.9 | 11.1 |
| 2/6/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 650 | 10 | 180 | 800 | 8.55 | 0.96 | 18.4 | 13.1 |
| 2/8/2013 | | | | | | | | | 800 | 8.68 | 0.96 | 17.2 | 16.5 |
| 2/11/2013 | | | | | | | | | 800 | 8.52 | 0.95 | 17.1 | 16.4 |
| 2/13/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 650 | 7 | 180 | 800 | 8.53 | 0.95 | 13.0 | 15.0 |

Table 3
 OXY USA WTP LP
 CC 705-22-43
 Water Monitoring Summary

| Location / Date Sampled | Organics | | | | | Inorganics | | | Field Parameters | | | | |
|--|----------|-----------------------------------|---------------------------------|--------------------------------------|----------------------------------|-----------------------------|-----------------------------------|----------------------------------|------------------|------|----------------------|---------------------------|-----------------|
| | TPH | Benzene, mg/L (MCL=0.005 mg/L) | Toluene, mg/L (MCL=1.0 mg/L) | Ethylbenzene, mg/L (MCL=0.7 mg/L) | Xylenes, mg/L (MCL=10.0 mg/L) | TDS, mg/L (MCL=<1.25xBG) | Chlorides, mg/L (MCL=<1.25xBG) | Sulfates, mg/L (MCL=<1.25xBG) | TDS, mS/cm | pH | Specific Conductance | Dissolved Oxygen, mg/L | Temperature, °C |
| 2/15/2013 | | | | | | | | | 700 | 8.29 | 0.95 | 17.8 | 15.0 |
| 2/18/2013 | | | | | | | | | 800 | 8.48 | 0.99 | 13.1 | 15.2 |
| 2/20/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 660 | 7 | 180 | 800 | 7.10 | 0.97 | 16.7 | 12.0 |
| 2/22/2013 | | | | | | | | | 800 | 7.36 | 0.96 | 17.7 | 13.5 |
| 2/25/2013 | | | | | | | | | 800 | 7.91 | 0.98 | | 14.5 |
| 2/27/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 670 | 78 | 140 | 900 | 8.46 | 1.00 | | 13.9 |
| 3/1/2013 | | | | | | | | | 800 | 8.52 | 0.97 | 14.1 | 14.1 |
| 3/4/2013 | | | | | | | | | 800 | 8.34 | 0.95 | 13.5 | 13.8 |
| 3/6/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 730 | 7 | 180 | 800 | 8.44 | 0.99 | 16.2 | 13.6 |
| 3/13/2013 | | | | | | | | | 700 | 8.27 | 0.95 | 15.4 | 15.0 |
| 3/20/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 670 | 8 | 180 | 700 | 8.28 | 0.96 | 1.9 | 14.3 |
| 3/27/2013 | | | | | | | | | 700 | 8.28 | 0.94 | 2.1 | 16.7 |
| 4/3/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 500 | 7 | 170 | 700 | 8.19 | 0.96 | 1.8 | 16.2 |
| 4/10/2013 | | | | | | | | | 800 | 8.13 | 0.95 | 2.2 | 17.0 |
| 4/17/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 680 | 8 | 190 | 900 | 8.29 | 0.81 | 2.4 | 12.9 |
| 4/24/2013 | | | | | | | | | 800 | 8.39 | 1.01 | 1.5 | 15.7 |
| 5/1/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 640 | 55 | 150 | 900 | 8.11 | 1.02 | 1.5 | 16.2 |
| 5/8/2013 | | | | | | | | | 800 | 7.91 | 0.98 | 1.9 | 16.8 |
| 5/15/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 720 | 120 | 150 | 800 | 8.43 | 1.15 | 1.6 | 16.7 |
| 5/22/2013 | | | | | | | | | 800 | 8.36 | 0.96 | 1.1 | 20.1 |
| 5/23/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 640 | 8 | 180 | 900 | 8.04 | 0.96 | 1.2 | 17.8 |
| 6/5/2013 | | | | | | | | | 800 | 8.17 | 0.95 | 1.6 | 17.6 |
| 6/12/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 660 | 8 | 180 | 800 | 8.13 | 0.97 | 1.1 | 20.8 |
| 7/19/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 630 | 27 | 160 | 800 | 8.21 | 0.95 | 0.8 | 23.7 |
| 9/12/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 650 | 7 | 180 | 800 | 8.43 | 0.95 | 0.6 | 22.7 |
| 10/18/2013 | | | | | | | | | 800 | 8.23 | 0.55 | | 16.4 |
| 11/13/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 650 | 8 | 180 | 800 | 8.13 | 0.80 | 1.3 | 19.5 |
| 12/10/2013 | | | | | | | | | 800 | 8.24 | 0.99 | 1.5 | 12.9 |
| 1/8/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 640 | 7 | 170 | 700 | 7.85 | 0.38 | 2.2 | 17.5 |
| 5/21/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | | 7 | 180 | 810 | 7.81 | 2.77 | 1.4 | 20.6 |
| 8/28/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | | 8 | 180 | 676 | 7.94 | 1.04 | 0.6 | 22.2 |
| 12/3/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 696 | 93 | 160 | 695 | 7.89 | 1.07 | 0.7 | 18.4 |
| 1/21/2015 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | N/A | 64 | 170 | 430 | 8.35 | 0.66 | 1.3 | 11.3 |
| Surface Water - 797-06-07 Creek | | | | | | | | | | | | | |
| 1/11/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 750 | 86 | 150 | 900 | 8.33 | 1.09 | | 7.5 |
| 1/12/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 730 | 83 | 150 | | | | | |
| 1/13/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 690 | 86 | 150 | 900 | 8.05 | 1.10 | | 6.4 |

Table 3
 OXY USA WTP LP
 CC 705-22-43
 Water Monitoring Summary

| Location / Date Sampled | Organics | | | | | Inorganics | | | Field Parameters | | | | |
|-------------------------------|----------|-----------------------------------|---------------------------------|--------------------------------------|----------------------------------|-----------------------------|-----------------------------------|----------------------------------|------------------|------|----------------------|---------------------------|-----------------|
| | TPH | Benzene, mg/L (MCL=0.005 mg/L) | Toluene, mg/L (MCL=1.0 mg/L) | Ethylbenzene, mg/L (MCL=0.7 mg/L) | Xylenes, mg/L (MCL=10.0 mg/L) | TDS, mg/L (MCL=<1.25xBG) | Chlorides, mg/L (MCL=<1.25xBG) | Sulfates, mg/L (MCL=<1.25xBG) | TDS, mS/cm | pH | Specific Conductance | Dissolved Oxygen, mg/L | Temperature, °C |
| 1/14/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 720 | 82 | 150 | 900 | 8.14 | 1.07 | | 8.4 |
| 1/15/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 720 | 82 | 150 | 900 | 8.32 | 1.07 | | 5.1 |
| 1/16/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 700 | 84 | 150 | 900 | 8.27 | 1.13 | | 6.6 |
| 1/17/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 740 | 82 | 150 | 600 | 8.09 | 1.20 | 13.4 | 8.7 |
| 1/18/2013 | | | | | | | | | 900 | 8.23 | 1.10 | | 8.6 |
| 1/21/2013 | | | | | | | | | 900 | 8.51 | 1.06 | | 8.6 |
| 1/23/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 720 | 81 | 160 | 900 | 8.35 | 1.08 | 13.4 | 9.1 |
| 1/25/2013 | | | | | | | | | 900 | 8.55 | 1.05 | 12.3 | 9.3 |
| 1/28/2013 | | | | | | | | | 800 | 8.50 | 1.06 | 18.3 | 9.0 |
| 1/30/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 730 | 79 | 150 | 900 | 8.45 | 1.09 | 16.1 | 8.5 |
| 2/1/2013 | | | | | | | | | 900 | 8.40 | 1.08 | 18.6 | 8.4 |
| 2/4/2013 | | | | | | | | | 900 | 8.39 | 1.08 | 13.6 | 8.6 |
| 2/6/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 720 | 41 | 160 | 800 | 8.38 | 1.08 | 19.0 | 8.8 |
| 2/8/2013 | | | | | | | | | 800 | 8.41 | 1.08 | 18.5 | 8.5 |
| 2/11/2013 | | | | | | | | | 900 | 8.45 | 1.08 | 17.7 | 8.7 |
| 2/13/2013 | 0.13 | <0.001 | <0.005 | <0.001 | <0.003 | 710 | 80 | 150 | 900 | 8.75 | 1.07 | 17.8 | 8.8 |
| 2/15/2013 | | | | | | | | | 800 | 8.60 | 1.05 | 17.8 | 8.7 |
| 2/18/2013 | | | | | | | | | 900 | 8.63 | 1.08 | 16.4 | 8.9 |
| 2/20/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 740 | 81 | 180 | 800 | 6.67 | 1.09 | 14.0 | 8.8 |
| 2/22/2013 | | | | | | | | | 800 | 7.54 | 1.08 | 18.3 | 8.6 |
| 2/25/2013 | | | | | | | | | 900 | 8.22 | 1.11 | | 8.3 |
| 2/27/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 720 | 82 | 150 | 900 | 9.01 | 1.12 | | 7.3 |
| 3/1/2013 | | | | | | | | | 900 | 8.66 | 1.07 | 12.0 | 9.1 |
| 3/4/2013 | | | | | | | | | 900 | 8.75 | 1.08 | 17.1 | 8.6 |
| 3/6/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 730 | 80 | 150 | 800 | 8.91 | 1.09 | 18.5 | 8.9 |
| 3/13/2013 | | | | | | | | | 700 | 8.33 | 1.07 | 17.0 | 8.9 |
| 3/20/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 710 | 78 | 150 | 900 | 5.85 | 1.08 | 8.9 | 9.9 |
| 3/27/2013 | | | | | | | | | 800 | 8.27 | 1.08 | 7.2 | 8.9 |
| 4/3/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 600 | 79 | 150 | 900 | 8.03 | 1.12 | 4.1 | 9.9 |
| 4/10/2013 | | | | | | | | | 900 | 8.10 | 1.12 | 3.9 | 8.6 |
| 4/17/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 740 | 78 | 150 | 900 | 8.06 | 0.30 | 4.5 | 8.6 |
| 4/24/2013 | | | | | | | | | 800 | 7.92 | 1.19 | 4.8 | 10.5 |
| 5/1/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 700 | 77 | 140 | 800 | 7.95 | 1.11 | 4.3 | 9.4 |
| 5/8/2013 | | | | | | | | | 900 | 8.04 | 1.12 | 3.6 | 9.0 |
| 5/15/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 700 | 76 | 150 | 700 | 8.12 | 1.12 | 3.5 | 13.1 |
| 5/22/2013 | | | | | | | | | 700 | 8.37 | 1.13 | 3.5 | 9.9 |
| 5/23/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 730 | 78 | 150 | 900 | 7.82 | 1.14 | 3.7 | 9.6 |

Table 3
 OXY USA WTP LP
 CC 705-22-43
 Water Monitoring Summary

| Location / Date Sampled | Organics | | | | | Inorganics | | | Field Parameters | | | | |
|-------------------------------|----------|-----------------------------------|---------------------------------|--------------------------------------|----------------------------------|-----------------------------|-----------------------------------|----------------------------------|------------------|------|----------------------|---------------------------|-----------------|
| | TPH | Benzene, mg/L (MCL=0.005 mg/L) | Toluene, mg/L (MCL=1.0 mg/L) | Ethylbenzene, mg/L (MCL=0.7 mg/L) | Xylenes, mg/L (MCL=10.0 mg/L) | TDS, mg/L (MCL=<1.25xBG) | Chlorides, mg/L (MCL=<1.25xBG) | Sulfates, mg/L (MCL=<1.25xBG) | TDS, mS/cm | pH | Specific Conductance | Dissolved Oxygen, mg/L | Temperature, °C |
| 6/5/2013 | | | | | | | | | 800 | 8.01 | 1.17 | 3.5 | 10.1 |
| 6/12/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 740 | 76 | 150 | 600 | 8.13 | 1.15 | 3.2 | 10.3 |
| 7/19/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 720 | 74 | 160 | 800 | 8.68 | 1.11 | 2.9 | 12.1 |
| 9/12/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 690 | 73 | 150 | 900 | 8.29 | 1.13 | 3.0 | 12.3 |
| 10/18/2013 | | | | | | | | | 800 | 7.92 | 0.34 | 3.3 | 12.4 |
| 11/13/2013 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 710 | 71 | 140 | 800 | 8.15 | | 6.5 | 14.7 |
| 12/10/2013 | | | | | | | | | 800 | 8.55 | 1.20 | 8.3 | 3.7 |
| 1/8/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 710 | 70 | 140 | 800 | 7.43 | 0.83 | 3.8 | 9.2 |
| 5/21/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | NA | 69 | 140 | 442 | 7.74 | 0.68 | 5.0 | 11.9 |
| 8/21/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 840 | 70 | 150 | 819 | 7.85 | 1.25 | 4.4 | 11.3 |
| 10/21/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | N/A | 74 | 160 | 813 | 7.70 | 1.25 | 3.4 | 10.3 |
| 11/24/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | N/A | 48 | 150 | 552 | 7.62 | 0.85 | 2.2 | 9.5 |
| 12/1/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | N/A | 85 | 150 | 760 | 7.61 | 1.17 | 2.1 | 9.4 |
| 12/8/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 786 | 80 | 140 | 786 | 7.68 | 1.21 | 3.4 | 9.5 |
| 12/15/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 786 | 83 | 150 | 786 | 7.60 | 1.21 | 2.6 | 8.9 |
| 12/22/2014 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | 793 | 97 | 140 | 793 | 7.59 | 1.22 | 2.2 | 8.8 |
| 1/21/2015 | <0.2 | <0.001 | <0.005 | <0.001 | <0.003 | N/A | 94 | 140 | 445 | 7.58 | 0.69 | 3.5 | 7.1 |