



Tyson Ertel  
HES Advisor  
OXY USA WTP LP, OXY USA Inc.  
760 Horizon Drive, Suite 101  
Grand Junction, CO 81506

Re: OXY USA WTP LP, Cascade Creek 705-22-43, Preliminary Investigation Summary  
Report, Garfield County, Colorado, Olsson Project No. 013-0242

Dear Mr. Ertel:

The following letter report below summarizes Olsson Associates, Inc. (Olsson) investigation activities for the referenced location.

### **Project Background Summary**

On January 11, 2013, it was discovered by OXY USA WTP LP (Oxy) that valve failure due to freezing conditions on one of the two production tanks on the Oxy Cascade Creek (CC) 705-22-43 (site) resulted in the release of approximately 180 barrels (bbls) of a production water condensate mixture into an unlined secondary containment. The Colorado Oil and Gas Conservation Commission (COGCC) was verbally notified of the release on January 12, 2013. Approximately one bbl breached containment and flowed to the north along the 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 for future disposal.

### **Site Setting**

The site is located in the southeast quarter of the northwest quarter of Section 5, Township 7 South, Range 97 West, Sixth Principal Meridian in Garfield County, Colorado (39.47766 latitude and -108.24353 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 CC 705-22-43). The site location is depicted on the Site Map included as Figure 1.

### **Source Investigation**

On January 15, 2013 Olsson provided environmental oversight for a hydro-excavator to pothole three locations adjacent to the secondary containment to depths ranging from 6 feet to 12 feet below ground surface (ft-bgs) to assess the extent of the release, however no impact was observed.

On February 8, 2013 Olsson conducted a preliminary site investigation to assess subsurface soil impacts associated with the release by advancing at selected locations on the site

### **Subsurface Investigation**

On January 15, 2013 a “hydro-excavator” completed “potholing” (PH) activities to determine potential release material migration corridors, see attached Figure 2 – Boring Locations. Prior to potholing, Oxy temporarily suspended production at the site and buried utility and pipeline locates were conducted. Pothole 1 PH1 was located outside of the secondary containment adjacent to the production pipelines from the separators to the aboveground tanks (ASTs). Pothole PH1 advanced approximately seven ft-bgs. Pothole PH2 was located at the southwest corner of the secondary containment to identify potential migration along the CC 705-22-43 sales pipeline to the west. Pothole PH2 depth was advanced approximately seven ft-bgs. PH3 was located at the west edge of the CC 705-22-43 pad along the sales pipeline right-of-way (ROW) to determine potential migration along the existing pipeline corridor. Pothole PH3 was advanced to approximately 12 ft-bgs and consists of shale talus fill material. During the potholing activities, no apparent petroleum-impacted soil impacts were encountered.

On February 8th, 2013 Olsson advanced five soil borings (BH1 to BH4, and BH9) at selected locations on site to assess the extent of contamination. Drilling services were provided by High Plains Drilling of Denver, Colorado using a drill rig equipped with 6-inch hollow stem auger. Soil samples were collected continuously (lithology permitting) using a split-spoon sampler. Where the split-spoon sampler was unusable due to subsurface conditions, the auger was used to advance the boring through the rocky zone to a point where the split-spoon sampler could be utilized for continuous sampling. An Olsson geologist documented the site lithology, examined the soils for suspected environmental impact (i.e. chemical staining and/or odors), and field screened the soils using a photo-ionization detector (PID) for the presence of volatile organic vapors as the borings were advanced.

Boring BH1, was located on the south edge of the secondary containment, was advanced to a total depth of 35 ft-bgs. Petroleum-impacted soils were observed between 25 and 30 ft-bgs. Boring BH2 was located at the southwest corner of the existing containment was advanced to 38 ft-bgs. Petroleum-impacted soil was observed between 25 and 30 ft-bgs. Boring BH3 was located immediately west of the west wall of the secondary containment and was advanced to a total depth of 22 ft-bgs. Petroleum-impacted soil was observed between 15 and 21 ft-bgs. Boring BH4 was located northwest of the existing tanks within the access road and was advanced to a total depth of 14 ft-bgs. Boring BH9 was located south of the southwest corner of the secondary containment and was advanced to 34 ft-bgs.

The field soil screening method involved placing a representative sample from each soil core interval into plastic bags, sealing the bags, and allowing the bag contents to equilibrate to the surrounding ambient conditions. The intake probe of a Mini-Rae photo-ionization detector (PID) was inserted into the individual sample bags to measure the volatile organic vapors desorbed from the impacted soils into the headspace of the bag. The PID readings were recorded in

parts per million (ppm). The PID headspace screening measurements ranged from less than 1 ppm to 2,500 ppm (boring BH2 at 26 ft-bgs), as shown on the attached boring logs. Field screen measurements are summarized in Table 1.

**Table 1 – PID Field Screening Measurements**

Boring	Sample Date	Depth (ft-bgs)	PID Reading (ppm)
PH1	1/15/13	6-7	6.5
PH2	1/15/13	6-7	2.7
PH3	1/15/13	11-12	1.3
BH1	2/8/13	25-30	1,450
BH2	2/8/13	25-30	2,500
BH3	2/8/13	20-22	1,938
BH4	2/8/13	10-14	14
BH9	2/8/13	15-20	3.5

ft-bgs – Feet below ground surface    ppm – Parts per million

Olsson prepared geologic cross sections depicting boring lithology and PID field screening measurements. Locations of the cross sections are shown on attached Figure 3. Cross section A to A' is included as Figure 4. Cross section B to B' is included as Figure 5.

Copies of pothole and boring logs are attached in Appendix A. Soil samples exhibiting the highest PID field screening measurements or indications of potential petroleum impact were collected for laboratory analysis which included the following COGCC Table 910-1 for soil constituents:

- Gasoline range hydrocarbons (GRO) using EPA Method 8015;
- Diesel range hydrocarbons (DRO) using EPA Method 8015;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8260B;
- Arsenic, barium, cadmium, chromium, copper, lead, nickel, selenium, silver, zinc using EPA Method 6010B;
- Mercury using EPA Method 7471;
- Hexavalent chromium using EPA Method 7196A;
- Poly-nuclear aromatic hydrocarbons (PAHs) using EPA Method 8270C – selected ion monitoring (SIM);
- Sodium absorption ration (SAR);
- Specific conductance (SC) using standard method (SM) 9050 Modified
- pH using SM 9045D; and
- Oxidation reduction potential (ORP) using SM 2580B-2011

## Laboratory Analytical Results

The laboratory analytical results are summarized in attached Table 2 and include the following:

- Total petroleum hydrocarbon (TPH – the sum of GRO plus DRO) was above the COGCC concentration level of 500 milligrams per kilogram (mg/kg) in soil samples BH1 (25-30 ft.) at 640 mg/kg, BH2 (25-30 ft.) at 3500 mg/kg, BH2 (37-38 ft.) at 1140 mg/kg, and BH3 (15-20 ft) at 790 mg/kg;
- Benzene was above the COGCC concentration level of 0.17 mg/kg in soil samples BH1 (25-30 ft.) at 0.28 mg/kg, BH2 (25-30 ft.) at 5.2 mg/kg, BH2 (37-38 ft.) at 0.83 mg/kg;
- Arsenic was above the COGCC concentration for arsenic of 0.39 mg/kg in soil samples BH1 (25-30 ft.) at 6.6 mg/kg, BH2 (25-30 ft.) at 1.3 mg/kg, BH2 (25-30 ft.) at 8.8 mg/kg, BH3 (15-20 ft.) at 5.5 mg/kg, BH3 (20-22 ft.) at 5.8 mg/kg, BH4 (10-14 ft.) at 6.4 mg/kg, BH4 (15-20 ft.) at 9.4 mg/kg, and BH9 (30-34 ft.) at 10 mg/kg; and
- pH was above the COGCC concentration level range of 6 to 9 pH units in soil samples BH1 (32-35 ft.), BH2 (37-38 ft.), and BH3 (20-22 ft.) at 9.1

## Summary

Field screening and laboratory analysis of soil samples collected from the boring locations partially assessed the extent of the contamination zone relating to the CC 705-22-43 release. Additional soil borings inside the secondary containment as well as southwest and west of the secondary containment area will aid in assessing the extent of the impacted area.

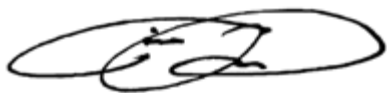
Olsson recommends temporary relocation of the storage tanks and secondary containment to allow for additional site characterization. Pending receipt of the laboratory analysis and field observations, Olsson recommends Oxy consider installing temporary wells to accommodate potential remediation or monitoring options.

Once the extent of contamination has been identified, Olsson will prepare a scope of work and cost estimate to complete a COGCC Form 27 Remediation Work Plan for the site.

Please call me if you have any questions.

Sincerely,

**Olsson Associates, Inc.**

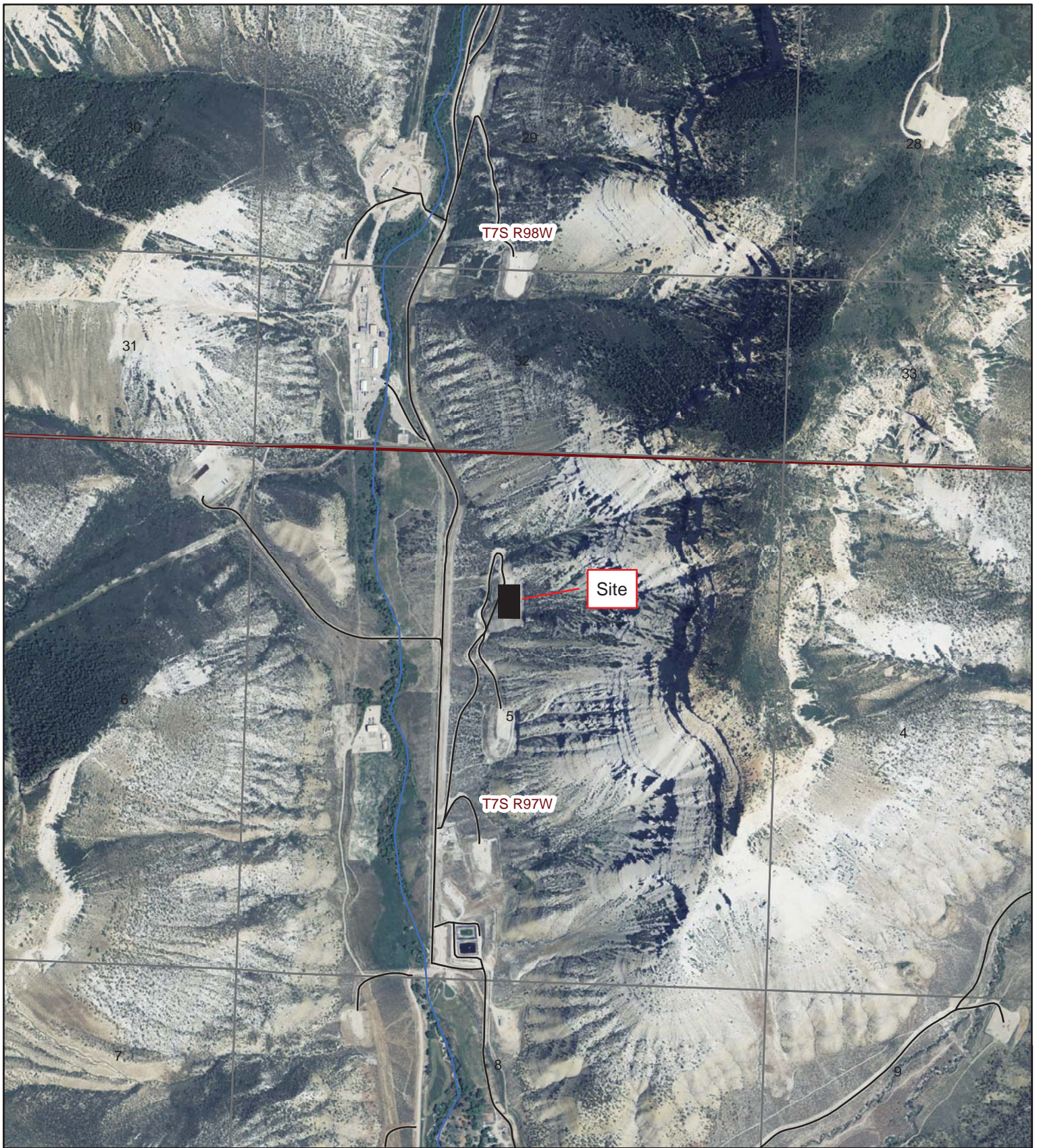





Tim Dobransky, CHMM  
Senior Scientist



Kevin J. Taylor, P.G.  
Senior Project Scientist



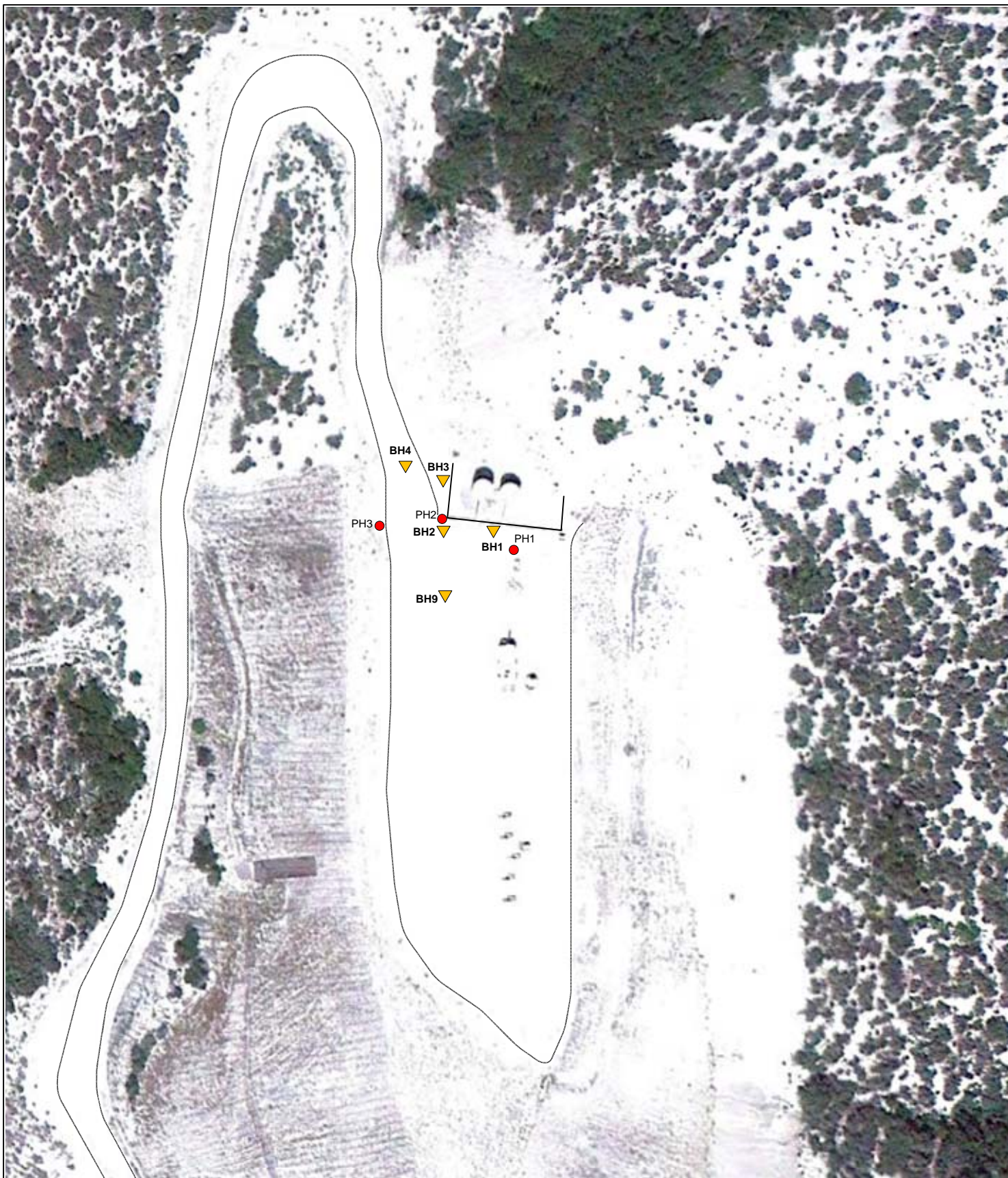


-  Conn Creek
-  Existing Road
-  705-22-43 well pad



PROJECT NO:	013-0242	<p>Site Map  CC 705-22-43 Pad  OXY USA WTP LP  Garfield County, Colorado</p>	 <p>760 HORIZON DRIVE, SUITE 102  GRAND JUNCTION, CO 81506  TEL 970.263.7800  FAX 970.263.7456</p>	FIGURE
DRAWN BY:	BKR			1
DATE:	04/02/2013			





Boring Locations 2/8/13



Locations Hydro-Excavated on 1/15/13



PROJECT NO: 013-0242  
 DRAWN BY: WWM  
 DATE: 2/20/2013

Boring Locations  
 CC 705-22-43 Pad  
 OXY USA WTP LP

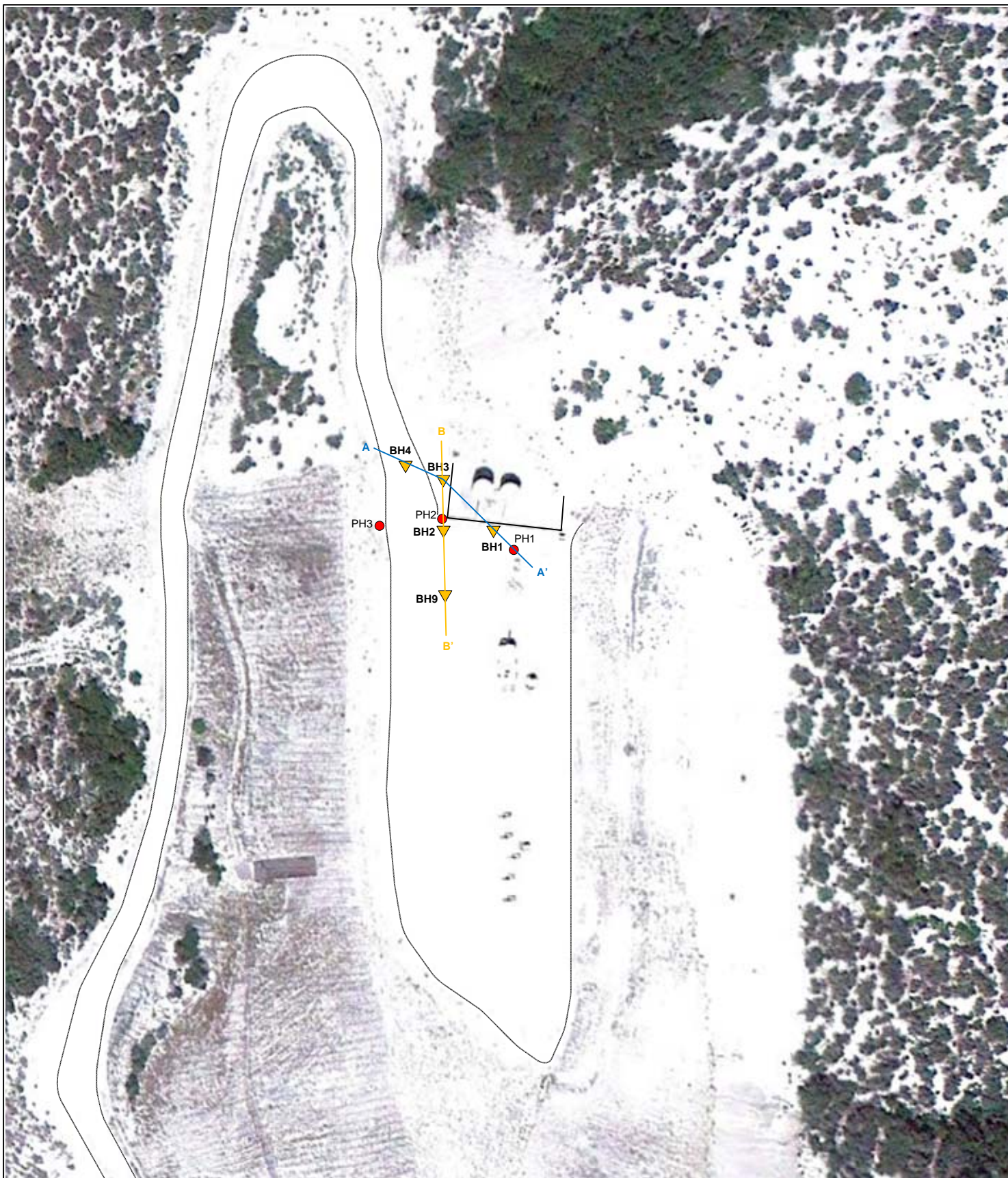
**OLSSON**  
 ASSOCIATES

826 21 $\frac{1}{2}$  Road  
 Grand Junction, CO 81505  
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 FAX 970.263.7456

FIGURE

2





Boring Locations 2/8/13



Cross Section



Locations Hydro-Excavated on 1/15/13



PROJECT NO: 013-0242

DRAWN BY: WWM

DATE: 2/20/2013

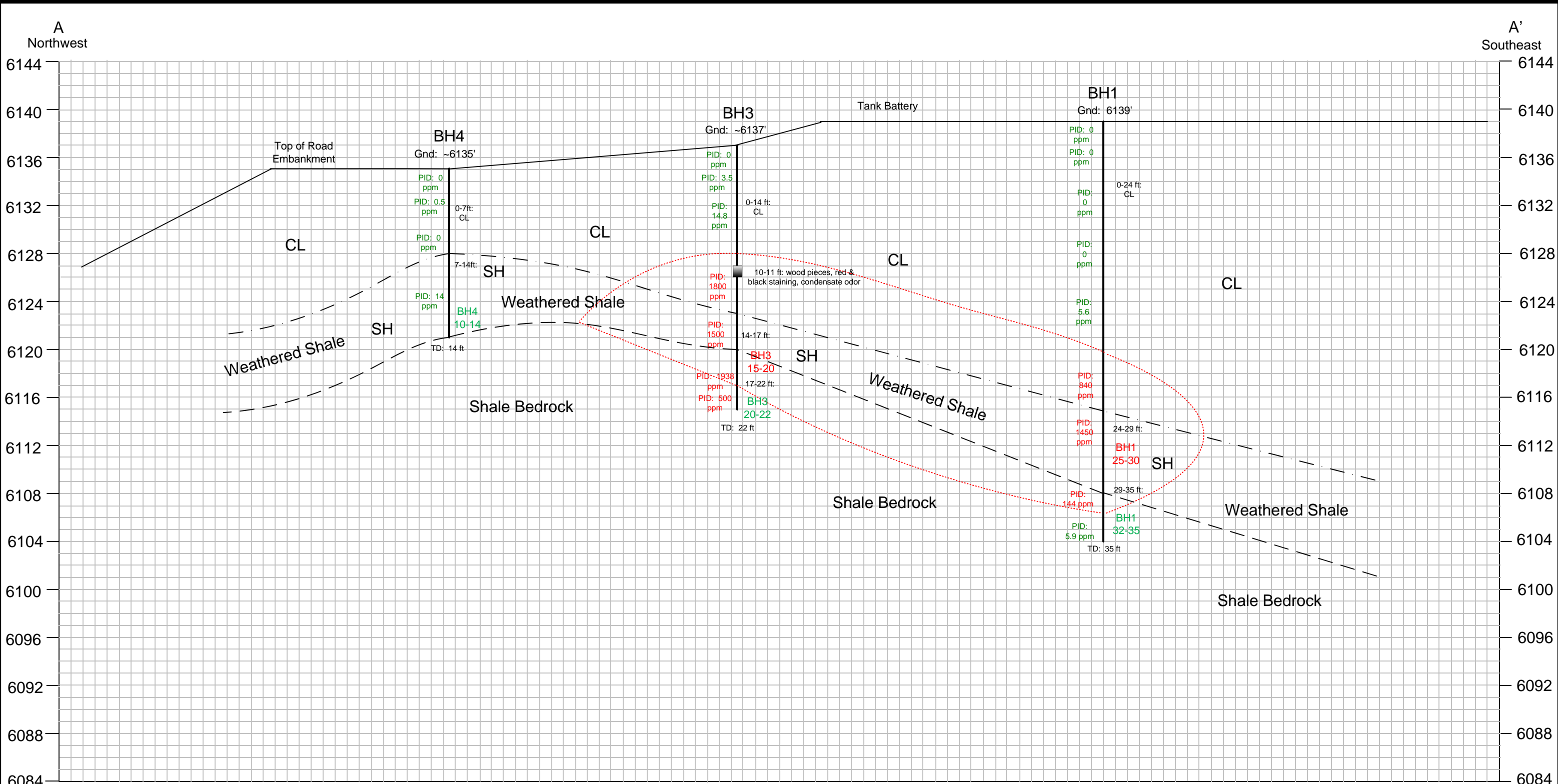
Cross Section Map  
CC 705-22-43 Pad  
OXY USA WTP LP

**OLSSON**  
ASSOCIATES

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Grand Junction, CO 81505  
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FAX 970.263.7456

FIGURE

3



**LEGEND:**

Unified Soil Classification System

- SC Clayey sands, sand – clay mixtures
- SH Shale
- CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays

- Estimated competent bedrock
- Estimated extent of contamination
- Estimated weathered bedrock contact
- Observed hydrocarbon staining

GND: Ground Elevation from COGCC Wellhead Data

BH1 OA soil boring location February 2013

PID: 41 ppm Photoionization Detector Reading in parts per million  
BH2 25-30 Soil Sample collected for laboratory analysis  
TD: 25 ft Total Depth in feet

No Vertical Exaggeration



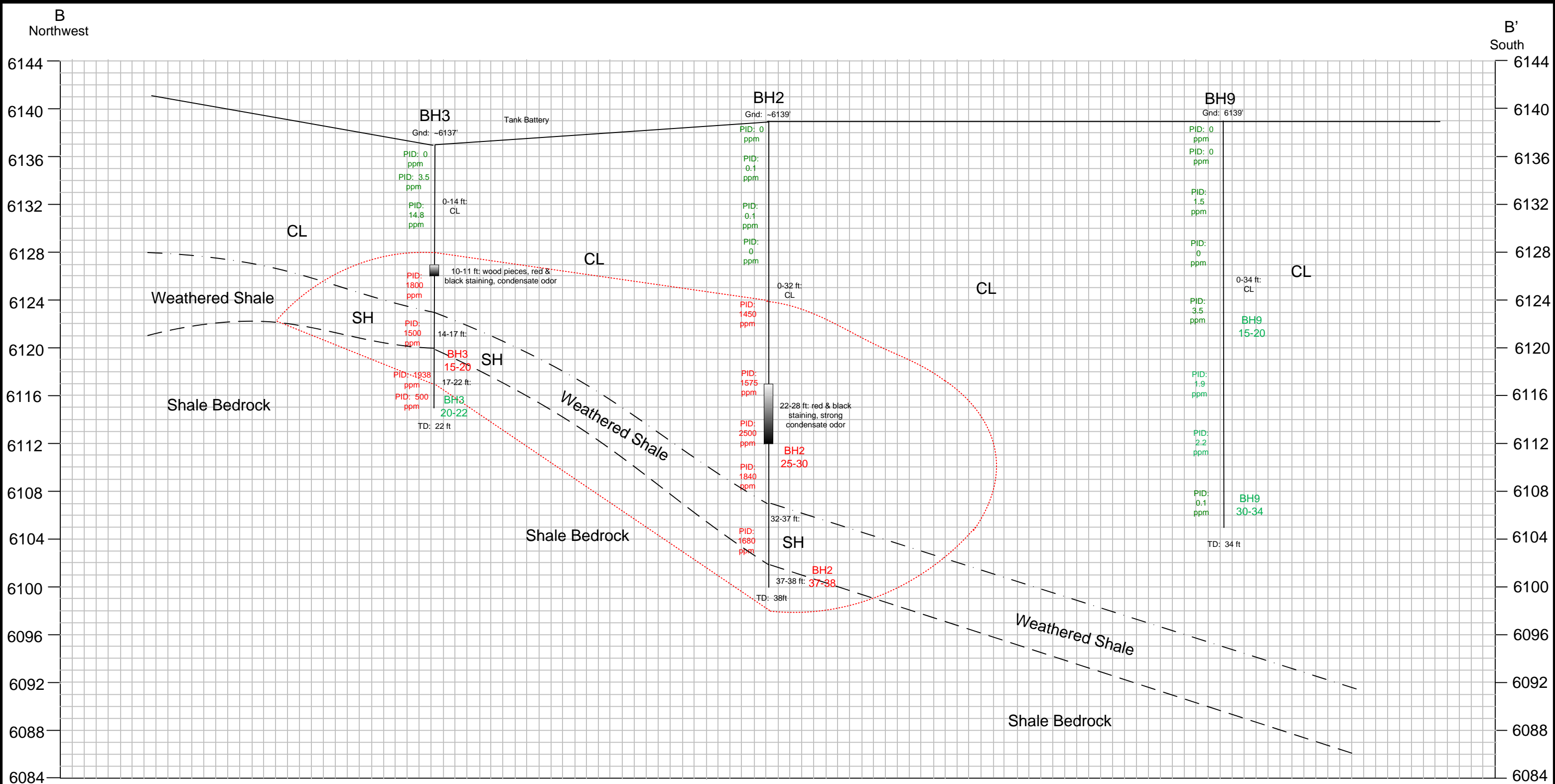
Approximate Scale: 1 inch = 8 feet

**Figure 4**  
**A-A' Geologic Cross-Section**  
**CC 705-22-43 Pad**

Revision Date	4/9/2013
Revision No.	
Revised By	WWM
Project No.	013-0242
Scale	As Shown







**LEGEND:**

Unified Soil Classification System

- CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
- SH Shale
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- Estimated competent bedrock
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- Estimated weathered bedrock contact
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GND: Ground Elevation from COGCC Wellhead Data

BH1 OA soil boring location February 2013

PID: 41 ppm Photoionization Detector Reading in parts per million  
BH2 25-30 Soil Sample collected for laboratory analysis  
TD: 25 ft Total Depth in feet

No Vertical Exaggeration

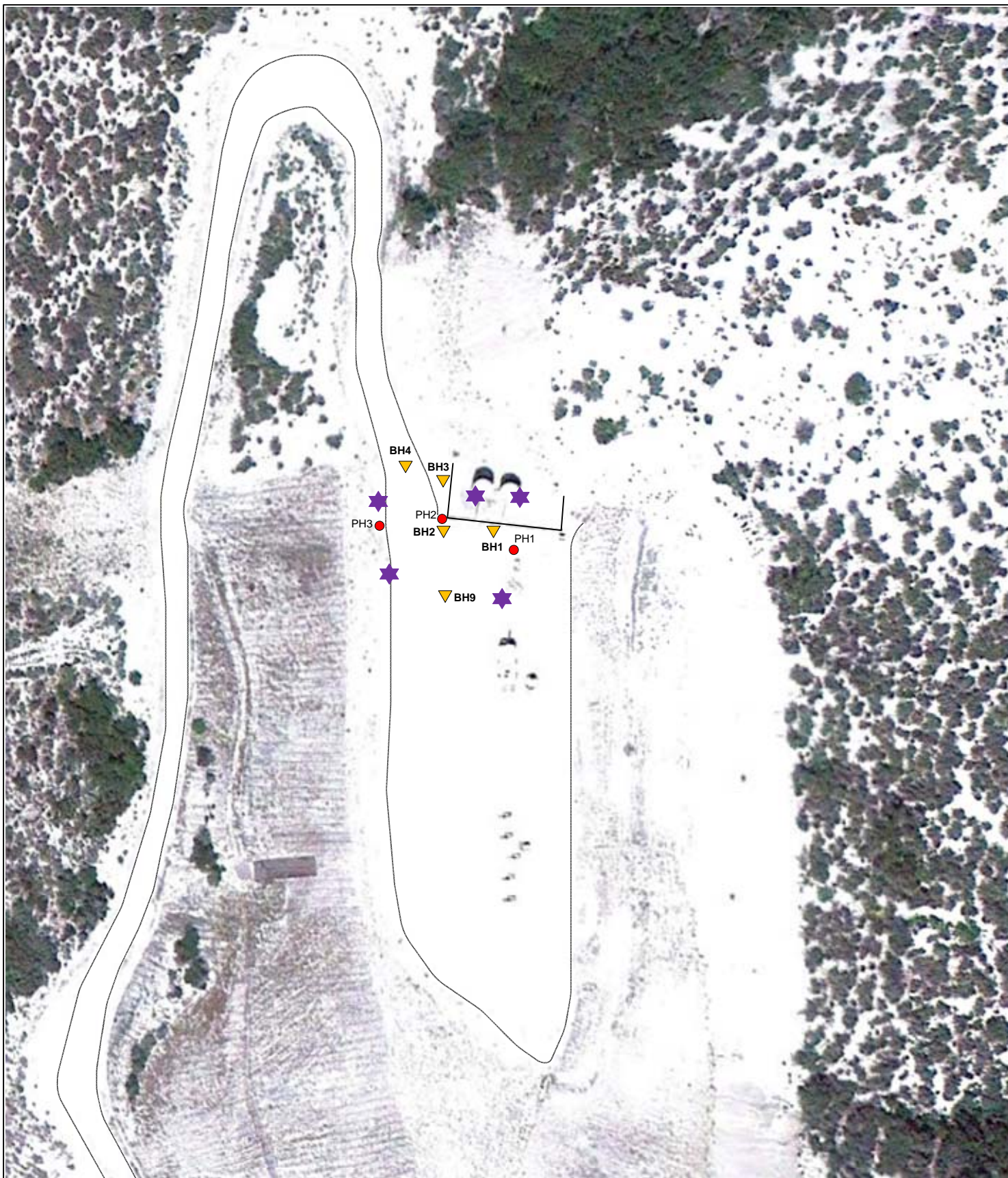


Approximate Scale: 1 inch = 8 feet

**Figure 5**  
**B-B' Geologic Cross-Section**  
**CC 705-22-43 Pad**

Revision Date	2/19/2013
Revision No.	
Revised By	WWM
Project No.	013-0242
Scale	As Shown





Boring Locations 2/8/13



Proposed Drilling Assessment Area



Locations Hydro-Excavated on 1/15/13



PROJECT NO: 013-0242  
DRAWN BY: WWM  
DATE: 2/20/2013

Future Drilling Assessment Map  
CC 705-22-43 Pad  
OXY USA WTP LP

**OLSSON**  
ASSOCIATES

826 21 $\frac{1}{2}$  Road  
Grand Junction, CO 81505  
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FIGURE

6





Table 1  
OXY USA WTP LP  
CC 705-22-43 Pad  
Subsurface Investigation  
Soil Sample Summary



SAMPLE SUMMARY	
Location Description	OXY USA WTP CC 705-22-43
Sample Type	Soil
Sample Date	2/8/2013



LABORATORY DATA SUMMARY											
Sample ID	BH 1	BH 1	BH 2	BH 2	BH 3	BH 3	BH 4	BH 9	BH 9	ALLOWABLE LIMITS	UNITS
Depth	25-30'	32-35'	25-30'	37-38'	15-20'	20-22'	10-14'	15-20'	30-34'		
Analytical Parameters											
TPH											
TPH-GRO	480	97	3000	1000	610	300	62	0.59	7.9	NA	mg/kg
TPH-DRO	160	40	500	140	180	93	66	16	31	NA	mg/kg
Total TPH	640	137	3500	1140	790	393	128	16.59	38.9	500	mg/kg
BTEX											
Benzene	0.28	<0.0050	5.2	0.83	<0.50	<0.20	<0.50	0.0067	0.067	0.17	mg/kg
Toluene	17	0.05	82	4.6	7.7	4	1.8	0.049	1.1	85	mg/kg
Ethylbenzene	4.7	0.11	14	4.4	1.7	0.95	0.38	<0.0050	0.12	100	mg/kg
Total Xylene	44	0.46	230	57	31	16	6.5	0.046	1.9	175	mg/kg
Metals											
Chromium, Hexavalent	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<2.0	23	mg/kg
Chromium, Trivalent	12	12	14	10	9.5	12	11	15	16	120,000	mg/kg
Arsenic	6.6	1.3	8.8	<0.38	5.5	5.8	6.4	9.4	10	0.39	mg/kg
Barium	350	200	260	280	350	240	240	300	320	15,000	mg/kg
Cadmium	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	70	mg/kg
Chromium	12	12	14	10	9.5	12	11	15	16	NA	mg/kg
Copper	14	20	16	12	9.2	15	14	16	16	3,100	mg/kg
Lead	12	15	9.4	6	6.7	13	6.2	9.5	8.2	400	mg/kg
Nickel	12	16	12	8.7	11	12	13	11	11	1,600	mg/kg
Mercury	0.024	<0.020	<0.020	<0.020	0.031	<0.020	<0.020	<0.020	<0.020	1,600	mg/kg
Selenium	3.7	4	2.2	3.7	2.4	3.8	2.4	2.2	1.7	390	mg/kg
Silver	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	390	mg/kg
Zinc	64	76	57	58	55	70	61	54	53	23,000	mg/kg
Polynuclear Aromatic Hyvdrocarbons											
Anthracene	<0.0060	<0.0060	0.0073	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	1,000	mg/kg
Acenaphthene	0.0081	<0.0060	0.027	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	1,000	mg/kg
Acenaphthylene	<0.0060	<0.0060	<0.0060	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	NA	mg/kg
Benzo(a)anthracene	<0.0060	<0.0060	<0.0060	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	0.22	mg/kg
Benzo(a)pyrene	<0.0060	<0.0060	<0.0060	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	0.022	mg/kg
Benzo(b)fluoranthene	<0.0060	<0.0060	<0.0060	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	0.22	mg/kg
Benzo(g,h,i)perylene	<0.0060	<0.0060	<0.0060	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	NA	mg/kg
Benzo(k)fluoranthene	<0.0060	<0.0060	<0.0060	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	2.2	mg/kg
Chrysene	<0.0060	<0.0060	<0.0060	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	22	mg/kg
Dibenzo(a,h)anthracene	<0.0060	<0.0060	<0.0060	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	0.022	mg/kg
Fluoranthene	<0.0060	<0.0060	<0.0060	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	1,000	mg/kg
Fluorene	0.016	<0.0060	0.054	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	1,000	mg/kg
Indeno(1,2,3-cd)pyrene	<0.0060	<0.0060	<0.0060	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	0.22	mg/kg
Napthalene	0.4	0.074	1.5	0.2	0.48	0.12	0.017	<0.0060	<0.0060	23	mg/kg
1-Methylnaphthalene	0.29	0.084	0.96	0.14	0.35	0.081	0.01	<0.0060	<0.0060	NA	mg/kg
2-Methylnaphthalene	0.84	0.21	2.9	0.44	0.98	0.23	0.031	<0.0060	<0.0060	NA	mg/kg
Phenanthrene	0.014	0.0071	0.032	<0.060	<0.060	0.0062	0.0096	<0.0060	<0.0060	NA	mg/kg
Pyrene	<0.0060	<0.0060	<0.0060	<0.060	<0.060	<0.0060	<0.0060	<0.0060	<0.0060	1,000	mg/kg
General Chemistry											
pH	8.4	9.1	8.4	9.1	8.8	9.1	8.8	8.5	8.4	6-9	su
Sodium Adsorption Ratio	5.8	7.9	3	9.1	1.8	6	1.4	2.6	4.4	<12	ratio
Specific Conductivity	0.99	0.69	0.61	0.57	0.24	0.47	0.26	0.85	1.3	<4 mmhos/cm or 2x background	mmhos/cm

mg/kg - milligrams per kilogram  
BDL - parameter was below the detection limit  
mmhos/cm - millimhos per centimeter  
su - standard units  
NA - not applicable  
Over allowable limit but under BACKGROUND level  
Over allowable limit and not within BACKGROUND level  
Over allowable limit

LOCATION MAP				<div></div>				826 21 ½ Road Grand Junction, CO 81505 T: 970.263.7800 F: 970.263.7456															
TEST HOLE/WELL LOG								PAGE 1 of 1															
Elevation: TBD				Detector: MiniRay PID				Seal: Bentonite				Grout: NA											
Gravel Pack: NA				Casing Type: NA				Diameter: NA				Length: NA				Hole Diameter: 6"				F. L. Meter:			
Screen Type: NA				Slot: NA				Diameter: NA				Length: NA				DTP: -				DTW: NA			
Drilling Method: Auger/drive				Sampling Method: Split spoon				Well Depth: NA				Total Depth: 35'											
Soil/Rock Type	Color	Moisture Content	% Fines	Stucture	Vapor (ppm)	Staining	Sample #	Depth (ft)	Sample Recovery %	Penetration Resistance	LITHOLOGY/REMARKS	WELL COMPLETION											
	Tan/ brown	30	70	Loose	0.0	N		0	0/2		<div>Clay: tan, silty, sandy, some shale/ marlstone pieces.</div> <div>↓</div> <div>Shale: tan-gray-black, firm, silty, laminar in part, probable weathered Green River Formation.</div> <div>Drive refusal at 27'</div> <div>Drive refusal at 31'</div> <div>Drive refusal at 32'</div> <div>Drive refusal at 34'</div> <div>35' Total Depth</div>	NA											
					0.0			2	1/2	5/3													
								4		5/5													
								6	0.5/ 4	4/4 4/15 5/6													
								8	0/2														
								10		4/4													
								12	0.5/ 4	2/5 4/3													
								14		5/4 4/3													
								16	3/4	4/15 3/4 3/3													
								18	0/2														
								20		2/5 5/6													
								22	2/4	8/7 10/11													
					↓ Platy- laminar	840		24		10/20 19/23													
						1450		26	3/4	25/32 50+													
							BH1 25-30'	28	0/2														
								30	1/2	31/32 50+													
						144		32	0.5/ 2	50+													
						5.9		34	0.5/ 2	50+													
							BH1 32-35'	36	2														
								38															
								40															
								42															
								44															
								46															
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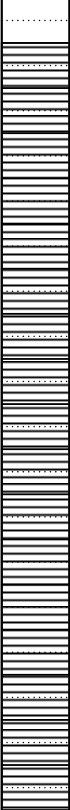


LOCATION MAP								<div></div>				826 21 ½ Road Grand Junction, CO 81505 T: 970.263.7800 F: 970.263.7456																							
TEST HOLE/WELL LOG												PAGE 1 of 1																							
Elevation: TBD						Detector: MiniRay PID						Seal: Bentonite						Grout: NA																	
Gravel Pack: NA						Diameter: NA						Length: NA						Hole Diameter: 6"						F. L. Meter:											
Casing Type: NA						Diameter: NA						Length: NA						DTP: -						DTW: NA											
Screen Type: NA						Slot: NA						Diameter: NA						Length: NA						Well Depth: NA						Total Depth: 38'					
Soil/Rock Type	Color	Moisture Content	% Fines	Stucture	Vapor (ppm)	Staining	Sample #	Depth (ft)	Sample Recovery %	Penetration Resistance	LITHOLOGY/REMARKS												WELL COMPLETION												
	Tan/ brown	30	70	Loose	0.0	N		0	0/2		Clay: tan, silty, sandy, some lithic fragments.	NA																							
								2					13/8																						
								4					3.5/4	10/12																					
								6					11/7																						
								8					4/4	4/6																					
								10					6/7																						
								12					3/4	5/6																					
								14					4/4																						
								16					4/4	3/5																					
								18					4/4	5/8																					
								20					0/2	6/8																					
								22					3/4	3/2																					
								24					3/4	4/3																					
								26					2.5/4	3/3																					
								28					2.5/4	4/3																					
								30					0/2	3/6																					
								32					3/4	4/13																					
								34					3/4	4/6																					
								36					2.5/4	6/8																					
								38					0.2/1																						
								40																											
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								56																											
								58																											
								60																											
								Condensate odor detected.																											
								Red stained joint at 22', strong condensate odor.																											
								Drive refusal at 27'																											
								Drive refusal at 31'																											
								Shale: tan-gray, firm, silty, laminar in part, probable weathered Green River Formation.																											
								Drive refusal at 37'																											
								38' Total Depth Drive refusal at 38'																											

LOCATION MAP				<div></div>				826 21 1/2 Road Grand Junction, CO 81505 T: 970.263.7800 F: 970.263.7456						
TEST HOLE/WELL LOG				PAGE 1 of 1										
Test/Well Number: BH-3				Project: OXY CC 705-22-43										
Date: 2-8-2013				Project Number: 013-0242										
Logged by: W. Monroe				Drilled by: High Plains										
Drilling Method: Auger/drive				Sampling Method: Split spoon										
Elevation: TBD		Detector: MiniRay PID		Seal: Bentonite		Grout: NA								
Gravel Pack: NA				Hole Diameter: 6"		F. L. Meter:								
Casing Type: NA		Diameter: NA		Length: NA		DTP: -								
Screen Type: NA		Slot: NA		Diameter: NA		Length: NA								
				Well Depth: NA		Total Depth: 22'								
Soil/Rock Type	Color	Moisture Content	% Fines	Stucture	Vapor (ppm)	Staining	Sample #	Depth (ft)	Sample Recovery %	Penetration Resistance	LITHOLOGY/REMARKS	WELL COMPLETION		
	Tan/ brown	30	70	Loose	0.0	N	BH3 15-20'	0	0/2		Clay: tan, silty, sandy, some lithic fragments.	NA		
								2	2/2	7/5 4/4				
								4		3/3			Red/black stained wood pieces at 10-11', condensate odor.	
								6	3/4	3/3 3/2 3/3				
								8	0/1	2/2				
								10	4/4	4/3 2/5				
								12		11/13				
								14	0/1	10/14 22/32				
								16	4/4	25/27 33/50+				
								18	0/1	32/31				
								20	3/4	42/50+ 86				
								22						Drive refusal at 21'
								24						22' Total Depth
								26						
								28						
								30						
								32						
								34						
								36						
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60														





LOCATION MAP				<div></div>				826 21 1/2 Road Grand Junction, CO 81505 T: 970.263.7800 F: 970.263.7456				
TEST HOLE/WELL LOG				PAGE 1 of 1								
Test/Well Number: BH-9				Project: OXY CC 705-22-43								
Date: 2-8-2013				Project Number: 013-0242								
Logged by: W. Monroe				Drilled by: High Plains								
Drilling Method: Auger/drive				Sampling Method: Split spoon								
Elevation: TBD		Detector: MiniRay PID		Seal: Bentonite		Grout: NA						
Gravel Pack: NA				Hole Diameter: 6"		F. L. Meter:						
Casing Type: NA		Diameter: NA		Length: NA		DTP: -						
Screen Type: NA		Slot: NA		Diameter: NA		Length: NA						
				Well Depth: NA		Total Depth: 34'						
Soil/Rock Type	Color	Moisture Content	% Fines	Stucture	Vapor (ppm)	Staining	Sample #	Depth (ft)	Sample Recovery %	Penetration Resistance	LITHOLOGY/REMARKS	WELL COMPLETION
	Tan/ brown	30	70	Loose	0.0	N	BH9 15-20'	0	0/2		Clay: tan, silty, sandy, common lithic fragments.	NA
								2	2/2	15/14 12/10		
								4		6/4		
								6	3/4	2/5 3/4 5/5		
								8	0/2			
								10		3/3 4/3		
								12	4/4	3/3 3/4		
								14		5/3 4/4		
								16	3/4	4/5 6/9		
								18	0/2			
								20		6/6 7/5		
								22	3/4	4/5 7/9		
								24		9/12 20/33		
								26	4/4	10/11 13/15		
								28	0/2			
								30		15/13 13/9		
								32	3/4	9/12 13/15		
								34				
								36				
								38				
								40				
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60												





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Est. 1970

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

## Report Summary

Monday February 18, 2013

Report Number: L619720

Samples Received: 02/12/13

Client Project: 013-0242

Description: OXY CC 705-22-43

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

Entire Report Reviewed By:

  
Jarred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

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

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# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 1 25-30 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 10:00

ESC Sample # : L619720-01

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/15/13	1
Chromium, Trivalent	12.	2.0	mg/kg	Calc.	02/13/13	1
ORP	8.0		mV	2580 B-2011	02/13/13	1
pH	8.4		su	9045D	02/15/13	1
Sodium Adsorption Ratio	5.8			Calc.	02/13/13	1
Specific Conductance	990		umhos/cm	9050AMod	02/14/13	1
Mercury	0.024	0.020	mg/kg	7471	02/14/13	1
Arsenic	6.6	0.38	mg/kg	6010B	02/13/13	1
Barium	350	0.25	mg/kg	6010B	02/13/13	1
Cadmium	BDL	0.25	mg/kg	6010B	02/13/13	1
Chromium	12.	0.50	mg/kg	6010B	02/13/13	1
Copper	14.	1.0	mg/kg	6010B	02/13/13	1
Lead	12.	1.2	mg/kg	6010B	02/13/13	5
Nickel	12.	1.0	mg/kg	6010B	02/13/13	1
Selenium	3.7	1.0	mg/kg	6010B	02/13/13	1
Silver	BDL	2.5	mg/kg	6010B	02/13/13	5
Zinc	64.	1.5	mg/kg	6010B	02/13/13	1
TPH (GC/FID) Low Fraction	480	20.	mg/kg	8015D/GRO	02/12/13	200
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	99.4		% Rec.	602/8015	02/12/13	200
Benzene	0.28	0.10	mg/kg	8260B	02/14/13	100
Toluene	17.	0.50	mg/kg	8260B	02/14/13	100
Ethylbenzene	4.7	0.10	mg/kg	8260B	02/14/13	100
Total Xylenes	44.	3.0	mg/kg	8260B	02/14/13	1000
Surrogate Recovery						
Toluene-d8	95.6		% Rec.	8260B	02/14/13	100
Dibromofluoromethane	94.4		% Rec.	8260B	02/14/13	100
a,a,a-Trifluorotoluene	100.		% Rec.	8260B	02/14/13	100
4-Bromofluorobenzene	97.9		% Rec.	8260B	02/14/13	100
TPH (GC/FID) High Fraction	160	4.0	mg/kg	3546/DRO	02/13/13	1
Surrogate recovery(%) o-Terphenyl	86.0		% Rec.	3546/DRO	02/13/13	1

## Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L619720-01 (SV8270PAHSIM) - Previous run also had low SURR recovery. Matrix effect.  
L619720-01 (PH) - 8.4@21.3c



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# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43

ESC Sample # : L619720-01

Sample ID : BH 1 25-30 FT

Site ID :

Collected By : W. Monroe  
Collection Date : 02/08/13 10:00

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Acenaphthene	0.0081	0.0060	mg/kg	8270C-SIM	02/17/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Fluorene	0.016	0.0060	mg/kg	8270C-SIM	02/17/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Naphthalene	0.40	0.030	mg/kg	8270C-SIM	02/18/13	5
Phenanthrene	0.014	0.0060	mg/kg	8270C-SIM	02/17/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
1-Methylnaphthalene	0.29	0.030	mg/kg	8270C-SIM	02/18/13	5
2-Methylnaphthalene	0.84	0.030	mg/kg	8270C-SIM	02/18/13	5
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/17/13	1
Surrogate Recovery						
Nitrobenzene-d5	300.		% Rec.	8270C-SIM	02/18/13	5
2-Fluorobiphenyl	112.		% Rec.	8270C-SIM	02/17/13	1
p-Terphenyl-d14	112.		% Rec.	8270C-SIM	02/17/13	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: 02/18/13 15:00 Printed: 02/18/13 15:01

L619720-01 (SV8270PAHSIM) - Previous run also had low SURR recovery. Matrix effect.

L619720-01 (PH) - 8.4@21.3c





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# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 1 32-35 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 11:00

ESC Sample # : L619720-02

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/15/13	1
Chromium,Trivalent	12.	2.0	mg/kg	Calc.	02/13/13	1
ORP	-1.0		mV	2580 B-2011	02/13/13	1
pH	9.1		su	9045D	02/15/13	1
Sodium Adsorption Ratio	7.9			Calc.	02/13/13	1
Specific Conductance	690		umhos/cm	9050AMod	02/14/13	1
Mercury	BDL	0.020	mg/kg	7471	02/14/13	1
Arsenic	1.3	0.38	mg/kg	6010B	02/13/13	1
Barium	200	0.25	mg/kg	6010B	02/13/13	1
Cadmium	BDL	0.25	mg/kg	6010B	02/13/13	1
Chromium	12.	0.50	mg/kg	6010B	02/13/13	1
Copper	20.	1.0	mg/kg	6010B	02/13/13	1
Lead	15.	1.2	mg/kg	6010B	02/13/13	5
Nickel	16.	1.0	mg/kg	6010B	02/13/13	1
Selenium	4.0	1.0	mg/kg	6010B	02/13/13	1
Silver	BDL	2.5	mg/kg	6010B	02/13/13	5
Zinc	76.	1.5	mg/kg	6010B	02/13/13	1
TPH (GC/FID) Low Fraction	97.	5.0	mg/kg	8015D/GRO	02/12/13	50
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	100.		% Rec.	602/8015	02/12/13	50
Benzene	BDL	0.0050	mg/kg	8260B	02/14/13	5
Toluene	0.050	0.025	mg/kg	8260B	02/14/13	5
Ethylbenzene	0.11	0.0050	mg/kg	8260B	02/14/13	5
Total Xylenes	0.46	0.015	mg/kg	8260B	02/14/13	5
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	02/14/13	5
Dibromofluoromethane	97.8		% Rec.	8260B	02/14/13	5
a,a,a-Trifluorotoluene	105.		% Rec.	8260B	02/14/13	5
4-Bromofluorobenzene	107.		% Rec.	8260B	02/14/13	5
TPH (GC/FID) High Fraction	40.	4.0	mg/kg	3546/DRO	02/13/13	1
Surrogate recovery(%) o-Terphenyl	71.4		% Rec.	3546/DRO	02/13/13	1

## Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L619720-02 (PH) - 9.1@20.8c



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# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 1 32-35 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 11:00

ESC Sample # : L619720-02

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Naphthalene	0.074	0.0060	mg/kg	8270C-SIM	02/14/13	1
Phenanthrene	0.0071	0.0060	mg/kg	8270C-SIM	02/14/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
1-Methylnaphthalene	0.084	0.0060	mg/kg	8270C-SIM	02/14/13	1
2-Methylnaphthalene	0.21	0.0060	mg/kg	8270C-SIM	02/14/13	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Surrogate Recovery						
Nitrobenzene-d5	109.		% Rec.	8270C-SIM	02/14/13	1
2-Fluorobiphenyl	74.0		% Rec.	8270C-SIM	02/14/13	1
p-Terphenyl-d14	82.2		% Rec.	8270C-SIM	02/14/13	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: 02/18/13 15:00 Printed: 02/18/13 15:01  
L619720-02 (PH) - 9.1@20.8c



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# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 2 25-30 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 12:00

ESC Sample # : L619720-03

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/15/13	1
Chromium,Trivalent	14.	2.0	mg/kg	Calc.	02/13/13	1
ORP	17.		mV	2580 B-2011	02/13/13	1
pH	8.4		su	9045D	02/15/13	1
Sodium Adsorption Ratio	3.0			Calc.	02/13/13	1
Specific Conductance	610		umhos/cm	9050AMod	02/14/13	1
Mercury	BDL	0.020	mg/kg	7471	02/14/13	1
Arsenic	8.8	0.38	mg/kg	6010B	02/13/13	1
Barium	260	0.25	mg/kg	6010B	02/13/13	1
Cadmium	BDL	0.25	mg/kg	6010B	02/13/13	1
Chromium	14.	0.50	mg/kg	6010B	02/13/13	1
Copper	16.	1.0	mg/kg	6010B	02/13/13	1
Lead	9.4	1.2	mg/kg	6010B	02/13/13	5
Nickel	12.	1.0	mg/kg	6010B	02/13/13	1
Selenium	2.2	1.0	mg/kg	6010B	02/13/13	1
Silver	BDL	2.5	mg/kg	6010B	02/13/13	5
Zinc	57.	1.5	mg/kg	6010B	02/13/13	1
TPH (GC/FID) Low Fraction	3000	100	mg/kg	8015D/GRO	02/12/13	1000
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	96.0		% Rec.	602/8015	02/12/13	1000
Benzene	5.2	2.0	mg/kg	8260B	02/13/13	2000
Toluene	82.	10.	mg/kg	8260B	02/13/13	2000
Ethylbenzene	14.	2.0	mg/kg	8260B	02/13/13	2000
Total Xylenes	230	6.0	mg/kg	8260B	02/13/13	2000
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	02/13/13	2000
Dibromofluoromethane	94.2		% Rec.	8260B	02/13/13	2000
a,a,a-Trifluorotoluene	100.		% Rec.	8260B	02/13/13	2000
4-Bromofluorobenzene	108.		% Rec.	8260B	02/13/13	2000
TPH (GC/FID) High Fraction	500	20.	mg/kg	3546/DRO	02/13/13	5
Surrogate recovery(%) o-Terphenyl	73.9		% Rec.	3546/DRO	02/13/13	5

## Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L619720-03 (PH) - 8.4@20.8c





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# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 2 25-30 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 12:00

ESC Sample # : L619720-03

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	0.0073	0.0060	mg/kg	8270C-SIM	02/14/13	1
Acenaphthene	0.027	0.0060	mg/kg	8270C-SIM	02/14/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Fluorene	0.054	0.0060	mg/kg	8270C-SIM	02/14/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Naphthalene	1.5	0.12	mg/kg	8270C-SIM	02/15/13	20
Phenanthrene	0.032	0.0060	mg/kg	8270C-SIM	02/14/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
1-Methylnaphthalene	0.96	0.12	mg/kg	8270C-SIM	02/15/13	20
2-Methylnaphthalene	2.9	0.12	mg/kg	8270C-SIM	02/15/13	20
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Surrogate Recovery						
Nitrobenzene-d5	1050		% Rec.	8270C-SIM	02/15/13	20
2-Fluorobiphenyl	106.		% Rec.	8270C-SIM	02/14/13	1
p-Terphenyl-d14	103.		% Rec.	8270C-SIM	02/14/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 02/18/13 15:00 Printed: 02/18/13 15:01  
L619720-03 (PH) - 8.4@20.8c



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 2 37-38 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 13:00

ESC Sample # : L619720-04

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/15/13	1
Chromium, Trivalent	10.	2.0	mg/kg	Calc.	02/13/13	1
ORP	BDL		mV	2580 B-2011	02/13/13	1
pH	9.1		su	9045D	02/15/13	1
Sodium Adsorption Ratio	9.1			Calc.	02/13/13	1
Specific Conductance	570		umhos/cm	9050AMod	02/14/13	1
Mercury	BDL	0.020	mg/kg	7471	02/14/13	1
Arsenic	BDL	0.38	mg/kg	6010B	02/13/13	1
Barium	280	0.25	mg/kg	6010B	02/13/13	1
Cadmium	BDL	0.25	mg/kg	6010B	02/13/13	1
Chromium	10.	0.50	mg/kg	6010B	02/13/13	1
Copper	12.	1.0	mg/kg	6010B	02/13/13	1
Lead	6.0	1.2	mg/kg	6010B	02/13/13	5
Nickel	8.7	1.0	mg/kg	6010B	02/13/13	1
Selenium	3.7	1.0	mg/kg	6010B	02/13/13	1
Silver	BDL	2.5	mg/kg	6010B	02/13/13	5
Zinc	58.	1.5	mg/kg	6010B	02/13/13	1
TPH (GC/FID) Low Fraction	1000	20.	mg/kg	8015D/GRO	02/12/13	200
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	96.2		% Rec.	602/8015	02/12/13	200
Benzene	0.83	0.20	mg/kg	8260B	02/14/13	200
Toluene	4.6	1.0	mg/kg	8260B	02/14/13	200
Ethylbenzene	4.4	0.20	mg/kg	8260B	02/14/13	200
Total Xylenes	57.	0.60	mg/kg	8260B	02/14/13	200
Surrogate Recovery						
Toluene-d8	95.6		% Rec.	8260B	02/14/13	200
Dibromofluoromethane	97.2		% Rec.	8260B	02/14/13	200
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	02/14/13	200
4-Bromofluorobenzene	95.4		% Rec.	8260B	02/14/13	200
TPH (GC/FID) High Fraction	140	4.0	mg/kg	3546/DRO	02/13/13	1
Surrogate recovery(%) o-Terphenyl	72.6		% Rec.	3546/DRO	02/13/13	1

## Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L619720-04 (SV8270PAHSIM) - Previous run also had low SURR recovery. Matrix effect.  
L619720-04 (PH) - 9.1@20.4c



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REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 2 37-38 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 13:00

ESC Sample # : L619720-04

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Acenaphthene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Acenaphthylene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Benzo(a)anthracene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Benzo(a)pyrene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Benzo(b)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Benzo(g,h,i)perylene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Benzo(k)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Chrysene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Dibenz(a,h)anthracene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Fluoranthene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Fluorene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Indeno(1,2,3-cd)pyrene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Naphthalene	0.20	0.060	mg/kg	8270C-SIM	02/18/13	10
Phenanthrene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Pyrene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
1-Methylnaphthalene	0.14	0.060	mg/kg	8270C-SIM	02/18/13	10
2-Methylnaphthalene	0.44	0.060	mg/kg	8270C-SIM	02/18/13	10
2-Chloronaphthalene	BDL	0.060	mg/kg	8270C-SIM	02/18/13	10
Surrogate Recovery						
Nitrobenzene-d5	304.		% Rec.	8270C-SIM	02/18/13	10
2-Fluorobiphenyl	105.		% Rec.	8270C-SIM	02/18/13	10
p-Terphenyl-d14	102.		% Rec.	8270C-SIM	02/18/13	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L619720-04 (SV8270PAHSIM) - Previous run also had low SURR recovery. Matrix effect.

L619720-04 (PH) - 9.1@20.4c





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# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 3 15-20 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 13:30

ESC Sample # : L619720-05

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/15/13	1
Chromium,Trivalent	9.5	2.0	mg/kg	Calc.	02/13/13	1
ORP	23.		mV	2580 B-2011	02/13/13	1
pH	8.8		su	9045D	02/15/13	1
Sodium Adsorption Ratio	1.8			Calc.	02/13/13	1
Specific Conductance	240		umhos/cm	9050AMod	02/14/13	1
Mercury	0.031	0.020	mg/kg	7471	02/14/13	1
Arsenic	5.5	0.38	mg/kg	6010B	02/13/13	1
Barium	350	0.25	mg/kg	6010B	02/13/13	1
Cadmium	BDL	0.25	mg/kg	6010B	02/13/13	1
Chromium	9.5	0.50	mg/kg	6010B	02/13/13	1
Copper	9.2	1.0	mg/kg	6010B	02/13/13	1
Lead	6.7	1.2	mg/kg	6010B	02/13/13	5
Nickel	11.	1.0	mg/kg	6010B	02/13/13	1
Selenium	2.4	1.0	mg/kg	6010B	02/13/13	1
Silver	BDL	2.5	mg/kg	6010B	02/13/13	5
Zinc	55.	1.5	mg/kg	6010B	02/13/13	1
TPH (GC/FID) Low Fraction	610	50.	mg/kg	8015D/GRO	02/12/13	500
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	100.		% Rec.	602/8015	02/12/13	500
Benzene	BDL	0.50	mg/kg	8260B	02/13/13	500
Toluene	7.7	2.5	mg/kg	8260B	02/13/13	500
Ethylbenzene	1.7	0.50	mg/kg	8260B	02/13/13	500
Total Xylenes	31.	1.5	mg/kg	8260B	02/13/13	500
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	02/13/13	500
Dibromofluoromethane	101.		% Rec.	8260B	02/13/13	500
a,a,a-Trifluorotoluene	106.		% Rec.	8260B	02/13/13	500
4-Bromofluorobenzene	102.		% Rec.	8260B	02/13/13	500
TPH (GC/FID) High Fraction	180	20.	mg/kg	3546/DRO	02/13/13	5
Surrogate recovery(%) o-Terphenyl	73.1		% Rec.	3546/DRO	02/13/13	5

## Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L619720-05 (PH) - 8.8@20.7c  
L619720-05 (SV8270PAHSIM) - Previous run also had low SURR recovery. Matrix effect.



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# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 3 15-20 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 13:30

ESC Sample # : L619720-05

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Acenaphthene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Acenaphthylene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Benzo(a)anthracene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Benzo(a)pyrene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Benzo(b)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Benzo(g,h,i)perylene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Benzo(k)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Chrysene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Dibenz(a,h)anthracene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Fluoranthene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Fluorene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Indeno(1,2,3-cd)pyrene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Naphthalene	0.48	0.060	mg/kg	8270C-SIM	02/17/13	10
Phenanthrene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Pyrene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
1-Methylnaphthalene	0.35	0.060	mg/kg	8270C-SIM	02/17/13	10
2-Methylnaphthalene	0.98	0.060	mg/kg	8270C-SIM	02/17/13	10
2-Chloronaphthalene	BDL	0.060	mg/kg	8270C-SIM	02/17/13	10
Surrogate Recovery						
Nitrobenzene-d5	345.		% Rec.	8270C-SIM	02/17/13	10
2-Fluorobiphenyl	107.		% Rec.	8270C-SIM	02/17/13	10
p-Terphenyl-d14	103.		% Rec.	8270C-SIM	02/17/13	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L619720-05 (PH) - 8.8@20.7c

L619720-05 (SV8270PAHSIM) - Previous run also had low SURR recovery. Matrix effect.



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# REPORT OF ANALYSIS

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OXY USA Inc - Grand Junction, CO  
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February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 3 20-22 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 14:30

ESC Sample # : L619720-06

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/15/13	1
Chromium,Trivalent	12.	2.0	mg/kg	Calc.	02/13/13	1
ORP	24.		mV	2580 B-2011	02/13/13	1
pH	9.1		su	9045D	02/15/13	1
Sodium Adsorption Ratio	6.0			Calc.	02/13/13	1
Specific Conductance	470		umhos/cm	9050AMod	02/14/13	1
Mercury	BDL	0.020	mg/kg	7471	02/14/13	1
Arsenic	5.8	0.38	mg/kg	6010B	02/13/13	1
Barium	240	0.25	mg/kg	6010B	02/13/13	1
Cadmium	BDL	0.25	mg/kg	6010B	02/13/13	1
Chromium	12.	0.50	mg/kg	6010B	02/13/13	1
Copper	15.	1.0	mg/kg	6010B	02/13/13	1
Lead	13.	1.2	mg/kg	6010B	02/13/13	5
Nickel	12.	1.0	mg/kg	6010B	02/13/13	1
Selenium	3.8	1.0	mg/kg	6010B	02/13/13	1
Silver	BDL	2.5	mg/kg	6010B	02/13/13	5
Zinc	70.	1.5	mg/kg	6010B	02/13/13	1
TPH (GC/FID) Low Fraction	300	20.	mg/kg	8015D/GRO	02/12/13	200
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	100.		% Rec.	602/8015	02/12/13	200
Benzene	BDL	0.20	mg/kg	8260B	02/13/13	200
Toluene	4.0	1.0	mg/kg	8260B	02/13/13	200
Ethylbenzene	0.95	0.20	mg/kg	8260B	02/13/13	200
Total Xylenes	16.	0.60	mg/kg	8260B	02/13/13	200
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	02/13/13	200
Dibromofluoromethane	95.9		% Rec.	8260B	02/13/13	200
a,a,a-Trifluorotoluene	108.		% Rec.	8260B	02/13/13	200
4-Bromofluorobenzene	103.		% Rec.	8260B	02/13/13	200
TPH (GC/FID) High Fraction	93.	4.0	mg/kg	3546/DRO	02/13/13	1
Surrogate recovery(%) o-Terphenyl	84.4		% Rec.	3546/DRO	02/13/13	1

## Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L619720-06 (PH) - 9.1@20.1c





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# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43

ESC Sample # : L619720-06

Sample ID : BH 3 20-22 FT

Site ID :

Collected By : W. Monroe  
Collection Date : 02/08/13 14:30

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Naphthalene	0.12	0.0060	mg/kg	8270C-SIM	02/14/13	1
Phenanthrene	0.0062	0.0060	mg/kg	8270C-SIM	02/14/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
1-Methylnaphthalene	0.081	0.0060	mg/kg	8270C-SIM	02/14/13	1
2-Methylnaphthalene	0.23	0.0060	mg/kg	8270C-SIM	02/14/13	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Surrogate Recovery						
Nitrobenzene-d5	136.		% Rec.	8270C-SIM	02/14/13	1
2-Fluorobiphenyl	80.6		% Rec.	8270C-SIM	02/14/13	1
p-Terphenyl-d14	88.5		% Rec.	8270C-SIM	02/14/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L619720-06 (PH) - 9.1@20.1c



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# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 4 10-14 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 15:00

ESC Sample # : L619720-07

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/15/13	1
Chromium,Trivalent	11.	2.0	mg/kg	Calc.	02/13/13	1
ORP	34.		mV	2580 B-2011	02/13/13	1
pH	8.8		su	9045D	02/15/13	1
Sodium Adsorption Ratio	1.4			Calc.	02/13/13	1
Specific Conductance	260		umhos/cm	9050AMod	02/14/13	1
Mercury	BDL	0.020	mg/kg	7471	02/14/13	1
Arsenic	6.4	0.38	mg/kg	6010B	02/13/13	1
Barium	240	0.25	mg/kg	6010B	02/13/13	1
Cadmium	BDL	0.25	mg/kg	6010B	02/13/13	1
Chromium	11.	0.50	mg/kg	6010B	02/13/13	1
Copper	14.	1.0	mg/kg	6010B	02/13/13	1
Lead	6.2	1.2	mg/kg	6010B	02/13/13	5
Nickel	13.	1.0	mg/kg	6010B	02/13/13	1
Selenium	2.4	1.0	mg/kg	6010B	02/13/13	1
Silver	BDL	2.5	mg/kg	6010B	02/13/13	5
Zinc	61.	1.5	mg/kg	6010B	02/13/13	1
TPH (GC/FID) Low Fraction	62.	5.0	mg/kg	8015D/GRO	02/12/13	50
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	100.		% Rec.	602/8015	02/12/13	50
Benzene	BDL	0.050	mg/kg	8260B	02/13/13	50
Toluene	1.8	0.25	mg/kg	8260B	02/13/13	50
Ethylbenzene	0.38	0.050	mg/kg	8260B	02/13/13	50
Total Xylenes	6.5	0.15	mg/kg	8260B	02/13/13	50
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	02/13/13	50
Dibromofluoromethane	98.9		% Rec.	8260B	02/13/13	50
a,a,a-Trifluorotoluene	106.		% Rec.	8260B	02/13/13	50
4-Bromofluorobenzene	105.		% Rec.	8260B	02/13/13	50
TPH (GC/FID) High Fraction	66.	20.	mg/kg	3546/DRO	02/14/13	5
Surrogate recovery(%) o-Terphenyl	44.5		% Rec.	3546/DRO	02/14/13	5

## Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L619720-07 (DRO) - Previous run also had low SURR recovery. Matrix effect.  
L619720-07 (PH) - 8.8@19.9c



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

February 18, 2013

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

Date Received : February 12, 2013  
Description : OXY CC 705-22-43

Sample ID : BH 4 10-14 FT

Collected By : W. Monroe  
Collection Date : 02/08/13 15:00

ESC Sample # : L619720-07

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Naphthalene	0.017	0.0060	mg/kg	8270C-SIM	02/15/13	1
Phenanthrene	0.0096	0.0060	mg/kg	8270C-SIM	02/15/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
1-Methylnaphthalene	0.010	0.0060	mg/kg	8270C-SIM	02/15/13	1
2-Methylnaphthalene	0.031	0.0060	mg/kg	8270C-SIM	02/15/13	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/15/13	1
Surrogate Recovery						
Nitrobenzene-d5	56.6		% Rec.	8270C-SIM	02/15/13	1
2-Fluorobiphenyl	69.8		% Rec.	8270C-SIM	02/15/13	1
p-Terphenyl-d14	75.5		% Rec.	8270C-SIM	02/15/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 02/18/13 15:00 Printed: 02/18/13 15:01

L619720-07 (DRO) - Previous run also had low SURR recovery. Matrix effect.

L619720-07 (PH) - 8.8@19.9c



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 9 15-20 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 16:00

ESC Sample # : L619720-08

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	10.	mg/kg	3060A/7196A	02/15/13	5
Chromium,Trivalent	15.	10.	mg/kg	Calc.	02/13/13	1
ORP	50.		mV	2580 B-2011	02/13/13	1
pH	8.5		su	9045D	02/15/13	1
Sodium Adsorption Ratio	2.6			Calc.	02/13/13	1
Specific Conductance	850		umhos/cm	9050AMod	02/14/13	1
Mercury	BDL	0.020	mg/kg	7471	02/14/13	1
Arsenic	9.4	0.38	mg/kg	6010B	02/13/13	1
Barium	300	0.25	mg/kg	6010B	02/13/13	1
Cadmium	BDL	0.25	mg/kg	6010B	02/13/13	1
Chromium	15.	0.50	mg/kg	6010B	02/13/13	1
Copper	16.	1.0	mg/kg	6010B	02/13/13	1
Lead	9.5	1.2	mg/kg	6010B	02/13/13	5
Nickel	11.	1.0	mg/kg	6010B	02/13/13	1
Selenium	2.2	1.0	mg/kg	6010B	02/13/13	1
Silver	BDL	2.5	mg/kg	6010B	02/13/13	5
Zinc	54.	1.5	mg/kg	6010B	02/13/13	1
TPH (GC/FID) Low Fraction	0.59	0.50	mg/kg	8015D/GRO	02/12/13	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	100.		% Rec.	602/8015	02/12/13	5
Benzene	0.0067	0.0050	mg/kg	8260B	02/13/13	5
Toluene	0.049	0.025	mg/kg	8260B	02/13/13	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	02/13/13	5
Total Xylenes	0.046	0.015	mg/kg	8260B	02/13/13	5
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	02/13/13	5
Dibromofluoromethane	102.		% Rec.	8260B	02/13/13	5
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	02/13/13	5
4-Bromofluorobenzene	103.		% Rec.	8260B	02/13/13	5
TPH (GC/FID) High Fraction	16.	4.0	mg/kg	3546/DRO	02/13/13	1
Surrogate recovery(%) o-Terphenyl	67.0		% Rec.	3546/DRO	02/13/13	1

## Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L619720-08 (CR6) - diluted due to sample color  
L619720-08 (PH) - 8.5@20.6c





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Est. 1970

# REPORT OF ANALYSIS

February 18, 2013

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

Date Received : February 12, 2013  
Description : OXY CC 705-22-43

Sample ID : BH 9 15-20 FT

Collected By : W. Monroe  
Collection Date : 02/08/13 16:00

ESC Sample # : L619720-08

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Naphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
1-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
2-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Surrogate Recovery						
Nitrobenzene-d5	73.0		% Rec.	8270C-SIM	02/14/13	1
2-Fluorobiphenyl	78.5		% Rec.	8270C-SIM	02/14/13	1
p-Terphenyl-d14	103.		% Rec.	8270C-SIM	02/14/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 02/18/13 15:00 Printed: 02/18/13 15:01  
L619720-08 (CR6) - diluted due to sample color  
L619720-08 (PH) - 8.5@20.6c



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Est. 1970

# REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 9 30-34 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 16:30

ESC Sample # : L619720-09

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/15/13	1
Chromium,Trivalent	16.	2.0	mg/kg	Calc.	02/13/13	1
ORP	55.		mV	2580 B-2011	02/13/13	1
pH	8.4		su	9045D	02/15/13	1
Sodium Adsorption Ratio	4.4			Calc.	02/13/13	1
Specific Conductance	1300		umhos/cm	9050AMod	02/14/13	1
Mercury	BDL	0.020	mg/kg	7471	02/14/13	1
Arsenic	10.	0.38	mg/kg	6010B	02/13/13	1
Barium	320	0.25	mg/kg	6010B	02/13/13	1
Cadmium	BDL	0.25	mg/kg	6010B	02/13/13	1
Chromium	16.	0.50	mg/kg	6010B	02/13/13	1
Copper	16.	1.0	mg/kg	6010B	02/13/13	1
Lead	8.2	1.2	mg/kg	6010B	02/13/13	5
Nickel	11.	1.0	mg/kg	6010B	02/13/13	1
Selenium	1.7	1.0	mg/kg	6010B	02/13/13	1
Silver	BDL	2.5	mg/kg	6010B	02/13/13	5
Zinc	53.	1.5	mg/kg	6010B	02/13/13	1
TPH (GC/FID) Low Fraction	7.9	0.50	mg/kg	8015D/GRO	02/12/13	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	99.2		% Rec.	602/8015	02/12/13	5
Benzene	0.067	0.0050	mg/kg	8260B	02/13/13	5
Toluene	1.1	0.25	mg/kg	8260B	02/14/13	50
Ethylbenzene	0.12	0.0050	mg/kg	8260B	02/13/13	5
Total Xylenes	1.9	0.015	mg/kg	8260B	02/13/13	5
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	02/13/13	5
Dibromofluoromethane	99.5		% Rec.	8260B	02/13/13	5
a,a,a-Trifluorotoluene	105.		% Rec.	8260B	02/13/13	5
4-Bromofluorobenzene	102.		% Rec.	8260B	02/13/13	5
TPH (GC/FID) High Fraction	31.	4.0	mg/kg	3546/DRO	02/13/13	1
Surrogate recovery(%) o-Terphenyl	65.2		% Rec.	3546/DRO	02/13/13	1

## Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L619720-09 (PH) - 8.4@20.2c



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REPORT OF ANALYSIS

Stuart Hall  
OXY USA Inc - Grand Junction, CO  
760 Horizon Dr., Ste. 101  
Grand Junction, CO 81506

February 18, 2013

Date Received : February 12, 2013  
Description : OXY CC 705-22-43  
Sample ID : BH 9 30-34 FT  
Collected By : W. Monroe  
Collection Date : 02/08/13 16:30

ESC Sample # : L619720-09

Site ID :

Project # : 013-0242

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Naphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
1-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
2-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/14/13	1
Surrogate Recovery						
Nitrobenzene-d5	71.3		% Rec.	8270C-SIM	02/14/13	1
2-Fluorobiphenyl	80.3		% Rec.	8270C-SIM	02/14/13	1
p-Terphenyl-d14	88.9		% Rec.	8270C-SIM	02/14/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 02/18/13 15:00 Printed: 02/18/13 15:01  
L619720-09 (PH) - 8.4@20.2c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L619720-01	WG637188	SAMP	Nitrobenzene-d5	R2546438	J1
	WG636449	SAMP	ORP	R2540700	T8
	WG636466	SAMP	Silver	R2541503	O
L619720-02	WG636834	SAMP	Anthracene	R2544037	J3
	WG636834	SAMP	Acenaphthene	R2544037	J3
	WG636834	SAMP	Acenaphthylene	R2544037	J3
	WG636834	SAMP	Benzo(a)anthracene	R2544037	J3
	WG636834	SAMP	Benzo(a)pyrene	R2544037	J3
	WG636834	SAMP	Benzo(b)fluoranthene	R2544037	J3
	WG636834	SAMP	Benzo(g,h,i)perylene	R2544037	J3
	WG636834	SAMP	Benzo(k)fluoranthene	R2544037	J3
	WG636834	SAMP	Chrysene	R2544037	J3
	WG636834	SAMP	Dibenz(a,h)anthracene	R2544037	J3
	WG636834	SAMP	Fluoranthene	R2544037	J3
	WG636834	SAMP	Fluorene	R2544037	J3
	WG636834	SAMP	Indeno(1,2,3-cd)pyrene	R2544037	J3
	WG636834	SAMP	Phenanthrene	R2544037	J3
	WG636834	SAMP	Pyrene	R2544037	J3
	WG636834	SAMP	1-Methylnaphthalene	R2544037	J3
	WG636834	SAMP	2-Methylnaphthalene	R2544037	J3
	WG636834	SAMP	2-Chloronaphthalene	R2544037	J3
	WG636449	SAMP	ORP	R2540700	T8
	WG636466	SAMP	Silver	R2541503	O
L619720-03	WG636834	SAMP	Anthracene	R2544037	J3
	WG636834	SAMP	Acenaphthene	R2544037	J3
	WG636834	SAMP	Acenaphthylene	R2544037	J3
	WG636834	SAMP	Benzo(a)anthracene	R2544037	J3
	WG636834	SAMP	Benzo(a)pyrene	R2544037	J3
	WG636834	SAMP	Benzo(b)fluoranthene	R2544037	J3
	WG636834	SAMP	Benzo(g,h,i)perylene	R2544037	J3
	WG636834	SAMP	Benzo(k)fluoranthene	R2544037	J3
	WG636834	SAMP	Chrysene	R2544037	J3
	WG636834	SAMP	Dibenz(a,h)anthracene	R2544037	J3
	WG636834	SAMP	Fluoranthene	R2544037	J3
	WG636834	SAMP	Fluorene	R2544037	J3
	WG636834	SAMP	Indeno(1,2,3-cd)pyrene	R2544037	J3
	WG636834	SAMP	Phenanthrene	R2544037	J3
	WG636834	SAMP	Pyrene	R2544037	J3
	WG636834	SAMP	1-Methylnaphthalene	R2544779	J3
	WG636834	SAMP	2-Methylnaphthalene	R2544779	J3
	WG636834	SAMP	2-Chloronaphthalene	R2544037	J3
	WG636834	SAMP	Nitrobenzene-d5	R2544779	J7
	WG636449	SAMP	ORP	R2540700	T8
	WG636466	SAMP	Silver	R2541503	O
L619720-04	WG637188	SAMP	Nitrobenzene-d5	R2546438	J1
	WG636449	SAMP	ORP	R2540700	T8
	WG636466	SAMP	Silver	R2541503	O
L619720-05	WG637188	SAMP	Nitrobenzene-d5	R2546144	J1
	WG636449	SAMP	ORP	R2540700	T8
L619720-06	WG636466	SAMP	Silver	R2541503	O
	WG636834	SAMP	Anthracene	R2544037	J3
	WG636834	SAMP	Acenaphthene	R2544037	J3
	WG636834	SAMP	Acenaphthylene	R2544037	J3
	WG636834	SAMP	Benzo(a)anthracene	R2544037	J3
	WG636834	SAMP	Benzo(a)pyrene	R2544037	J3
	WG636834	SAMP	Benzo(b)fluoranthene	R2544037	J3
	WG636834	SAMP	Benzo(g,h,i)perylene	R2544037	J3
	WG636834	SAMP	Benzo(k)fluoranthene	R2544037	J3
	WG636834	SAMP	Chrysene	R2544037	J3
	WG636834	SAMP	Dibenz(a,h)anthracene	R2544037	J3
	WG636834	SAMP	Fluoranthene	R2544037	J3
	WG636834	SAMP	Fluorene	R2544037	J3
	WG636834	SAMP	Indeno(1,2,3-cd)pyrene	R2544037	J3
	WG636834	SAMP	Phenanthrene	R2544037	J3
	WG636834	SAMP	Pyrene	R2544037	J3
	WG636834	SAMP	1-Methylnaphthalene	R2544037	J3
	WG636834	SAMP	2-Methylnaphthalene	R2544037	J3
	WG636834	SAMP	2-Chloronaphthalene	R2544037	J3
	WG636449	SAMP	ORP	R2540700	T8



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L619720-07	WG636466	SAMP	Silver	R2541503	O
	WG636834	SAMP	Anthracene	R2544779	J3
	WG636834	SAMP	Acenaphthene	R2544779	J3
	WG636834	SAMP	Acenaphthylene	R2544779	J3
	WG636834	SAMP	Benzo(a)anthracene	R2544779	J3
	WG636834	SAMP	Benzo(a)pyrene	R2544779	J3
	WG636834	SAMP	Benzo(b)fluoranthene	R2544779	J3
	WG636834	SAMP	Benzo(g,h,i)perylene	R2544779	J3
	WG636834	SAMP	Benzo(k)fluoranthene	R2544779	J3
	WG636834	SAMP	Chrysene	R2544779	J3
	WG636834	SAMP	Dibenz(a,h)anthracene	R2544779	J3
	WG636834	SAMP	Fluoranthene	R2544779	J3
	WG636834	SAMP	Fluorene	R2544779	J3
	WG636834	SAMP	Indeno(1,2,3-cd)pyrene	R2544779	J3
	WG636834	SAMP	Phenanthrene	R2544779	J3
	WG636834	SAMP	Pyrene	R2544779	J3
	WG636834	SAMP	1-Methylnaphthalene	R2544779	J3
	WG636834	SAMP	2-Methylnaphthalene	R2544779	J3
	WG636834	SAMP	2-Chloronaphthalene	R2544779	J3
	WG636449	SAMP	ORP	R2540700	T8
	WG636466	SAMP	Silver	R2541503	O
L619720-08	WG636731	SAMP	o-Terphenyl	R2543539	J2
	WG636834	SAMP	Anthracene	R2544037	J3
	WG636834	SAMP	Acenaphthene	R2544037	J3
	WG636834	SAMP	Acenaphthylene	R2544037	J3
	WG636834	SAMP	Benzo(a)anthracene	R2544037	J3
	WG636834	SAMP	Benzo(a)pyrene	R2544037	J3
	WG636834	SAMP	Benzo(b)fluoranthene	R2544037	J3
	WG636834	SAMP	Benzo(g,h,i)perylene	R2544037	J3
	WG636834	SAMP	Benzo(k)fluoranthene	R2544037	J3
	WG636834	SAMP	Chrysene	R2544037	J3
	WG636834	SAMP	Dibenz(a,h)anthracene	R2544037	J3
	WG636834	SAMP	Fluoranthene	R2544037	J3
	WG636834	SAMP	Fluorene	R2544037	J3
	WG636834	SAMP	Indeno(1,2,3-cd)pyrene	R2544037	J3
	WG636834	SAMP	Phenanthrene	R2544037	J3
	WG636834	SAMP	Pyrene	R2544037	J3
	WG636834	SAMP	1-Methylnaphthalene	R2544037	J3
	WG636834	SAMP	2-Methylnaphthalene	R2544037	J3
	WG636834	SAMP	2-Chloronaphthalene	R2544037	J3
	WG636449	SAMP	ORP	R2540700	T8
	WG636466	SAMP	Silver	R2541503	O
L619720-09	WG636724	SAMP	Chromium, Hexavalent	R2543937	O
	WG636834	SAMP	Anthracene	R2544037	J3
	WG636834	SAMP	Acenaphthene	R2544037	J3
	WG636834	SAMP	Acenaphthylene	R2544037	J3
	WG636834	SAMP	Benzo(a)anthracene	R2544037	J3
	WG636834	SAMP	Benzo(a)pyrene	R2544037	J3
	WG636834	SAMP	Benzo(b)fluoranthene	R2544037	J3
	WG636834	SAMP	Benzo(g,h,i)perylene	R2544037	J3
	WG636834	SAMP	Benzo(k)fluoranthene	R2544037	J3
	WG636834	SAMP	Chrysene	R2544037	J3
	WG636834	SAMP	Dibenz(a,h)anthracene	R2544037	J3
	WG636834	SAMP	Fluoranthene	R2544037	J3
	WG636834	SAMP	Fluorene	R2544037	J3
	WG636834	SAMP	Indeno(1,2,3-cd)pyrene	R2544037	J3
	WG636834	SAMP	Phenanthrene	R2544037	J3
	WG636834	SAMP	Pyrene	R2544037	J3
	WG636834	SAMP	1-Methylnaphthalene	R2544037	J3
	WG636834	SAMP	2-Methylnaphthalene	R2544037	J3
	WG636834	SAMP	2-Chloronaphthalene	R2544037	J3
	WG636449	SAMP	ORP	R2540700	T8
	WG636466	SAMP	Silver	R2541503	O

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

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

Definitions

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

Summary of Remarks For Samples Printed  
02/18/13 at 15:01:36

TSR Signing Reports: 134  
R4 - Rush: Three Day

Log BTEX by 8260 unless otherwise noted

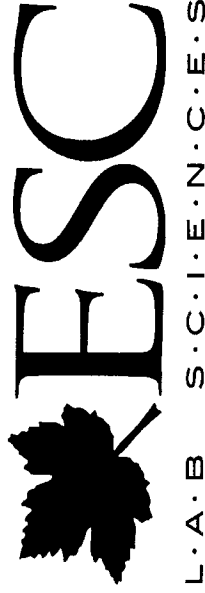
Sample: L619720-01 Account: OXYGJCO Received: 02/12/13 09:00 Due Date: 02/15/13 00:00 RPT Date: 02/18/13 15:00  
Changed BTEXGRO to V8260BTEX and GRO per MB. AV 2/12  
Sample: L619720-02 Account: OXYGJCO Received: 02/12/13 09:00 Due Date: 02/15/13 00:00 RPT Date: 02/18/13 15:00  
Changed BTEXGRO to V8260BTEX and GRO per MB. AV 2/12  
Sample: L619720-03 Account: OXYGJCO Received: 02/12/13 09:00 Due Date: 02/15/13 00:00 RPT Date: 02/18/13 15:00  
Changed BTEXGRO to V8260BTEX and GRO per MB. AV 2/12  
Sample: L619720-04 Account: OXYGJCO Received: 02/12/13 09:00 Due Date: 02/15/13 00:00 RPT Date: 02/18/13 15:00  
Changed BTEXGRO to V8260BTEX and GRO per MB. AV 2/12  
Sample: L619720-05 Account: OXYGJCO Received: 02/12/13 09:00 Due Date: 02/15/13 00:00 RPT Date: 02/18/13 15:00  
Changed BTEXGRO to V8260BTEX and GRO per MB. AV 2/12  
Sample: L619720-06 Account: OXYGJCO Received: 02/12/13 09:00 Due Date: 02/15/13 00:00 RPT Date: 02/18/13 15:00  
Changed BTEXGRO to V8260BTEX and GRO per MB. AV 2/12  
Sample: L619720-07 Account: OXYGJCO Received: 02/12/13 09:00 Due Date: 02/15/13 00:00 RPT Date: 02/18/13 15:00  
Changed BTEXGRO to V8260BTEX and GRO per MB. AV 2/12  
Sample: L619720-08 Account: OXYGJCO Received: 02/12/13 09:00 Due Date: 02/15/13 00:00 RPT Date: 02/18/13 15:00  
Changed BTEXGRO to V8260BTEX and GRO per MB. AV 2/12  
Sample: L619720-09 Account: OXYGJCO Received: 02/12/13 09:00 Due Date: 02/15/13 00:00 RPT Date: 02/18/13 15:00  
Changed BTEXGRO to V8260BTEX and GRO per MB. AV 2/12

Company Name/Address: <b><del>Cordilleran Compliance GJ,</del></b> <b><del>CO Olsson Associates</del></b> <b><del>826 21 1/2 Road</del></b> <b><del>Grand Junction, CO 81505</del></b>			Alternate billing information: Oxy USA WTP LP Tyson Ertel 760 Horizon Drive, Suite Suites 101, GJ, CO 81506 c/o Olsson Associates			Analysis/Container/Preservative <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">* COGCC TABLE 910-1 LIST</div> <div style="width: 100%;"></div> </div>			Chain of Custody Page 1 of 1  Prepared by:  <b>ENVIRONMENTAL SCIENCE CORP.</b> 12065 Lebanon Road Mt. Juliet, TN 37122  Phone (615) 758-5858 Phone (800) 767-5859 FAX (615) 758-5859			
Report to: <u>Tim Dobransky</u>			Email to: <u>Tyson-Ertel@oxy.com</u> <u>tdobransky@olssonassociates.com</u>									
Project Description: <u>Oxy CC 705-22-43</u>			City/State Collected: <u>De Beque, CO</u>									
Phone: (970) 263-7800		Client Project #: <u>013-0242</u>		ESC Key:								
FAX: (970) 263-7456												
Collected by: <u>W. Monroe</u>		Site/Facility ID#:		P.O.#:								
Collected by (signature):  Immediately Packed on Ice N ___ Y <u>X</u>		<b>Rush?</b> (Lab MUST Be Notified) ___ Same Day.....200% ___ Next Day.....100% ___ Two Day.....50% <u>X</u> Three Day.....25%		Date Results Needed: Email? ___No <u>X</u> Yes FAX? ___No ___Yes		No. of Cntrs		CoCode <b>CORCOMGC</b> (lab use only) Template/Prelogin Shipped Via:				
Sample ID		Comp/Grab	Matrix	Depth	Date	Time						
BH1 25-30		grab	SS	25-30	2-8-13	1000	2	X				
BH1 32-35				32-35		1100	1	X				
BH2 25-30				25-30		1200	2	X				
BH2 37-38				37-38		1300	1	X				
BH3 15-20				15-20		1330	2	X				
BH3 20-22				20-22		1430	1	X				
BH4 10-14				10-14		1500	1	X				
BH9 15-20				15-20		1600	2	X				
BH9 30-34		✓	✓	30-34	✓	1630	2	X				

\*Matrix: **SS** - Soil/Solid **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other ND 5435 5509 4548

Remarks: \* **FOR THOSE SAMPLES W/ INSUFFICIENT VOL. FOR FULL TABLE 910-1 - PLEASE RUN 910-1 HYDROCARBONS**

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier		Condition: <u>OT</u> (lab use only)	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <u>3-8</u>	Bottles Received: <u>14</u>	CoC Seals Intact ___ Y ___ N ___ NA	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: <u>2-12-13</u>	Time: <u>0900</u>	pH Checked: NCF: <u>X</u>	



## NON-CONFORMANCE FORM

Login No.: 6614720

Date: 2-12-13

Evaluated by: David May

Client: CORCOM GO

### Non-Conformance (check applicable items)

- |   |   |
|---|---|
| <input type="checkbox"/> Parameter(s) past holding time | <input type="checkbox"/> Login Clarification Needed   |
| <input type="checkbox"/> Improper temperature           | <input type="checkbox"/> Chain of custody is incomplete   |
| <input type="checkbox"/> Improper container type        | <input type="checkbox"/> Chain of Custody is missing (see below)  |
| <input type="checkbox"/> Improper preservation          | <input type="checkbox"/> Broken container(s) (See below)  |
| <input type="checkbox"/> Container lid not intact       | <input checked="" type="checkbox"/> Broken container: sufficient sample volume remains for analysis requested (See below) |

If no COC: Received by \_\_\_\_\_  
Date: \_\_\_\_\_ Time: \_\_\_\_\_  
Temp: \_\_\_\_\_ Cont. Rec. \_\_\_\_\_ pH: \_\_\_\_\_  
☐ Fedex ☐ UPS ☐ SWA ☐ Other \_\_\_\_\_  
Tracking # \_\_\_\_\_

☐ Insufficient packing material around container  
☐ Insufficient packing material inside cooler  
☐ Improper handling by carrier (FedEx / UPS / Courier)  
☐ Sample was frozen

Comments: 1 box. received broken for ID-BH-4-10-14.

Login Instructions:

TSR Initials: \_\_\_\_\_

Client informed by call / email / fax / voice mail date: \_\_\_\_\_ time: \_\_\_\_\_

Client contact: