



01761115

State of Colorado
Oil and Gas Conservation Commission

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



RECEIVED
FOR OGC USE ONLY

AUG 04 2010

COGCC

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): Pit Restoration

OGCC Operator Number: 10322

Name of Operator: East Cheyenne Gas Storage, LLC

Address: 10901 West Toller Drive, Suite 200

City: Littleton State: CO Zip: 80127

API Number: N/A

County: Logan (075)

Facility Name: Gillham

Facility Number: 116251

Well Name: N/A

Well Number: N/A

Location: (QtrQtr, Sec, Twp, Rng, Meridian): SENW Sec 6 T11N R52W Latitude: 40.95945 Longitude: -103.2238

Contact Name and Telephone:

Daniel Benedict (Merchant Energy Partners, LLC)

No: (720) 351-4000

Fax: (720) 351-4200

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Crude oil, 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.): Dry land farming, residential

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Sandy loam (silty sand)

Potential receptors (water wells within 1/4 mi, surface waters, etc.): None

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

Impacted Media (check):



Soils



Vegetation



Groundwater



Surface Water

Extent of Impact:

Hydrocarbon stains and constituent impacts in pits

How Determined:

Visual inspection, pit excavation and sample analysis

REMEDIATION WORKPLAN

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

The residential water well serving Mr. Ron Nelson (depth 250 ft, permit no. 280327) was replaced with a new well completed in the Fox Hills Sandstone below the High Plains Aquifer and screened from 820-1020 ft (well report included in Attachment 3). This well was replaced in response to environmental issues related to a separate produced water pit on the Schwake Lease (#100305).

Describe how source is to be removed:

The source materials in the skim pit and overflow pits will be remediated by land farming or off-site disposal, as appropriate.

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.:

In general, a combination of soil treatment and in-place closure will be used to remedy apparent impacts to soil. These activities are expected to reduce the potential for migration of constituents in the pits to ground water. Attachment 1 provides a description of these proposed activities.

Submit Page 2 with Page 1



Tracking Number: 01761115
Name of Operator: East Cheyenne
OGCC Operator No: 10322
Received Date: 8/4/10
Well Name & No: Kenneth Gillham #4
Facility Name & No: Water Pits

Page 2
REMEDIAL WORKPLAN (Cont.)

OGCC Employee: Axelsson

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

Ground water monitoring is not proposed because the potential for exposure to ground water is very low. No water wells are located within a 1/4-mile radius of the site. The closest well is approximately 3,300 feet east and was recently completed below shallow ground water to depths of 820-1020 feet. The source areas at the site will be removed/remediated to reduce the potential for migration of constituents of concern in soil to ground water. If residual concentrations are present, they are expected to attenuate with time to levels that are consistent with Table 910-1.

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.

Attachment 1 provides the remediation work plan, including reclamation activities.

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

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

Attachment 2 provides a description of site investigation results.

Table 1 provides a summary of analytical results and compares them to Table 910-1 media concentration limits.

Figure 1 provides a location map showing the location of the Gillham Pit in relation to regional landmarks and roads.

Figure 2 provides a local site map which includes sample locations.

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

Crude-saturated soil, if present, will be removed and disposed off-site at an appropriately certified industrial landfill.

Other affected materials that exceed Table 910-1 limits will be excavated or treated by land farming.

See Attachment 1 for the remediation workplan.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: <u>7/22/10</u>	Date Site Investigation Completed: <u>7/23/10</u>	Date Remediation Plan Submitted: <u>8/4/10</u>
Remediation Start Date: <u>8/16/10</u>	Anticipated Completion Date: <u>9/30/10</u>	Actual Completion Date: _____

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

Print Name: Daniel Benedict Signed: _____

Title: Operations Engineer Date: 8/4/10

OGCC Approved: [Signature] Title: EPS Date: 8/9/10

Remediation Workplan
Gillham Produced Water Pit #116251
Attachment 1

August 4, 2010
Project No. 0104362

Environmental Resources Management Southwest, Inc.
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000

ATTACHMENT 1 Remediation Workplan

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, in situ bioremediation, burning of oily vegetation, etc.:

The Gillham Pit (ID No. 116251) exists at the Kenneth Gillham lease adjacent to the Gillham No. 1 well (PI No. 05-075-07169) and is shown in Figures 1 and 2. The pit complex consists of five component internal pits, including one small, circular crude skimmer pit, having a diameter of approximately 25 ft, and four overflow pits of varying size (Figure 2). The pit complex is surrounded by berms that rise to approximately 4 ft above grade. The base of the pits are 1-2 feet below outside grade, and the internal berms are also approximately 4-5 ft above the pit bottoms.

The skimmer pit contains a top layer of crude-saturated soil approximately five feet in thickness, which is underlain by unstained soil with a moderate petroleum odor. Pits A, B and C (Figure 2) contain small volumes of soil affected by semivolatile hydrocarbons, arsenic, electrical conductivity, high pH, and sodium adsorption ratio (SAR) in the upper 1-3 ft. Shallow affected soil is underlain by clean soil having no petroleum odor or staining and, in a number of locations, a hard layer consisting of cement-stabilized sand and gravel. This layer was apparently laid down at the base of the pits by the operator in the late 1950s or 1960s to reduce the potential for migration of pit materials into the soil column. Tarry residues were noted only in scattered locations, outside of the skim pit area, particularly on the lower flanks of the berms separating the internal pits.

A review of Table 1 indicates that Table 910-1 limits were exceeded for benzene (1 sample), benzo(a)pyrene and benzo(a)fluoranthene (3 samples), indento(1,2,3-cd)pyrene (1 sample), TPH (5 samples), arsenic (all 16 samples), electrical conductivity (4 samples), pH (13 samples), and SAR (10 samples). Maximum crude impacts were noted in sub-pits A, C, and the skimmer pit, E.

The proposed pit closure remedy will reduce elevated concentrations of organic materials to levels below the Table 910-1 limits. In addition, surface water infiltration and the potential leaching to ground water by dissolution will be significantly reduced by closure of the pits. The following discussion presents the remedial approach for each pit and for ground water.

Skimmer Pit

- Excavate oil-saturated soil and place in land farm or transport to at an appropriately-certified industrial landfill for disposal, depending on the anticipated rate of biodegradation; and
- Collect samples of side wall and bottom soil, obtain laboratory analyses, and confirm Table 910-1 constituent concentrations are within limits for organic constituents prior to backfilling.

Overflow Pits

- Excavate upper 1-3 ft of soil showing visible petroleum impacts or known to exceed COGCC Table 910-1 limits for organic constituents;
- Land farm or transport soil to at an appropriately-certified industrial landfill for disposal; and
- Collect samples of side wall and bottom soil, obtain laboratory analyses, and confirm Table 910-1 constituent concentrations are within limits for organic constituents prior to backfilling.

Final Pit Area Management

- Backfill excavated pit area in lifts and compact to grade to avoid settling;
- Cover pit with graded topsoil to direct surface water runoff away from the backfilled pit; and
- Seed the graded area with native grasses using hydromulch or similar to stabilize the soil covers.

Ground Water

No ground water remediation is proposed, because no water wells are located within a $\frac{1}{4}$ mile radius of the site and the closest water well (3,300 feet east of the site) as been completed at depths of 820-1020 feet. Pit remediation will reduce the potential for soil leachate to affect ground water. No other water well users are apparent within $\frac{1}{2}$ mile of the site.

Site Investigation Results
Gillham Produced Water Pit #116251
Attachment 2

August 4, 2010
Project No. 0104362

Environmental Resources Management Southwest, Inc.
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000

ATTACHMENT 2 Site Investigation Results

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?

Approach and Field Observations

A total of 16 exploratory trenches were excavated in the Gillham pits using a track excavator. Figure 2 shows the internal layout of the pit site, including the surroundings, the five component internal pits, and the track excavator sampling locations.

All trenches were dug to a depth of approximately five to six feet. Several trenches, those installed at B-A-1 and B-A-2, were dug to 7-8 feet, before the shallow pattern of hydrocarbon impact was fully discerned. Samples were collected by grab sampling from the bucket at intervals of 1-2 feet, 5 feet, and 7-8 feet for the two deeper trenches.

Hydrocarbon impacts to soil, indicated by staining, petroleum odor, and photoionization detector (PID) response were limited to depths of two feet in most locations. The only trench with a high degree of petroleum staining and odor was the trench at B-E, located in the former skimmer pit. At that location, black crude saturation and staining were observed to a depth of five feet. Soil collected from six feet in the trench had a moderate petroleum odor, but no staining. PID response from the sample was 275 ppm (compared to 544 ppm at two feet).

The only evidence of visible hydrocarbon-impacted soil at the surface was noted in the lower half of the internal berms, particularly in the corners, of pits A, B, and C. Pit D at the western end of the Gillham Pit had no visible staining throughout.

The former skimmer pit at trench location B-E was largely filled in with crude-saturated soil and a veneer of blow sand. There was no significant pit depression or liquid visible at the top of that pit.

Results

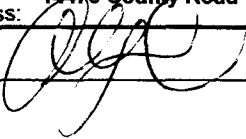
Samples were collected at multiple depths from each of the 16 trenches dug throughout the site for screening with the PID. One sample was collected from each pit, based upon judgment and indications of detectible hydrocarbon impact, for laboratory analysis. Figure 2 shows the sample locations. Duplicate samples were collected as a quality check on the laboratory results from two of the trenches, B-C-1 and B-D-1. These samples were delivered directly, under chain-of-custody control, to Accutest Laboratories in Wheatridge, Colorado. The pit samples were analyzed for constituents listed in Table 910-1 of the COGCC 900-series rules, as amended by guidance in the "Frequently Asked Questions" section of the web page at <http://cogcc.state.co.us>. Analytical results for the pit samples are presented in Table 1.

Table 1 indicates that COGCC Table 910-1 concentration and regulated parameter limits were exceeded for benzene (1 sample), benzo(a)pyrene and benzo(a)fluoranthene (3 samples), indeno(1,2,3-cd)pyrene (1 sample), TPH (6 samples), arsenic (all 16 samples), electrical conductivity (4 samples), pH (13 samples), and SAR (10 samples). Elevated pH measurements are probably attributable to Portland cement that was mixed with sand and gravel to form cement-stabilized sand in the base of the pits. Arsenic was not detected (above the reporting limit of 3.6 mg/kg) in a background soil sample collected near the Schwake Pit (No. 100304) on October 8, 2009, located approximately 0.5 mile east of the Gillham Pit. These results were used as a basis to conclude that a remedy was warranted for the hydrocarbon content of the pit materials.

Well Construction and Test Report
Gillham Produced Water Pit #116251
Attachment 3

August 4, 2010
Project No. 0104362

Environmental Resources Management Southwest, Inc.
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000

FORM NO. GWS-31 04/2005	WELL CONSTRUCTION AND TEST REPORT STATE OF COLORADO, OFFICE OF THE STATE ENGINEER 1313 Sherman St., Room 818, Denver, CO 80203 Phone - Info (303) 866-3587 Main (303) 866-3581 Fax (303) 866-3589 http://www.water.state.co.us	For Office Use Only																																
1. WELL PERMIT NUMBER: 280327																																		
2. WELL OWNER INFORMATION NAME OF WELL OWNER: RON AND CHRISTA NELSON																																		
MAILING ADDRESS: 18852 CR 74																																		
CITY: PEETZ STATE: CO ZIP CODE: 80751																																		
TELEPHONE NUMBER: (970) 334-2350																																		
3. WELL LOCATION AS DRILLED: NE 1/4, NE 1/4, Sec. 6, Twp. 11 <input checked="" type="checkbox"/> N or <input type="checkbox"/> S. Range 52 <input type="checkbox"/> E or <input checked="" type="checkbox"/> W DISTANCES FROM SEC. LINES: 431 ft. from <input checked="" type="checkbox"/> N or <input type="checkbox"/> S section line and 550 ft. from <input type="checkbox"/> E or <input type="checkbox"/> W section line. SUBDIVISION: _____ LOT _____ BLOCK _____ FILING (UNIT) _____ Optional GPS Location: GPS Unit must use the following settings: Format must be UTM, Units must be meters, Datum must be NAD83, Unit must be set to true N. <input type="checkbox"/> Zone 12 or <input checked="" type="checkbox"/> Zone 13 STREET ADDRESS AT WELL LOCATION: _____ CO _____ Northing: 650412																																		
4. GROUND SURFACE ELEVATION _____ feet DATE COMPLETED 10/8/2009 TOTAL DEPTH 1020 feet DRILLING METHOD Rotary-mud DEPTH COMPLETED 1020 feet																																		
5. GEOLOGIC LOG:																																		
Depth	Type	Grain Size	Color	Water Loc.																														
0 - 140	Clay Gravel Sand Gravelly		Brown	WL																														
140 - 220	Clay & Silt Chippy		Brown																															
220 - 620	Clay Gummy		Brown																															
620 - 720	Shale Dry		Gray																															
720 - 1020	Sandstone & Shale Fine		Gray	WL																														
6. HOLE DIAM (in.) From (ft) To (ft) 12 0 240 8 240 1020 7. PLAIN CASING: <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>OD (in)</th> <th>Kind</th> <th>Wall Size (in)</th> <th>From (ft)</th> <th>To (ft)</th> </tr> <tr> <td>5</td> <td>PVC</td> <td>SDR 17</td> <td>-10</td> <td>800</td> </tr> <tr> <td>8.625</td> <td>Steel</td> <td>.265</td> <td>0</td> <td>240</td> </tr> </table> PERFORATED CASING: Screen Slot Size (in) 0.03 5 PVC SDR 17 800 1020 8. FILTER PACK: Material Sand Size 10.20 Interval 300 - 1020 9. PACKER PLACEMENT: Type _____ Depth _____ 10. GROUTING RECORD <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Material</th> <th>Amount</th> <th>Density</th> <th>Interval</th> <th>Placement</th> </tr> <tr> <td>Cement</td> <td>80 S</td> <td>7 GAL</td> <td>0 - 240</td> <td>Positive Di</td> </tr> <tr> <td>Cement</td> <td>4 SA</td> <td>7 GAL</td> <td>200 - 300</td> <td>Tremie</td> </tr> </table>					OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)	5	PVC	SDR 17	-10	800	8.625	Steel	.265	0	240	Material	Amount	Density	Interval	Placement	Cement	80 S	7 GAL	0 - 240	Positive Di	Cement	4 SA	7 GAL	200 - 300	Tremie
					OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)																									
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					Cement	80 S	7 GAL	0 - 240	Positive Di																									
					Cement	4 SA	7 GAL	200 - 300	Tremie																									
Remarks: _____																																		
11. DISINFECTION: Type HTH Amt. Used 20																																		
12. WELL TEST DATA: <input type="checkbox"/> Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test. TESTING METHOD Air Static Level 480 ft. Date/Time measured: 10/19/2009 Production Rate 10 gpm. Pumping Level 600 ft. Date/Time measured: 10/19/2009 Test Length (hrs) 8. Remarks: _____																																		
13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. [The filing of a document that contains false statements is a violation of section 37-91-108(1)(e), C.R.S., and is punishable by fines up to \$5000 and/or revocation of the contracting license.]																																		
Company Name: Dreiling Drilling Co. Inc.			Phone: (970) 867-7160 License Number: 332																															
Mailing Address: 14473 County Road R			Fort Morgan, CO 80701																															
Signature: 		Print Name and Title A. Gregory Dreiling		Date 10/19/2009																														

Laboratory Analytical Report
Gillham Produced Water Pit #116251
Attachment 4

August 4, 2010
Project No. 0104362

Environmental Resources Management Southwest, Inc.
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000



07/30/10

Technical Report for

ERM

Gilltiam Pit Chevron/Schwake

0104362

Accutest Job Number: D15557

Sampling Date: 07/22/10

Report to:

**ERM
15810 Park Ten Place Suite 300
Houston, TX 77084
john.boone@erm.com**

ATTN: John Boone

Total number of pages in report: 259



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

**Jesse L. Smith
Laboratory Director**

Client Service contact: Amanda Kissell 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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

Table of Contents

-1-

Section 1: Sample Summary	4
Section 2: Case Narrative/Conformance Summary	7
Section 3: Sample Results	13
3.1: D15557-1: B-A-1-2	14
3.2: D15557-1A: B-A-1-2	20
3.3: D15557-2: B-A-2-1/2	22
3.4: D15557-2A: B-A-2-1/2	28
3.5: D15557-3: B-A-3-1/2	30
3.6: D15557-3A: B-A-3-1/2	36
3.7: D15557-4: B-B-1-1/2	38
3.8: D15557-4A: B-B-1-1/2	44
3.9: D15557-5: B-B-2-2	46
3.10: D15557-5A: B-B-2-2	52
3.11: D15557-6: B-B-3-2	54
3.12: D15557-6A: B-B-3-2	60
3.13: D15557-7: B-B-4-2	62
3.14: D15557-7A: B-B-4-2	68
3.15: D15557-8: B-B-5-2	70
3.16: D15557-8A: B-B-5-2	76
3.17: D15557-9: B-C-1-2	78
3.18: D15557-9A: B-C-1-2	84
3.19: D15557-10: B-2-1-2(DUP)	86
3.20: D15557-10A: B-2-1-2(DUP)	92
3.21: D15557-11: B-C-2-2	94
3.22: D15557-11A: B-C-2-2	100
3.23: D15557-12: B-D-1-2	102
3.24: D15557-12A: B-D-1-2	108
3.25: D15557-13: B-D-1-2(DUP)	110
3.26: D15557-13A: B-D-1-2(DUP)	116
3.27: D15557-14: B-D-2	118
3.28: D15557-14A: B-D-2	124
3.29: D15557-15: B-E-2	126
3.30: D15557-15A: B-E-2	132
3.31: D15557-16: B-F-2	134
3.32: D15557-16A: B-F-2	140
3.33: D15557-17: B-G-2	142
3.34: D15557-17A: B-G-2	148
3.35: D15557-18: B-H-2	150
3.36: D15557-18A: B-H-2	156
Section 4: Misc. Forms	158
4.1: Chain of Custody	159
Section 5: GC/MS Volatiles - QC Data Summaries	161

Table of Contents

-2-

5.1: Method Blank Summary	162
5.2: Blank Spike Summary	165
5.3: Matrix Spike/Matrix Spike Duplicate Summary	168
Section 6: GC Semi-volatiles - QC Data Summaries	171
6.1: Method Blank Summary	172
6.2: Blank Spike Summary	175
6.3: Matrix Spike/Matrix Spike Duplicate Summary	178
Section 7: Metals Analysis - QC Data Summaries	181
7.1: Prep QC MP2424: Ba,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn	182
7.2: Prep QC MP2425: As	192
7.3: Prep QC MP2430: Ca,Mg,Na,Sodium Adsorption Ratio	197
7.4: Prep QC MP2431: Ca,Mg,Na,Sodium Adsorption Ratio	205
7.5: Prep QC MP2432: Hg	213
7.6: Prep QC MP2440: Ca,Mg,Na,Sodium Adsorption Ratio	217
Section 8: General Chemistry - QC Data Summaries	225
8.1: Method Blank and Spike Results Summary	226
Section 9: Misc. Forms (Accutest Northern California,Inc.)	227
9.1: Chain of Custody	228
Section 10: GC/MS Semi-volatiles - QC Data (Accutest Northern California,Inc.)	232
10.1: Method Blank Summary	233
10.2: Blank Spike Summary	235
10.3: Blank Spike/Blank Spike Duplicate Summary	236
10.4: Matrix Spike/Matrix Spike Duplicate Summary	237
Section 11: Misc. Forms (Accutest Labs of New England, Inc.)	239
11.1: Chain of Custody	240
Section 12: GC Volatiles - QC Data (Accutest Labs of New England, Inc.)	243
12.1: Method Blank Summary	244
12.2: Blank Spike Summary	245
12.3: Matrix Spike/Matrix Spike Duplicate Summary	246
Section 13: Misc. Forms (Accutest Northern California,Inc.)	247
13.1: Chain of Custody	248
Section 14: Misc. Forms (Accutest Labs of New England, Inc.)	252
14.1: Chain of Custody	253
Section 15: General Chemistry - QC Data (Accutest Labs of New England, Inc.)	256
15.1: Method Blank and Spike Results Summary	257
15.2: Duplicate Results Summary	258
15.3: Matrix Spike Results Summary	259



Sample Summary

ERM

Job No: D15557

Gilltiam Pit Chevron/Schwake
Project No: 0104362

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D15557-1	07/22/10	09:25 JB	07/23/10	SO	Soil	B-A-1-2
D15557-1A	07/22/10	09:25 JB	07/23/10	SO	Soil	B-A-1-2
D15557-2	07/22/10	09:56 JB	07/23/10	SO	Soil	B-A-2-1/2
D15557-2A	07/22/10	09:56 JB	07/23/10	SO	Soil	B-A-2-1/2
D15557-3	07/22/10	10:10 JB	07/23/10	SO	Soil	B-A-3-1/2
D15557-3A	07/22/10	10:10 JB	07/23/10	SO	Soil	B-A-3-1/2
D15557-4	07/22/10	10:33 JB	07/23/10	SO	Soil	B-B-1-1/2
D15557-4A	07/22/10	10:33 JB	07/23/10	SO	Soil	B-B-1-1/2
D15557-5	07/22/10	10:45 JB	07/23/10	SO	Soil	B-B-2-2
D15557-5A	07/22/10	10:45 JB	07/23/10	SO	Soil	B-B-2-2
D15557-6	07/22/10	10:52 JB	07/23/10	SO	Soil	B-B-3-2
D15557-6A	07/22/10	10:52 JB	07/23/10	SO	Soil	B-B-3-2
D15557-7	07/22/10	11:05 JB	07/23/10	SO	Soil	B-B-4-2

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

Sample Summary

(continued)

ERM

Job No: D15557

Gilltiam Pit Chevron/Schwake
Project No: 0104362

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D15557-7A	07/22/10	11:05 JB	07/23/10	SO	Soil	B-B-4-2
D15557-8	07/22/10	11:17 JB	07/23/10	SO	Soil	B-B-5-2
D15557-8A	07/22/10	11:17 JB	07/23/10	SO	Soil	B-B-5-2
D15557-9	07/22/10	13:35 JB	07/23/10	SO	Soil	B-C-1-2
D15557-9A	07/22/10	13:35 JB	07/23/10	SO	Soil	B-C-1-2
D15557-10	07/22/10	13:43 JB	07/23/10	SO	Soil	B-2-1-2(DUP)
D15557-10A	07/22/10	13:43 JB	07/23/10	SO	Soil	B-2-1-2(DUP)
D15557-11	07/22/10	13:50 JB	07/23/10	SO	Soil	B-C-2-2
D15557-11A	07/22/10	13:50 JB	07/23/10	SO	Soil	B-C-2-2
D15557-12	07/22/10	14:12 JB	07/23/10	SO	Soil	B-D-1-2
D15557-12A	07/22/10	14:12 JB	07/23/10	SO	Soil	B-D-1-2
D15557-13	07/22/10	14:12 JB	07/23/10	SO	Soil	B-D-1-2(DUP)
D15557-13A	07/22/10	14:12 JB	07/23/10	SO	Soil	B-D-1-2(DUP)

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



Sample Summary
(continued)

ERM

Job No: D15557

Gilltiam Pit Chevron/Schwake
Project No: 0104362

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D15557-14	07/22/10	14:22 JB	07/23/10	SO	Soil	B-D-2
D15557-14A	07/22/10	14:22 JB	07/23/10	SO	Soil	B-D-2
D15557-15	07/22/10	14:41 JB	07/23/10	SO	Soil	B-E-2
D15557-15A	07/22/10	14:41 JB	07/23/10	SO	Soil	B-E-2
D15557-16	07/22/10	15:15 JB	07/23/10	SO	Soil	B-F-2
D15557-16A	07/22/10	15:15 JB	07/23/10	SO	Soil	B-F-2
D15557-17	07/22/10	15:25 JB	07/23/10	SO	Soil	B-G-2
D15557-17A	07/22/10	15:25 JB	07/23/10	SO	Soil	B-G-2
D15557-18	07/22/10	15:40 JB	07/23/10	SO	Soil	B-H-2
D15557-18A	07/22/10	15:40 JB	07/23/10	SO	Soil	B-H-2

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: ERM

Job No D15557

Site: Giltiam Pit Chevron/Schwake

Report Dat 7/30/2010 3:29:36 PM

On 07/23/2010, 18 sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 15.6 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D15557 was assigned to the project. The lab sample IDs, client sample IDs, and dates of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix SO

Batch ID: V3V313

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15557-3MS, D15557-3MSD were used as the QC samples indicated.

Matrix SO

Batch ID: V3V314

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15564-1MS, D15564-1MSD were used as the QC samples indicated.

Matrix SO

Batch ID: V5V511

- All samples were analyzed within the recommended method holding time.
- Sample(s) D15557-15MS, D15557-15MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for m,p-Xylene, o-Xylene are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for m,p-Xylene are outside control limits. Probable cause due to matrix interference.
- D15557-1, D15557-11: Dilution required due to matrix interference (non-target compounds above calibration range).

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO

Batch ID: C:OP2446

- The data for SW846 8270C BY SIM meets quality control requirements.
- D15557-14, D15557-15: Reporting limits raised due to the nature of the sample extract(Oily, non-target compounds and hard to blowdown). Analysis performed at Accutest Laboratories, San Jose, CA.
- D15557-1 through D15557-7, and D15557-9 through D15557-13: Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

Matrix SO

Batch ID: C:OP2449

- The data for SW846 8270C BY SIM meets quality control requirements.
- Analysis performed at Accutest Laboratories, San Jose, CA.

Volatiles by GC By Method SW846 8015

Matrix SO

Batch ID: M:GWX2386

- The data for SW846 8015 meets quality control requirements.
- Analysis performed at Accutest Laboratories, Marlborough, MA.

Extractables by GC By Method SW846-8015

Matrix SO

Batch ID: OP2224

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846-8015B

Matrix SO

Batch ID: OP2222

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15557-7MS, D15557-7MSD were used as the QC samples indicated.
- Sample(s) D15557-11, D15557-15 have surrogates above control limits. Probable cause due to matrix interference.

Matrix SO

Batch ID: OP2239

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) 15584-1MS, D15584-1MSD were used as the QC samples indicated.

Metals By Method SW846 6010B

Matrix AQ

Batch ID: MP2430

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15163-2AMSD, D15163-2AMS were used as the QC samples for metals.

Matrix AQ

Batch ID: MP2431

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15557-3AMS, D15557-3AMSD were used as the QC samples for metals.

Matrix AQ

Batch ID: MP2440

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15557-13AMS, D15557-13AMSD were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Matrix SO

Batch ID: MP2424

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15557-1MS, D15557-1MSD, D15557-1SDL were used as the QC samples for metals.
- Matrix Spike and Matrix Spike Duplicate Recovery(s) for Zinc are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- RPD(s) for Serial Dilution for cadmium, Selenium, Chromium, Lead, Nickel, Zinc are outside control limits for sample MP2424-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 6020

Matrix SO

Batch ID: MP2425

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15557-1MS, D15557-1MSD, D15557-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic are outside control limits for sample MP2425-SD1. Probable cause due to sample homogeneity.

Metals By Method SW846 7471A

Matrix SO

Batch ID: MP2432

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15557-1MSD, D15557-1MS were used as the QC samples for metals.
- Matrix Spike and Matrix Spike Duplicate Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Wet Chemistry By Method ASTM E1498-76M

Matrix SO

Batch ID: M:GN32457

- The data for ASTM E1498-76M meets quality control requirements.
- The following samples were run outside of holding time for method ASTM E1498-76M: D15557-1 through D15557-18.
- Redox Potential Vs H2: Analysis performed at Accutest Laboratories, Marlborough, MA.

Wet Chemistry By Method LADNR29B

Matrix SO

Batch ID: MP2431

- Sodium Adsorption Ratio: Calculated as: $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$

Wet Chemistry By Method SM18 2540G

Matrix SO

Batch ID: C:GN4186

- The data for SM18 2540G meets quality control requirements.
- Solids, Percent: Analysis performed at Accutest Laboratories, San Jose, CA.

Wet Chemistry By Method SM19 2540B M

Matrix SO

Batch ID: GN5534

- The data for SM19 2540B M meets quality control requirements.

Wet Chemistry By Method SW846 3060/7196A M

Matrix SO

Batch ID: R3495

- The data for SW846 3060/7196A M meets quality control requirements.
- Chromium, Trivalent: Calculated as: $(\text{Chromium}) - (\text{Chromium, Hexavalent})$

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO

Batch ID: M:GP11832

- The data for SW846 3060A/7196A meets quality control requirements.
- Chromium, Hexavalent: Analysis performed at Accutest Laboratories, Marlborough, MA.

Wet Chemistry By Method SW846 9045C

Matrix SO

Batch ID: GN5531

- The following samples were run outside of holding time for method SW846 9045C: D15557-1 through D15557-18.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Accutest Mountain States

Job No D15557

Site: ERMTTXH: Giltiam Pit Chevron/Schwake

Report Date 7/29/2010 5:57:43 PM

18 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 07/22/2010 and were received at Accutest on 07/23/2010 properly preserved and intact, unless noted below. These Samples received an Accutest job number of D15557. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO

Batch ID: OP2446

- Sample(s) OP2446-MB, OP2446-BS have surrogates outside laboratory control limits (high bias). Sample(s) D15557-8, -10, -11, -14, -15 have surrogates outside control limits due to dilution.
- Sample reporting limits raised due to the dark color and/or oily nature of the sample extracts.

Matrix SO

Batch ID: OP2449

- Sample(s) D15557-18MS, D15557-18MSD were used as the QC samples indicated.
- Matrix Spike Duplicate Recovery(s) for 1-Methylnaphthalene, 2-Methylnaphthalene, Naphthalene are outside control limits. Probable cause due to matrix interference.
- RPD(s) for MSD for 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene, Acenaphthylene, Fluorene, Naphthalene are outside control limits for sample OP2449-MSD.

Wet Chemistry By Method SM18 2540G

Matrix SO

Batch ID: GN4186

- Sample(s) D15557-4DUP were used as the QC samples for Solids, Percent.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Accutest Mountain States**Job No** D15557**Site:** ERMTTXH: Giltiam Pit Chevron/Schwake**Report Date** 7/29/2010 4:22:07 PM

18 Sample(s) were collected on 07/22/2010 and were received at Accutest on 07/23/2010 properly preserved, at 1.3 Deg. C and intact. These Samples received an Accutest job number of D15557. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GC By Method SW846 8015

Matrix SO**Batch ID:** GWX2386

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M93162-1MS, M93162-1MSD were used as the QC samples indicated.

Wet Chemistry By Method ASTM E1498-76M

Matrix SO**Batch ID:** GN32457

- Sample(s) D15557-1DUP were used as the QC samples for Redox Potential Vs H2.

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO**Batch ID:** GP11832

- All samples were distilled within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15445-3DUP, D15445-3MS were used as the QC samples for Chromium, Hexavalent.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(D15557).



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	B-A-1-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-1	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.1
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	5V09356.D	1	07/26/10	DC	n/a	n/a	V5V511
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	10.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	130	38	ug/kg	
108-88-3	Toluene	ND	250	130	ug/kg	
100-41-4	Ethylbenzene	ND	250	50	ug/kg	
	m,p-Xylene	ND	500	88	ug/kg	
95-47-6	o-Xylene	ND	250	88	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%
17060-07-0	1,2-Dichloroethane-D4	82%		70-130%

(a) Dilution required due to matrix interference (non-target compounds above calibration range).

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-A-1-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-1	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.1
Method:	SW846 8270C BY SIM SW846 3545A		
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10809.D	10	07/27/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	5.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5900	1500	ug/kg	
208-96-8	Acenaphthylene	ND	5900	1500	ug/kg	
120-12-7	Anthracene	ND	5900	1500	ug/kg	
56-55-3	Benzo(a)anthracene	189	590	180	ug/kg	J
50-32-8	Benzo(a)pyrene	281	590	180	ug/kg	J
205-99-2	Benzo(b)fluoranthene	443	590	180	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	630	590	180	ug/kg	
207-08-9	Benzo(k)fluoranthene	221	590	180	ug/kg	J
218-01-9	Chrysene	802	590	180	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	590	180	ug/kg	
206-44-0	Fluoranthene	ND	5900	1500	ug/kg	
86-73-7	Fluorene	ND	5900	1500	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	590	180	ug/kg	
90-12-0	1-Methylnaphthalene	ND	5900	1500	ug/kg	
91-57-6	2-Methylnaphthalene	ND	5900	1500	ug/kg	
91-20-3	Naphthalene	ND	5900	1500	ug/kg	
85-01-8	Phenanthrene	ND	5900	1500	ug/kg	
129-00-0	Pyrene	ND	5900	1500	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		20-115%
321-60-8	2-Fluorobiphenyl	99%		25-106%
1718-51-0	Terphenyl-d14	125%		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-A-1-2						
Lab Sample ID:	D15557-1				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	85.1	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50347.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.0 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	144	6.7	4.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	100%		36-148%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-A-1-2		
Lab Sample ID:	D15557-1	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	85.1
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2978.D	5	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	3270	78	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	118%		63-130%	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-A-1-2

Lab Sample ID: D15557-1

Matrix: SO - Soil

Date Sampled: 07/22/10

Date Received: 07/23/10

Percent Solids: 85.1

Project: Giltiam Pit Chevron/Schwake

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.8	0.41	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	106	1.0	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.0	1.0	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	6.6	1.0	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	7.0	0.51	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	7.9	5.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.074	0.074	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	6.1	3.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.1	5.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.1	3.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	20.3	3.1	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA854

(3) Instrument QC Batch: MA855

(4) Instrument QC Batch: MA856

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-A-1-2	Date Sampled: 07/22/10
Lab Sample ID: D15557-1	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 85.1
Project: Gilltiam Pit Chevron/Schwake	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	07/27/10 16:20	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	6.1	3.3	mg/kg	1	07/27/10 17:43	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	288		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	85.5		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	85.1		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	2950	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	8.85		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-A-1-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-1A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.5
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	190	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	12.8	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	428	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2430

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-A-1-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-1A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.5
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	8.10		ratio	1	07/28/10 14:27	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-A-2-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-2	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	81.9
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V05969.D	1	07/24/10	DC	n/a	n/a	V3V313
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	6.3	1.9	ug/kg	
108-88-3	Toluene	ND	13	6.3	ug/kg	
100-41-4	Ethylbenzene	ND	13	2.5	ug/kg	
	m,p-Xylene	ND	25	4.4	ug/kg	
95-47-6	o-Xylene	ND	13	4.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	91%		70-130%
460-00-4	4-Bromofluorobenzene	78%		70-130%
17060-07-0	1,2-Dichloroethane-D4	101%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-A-2-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-2	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	81.9
Method:	SW846 8270C BY SIM SW846 3545A		
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10810.D	20	07/27/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	5.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	12000	3100	ug/kg	
208-96-8	Acenaphthylene	ND	12000	3100	ug/kg	
120-12-7	Anthracene	ND	12000	3100	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1200	370	ug/kg	
50-32-8	Benzo(a)pyrene	ND	1200	370	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	1200	370	ug/kg	
191-24-2	Benzo(g,h,i)perylene	1580	1200	370	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	1200	370	ug/kg	
218-01-9	Chrysene	ND	1200	370	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	1200	370	ug/kg	
206-44-0	Fluoranthene	ND	12000	3100	ug/kg	
86-73-7	Fluorene	ND	12000	3100	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1200	370	ug/kg	
90-12-0	1-Methylnaphthalene	ND	12000	3100	ug/kg	
91-57-6	2-Methylnaphthalene	ND	12000	3100	ug/kg	
91-20-3	Naphthalene	ND	12000	3100	ug/kg	
85-01-8	Phenanthrene	ND	12000	3100	ug/kg	
129-00-0	Pyrene	ND	12000	3100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		20-115%
321-60-8	2-Fluorobiphenyl	97%		25-106%
1718-51-0	Terphenyl-d14	125%		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-A-2-1/2						
Lab Sample ID:	D15557-2				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	81.9	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50348.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.0 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	31.0	7.5	5.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	112%		36-148%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-A-2-1/2		
Lab Sample ID:	D15557-2	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	81.9
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2979.D	5	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	1740	84	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	65%		63-130%	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-A-2-1/2

Lab Sample ID: D15557-2

Matrix: SO - Soil

Date Sampled: 07/22/10

Date Received: 07/23/10

Percent Solids: 81.9

Project: Giltiam Pit Chevron/Schwake

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.5	0.41	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	130	1.0	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.0	1.0	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	9.4	1.0	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	9.8	0.51	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	40.4	5.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	0.090	0.070	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	8.1	3.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.1	5.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.1	3.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	27.2	3.1	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA854

(3) Instrument QC Batch: MA855

(4) Instrument QC Batch: MA856

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-A-2-1/2**Lab Sample ID:** D15557-2**Matrix:** SO - Soil**Date Sampled:** 07/22/10**Date Received:** 07/23/10**Percent Solids:** 81.9**Project:** Gilltiam Pit Chevron/Schwake

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.5	2.5	mg/kg	1	07/27/10 16:20	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.7	3.5	mg/kg	1	07/27/10 18:28	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	327		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	79.7		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	81.9		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	2250	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	8.71		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-A-2-1/2		
Lab Sample ID:	D15557-2A	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
		Percent Solids:	79.7
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	183	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	10.3	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	326	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2430

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-A-2-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-2A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	79.7
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	6.34		ratio	1	07/28/10 14:33	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-A-3-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-3	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	81.0
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V05970.D	1	07/24/10	DC	n/a	n/a	V3V313
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	6.2	1.9	ug/kg	
108-88-3	Toluene	ND	12	6.2	ug/kg	
100-41-4	Ethylbenzene	ND	12	2.5	ug/kg	
	m,p-Xylene	ND	25	4.3	ug/kg	
95-47-6	o-Xylene	ND	12	4.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%
17060-07-0	1,2-Dichloroethane-D4	87%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-A-3-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-3	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	81.0
Method:	SW846 8270C BY SIM SW846 3545A		
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10811.D	10	07/27/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	5.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	6200	1500	ug/kg	
208-96-8	Acenaphthylene	ND	6200	1500	ug/kg	
120-12-7	Anthracene	ND	6200	1500	ug/kg	
56-55-3	Benzo(a)anthracene	ND	620	190	ug/kg	
50-32-8	Benzo(a)pyrene	ND	620	190	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	620	190	ug/kg	
191-24-2	Benzo(g,h,i)perylene	517	620	190	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	620	190	ug/kg	
218-01-9	Chrysene	ND	620	190	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	620	190	ug/kg	
206-44-0	Fluoranthene	ND	6200	1500	ug/kg	
86-73-7	Fluorene	ND	6200	1500	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	620	190	ug/kg	
90-12-0	1-Methylnaphthalene	ND	6200	1500	ug/kg	
91-57-6	2-Methylnaphthalene	ND	6200	1500	ug/kg	
91-20-3	Naphthalene	ND	6200	1500	ug/kg	
85-01-8	Phenanthrene	ND	6200	1500	ug/kg	
129-00-0	Pyrene	ND	6200	1500	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	36%		20-115%
321-60-8	2-Fluorobiphenyl	60%		25-106%
1718-51-0	Terphenyl-d14	138%		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-A-3-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-3	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	81.0
Method:	SW846 8015		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50349.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.0 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	7.3	5.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	93%		36-148%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-A-3-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-3	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	81.0
Method:	SW846-8015B SW846 3550B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD3001.D	1	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	433	16	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	75%		63-130%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-A-3-1/2

Lab Sample ID: D15557-3

Matrix: SO - Soil

Date Sampled: 07/22/10

Date Received: 07/23/10

Percent Solids: 81.0

Project: Gilltiam Pit Chevron/Schwake

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.0	0.44	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	150	1.1	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	9.5	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	9.0	0.56	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	9.5	5.6	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	0.10	0.078	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	7.0	3.3	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.6	5.6	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.3	3.3	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	26.4	3.3	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA854

(3) Instrument QC Batch: MA855

(4) Instrument QC Batch: MA856

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-A-3-1/2**Lab Sample ID:** D15557-3**Matrix:** SO - Soil**Date Sampled:** 07/22/10**Date Received:** 07/23/10**Percent Solids:** 81.0**Project:** Gilltiam Pit Chevron/Schwake

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.4	2.4	mg/kg	1	07/27/10 16:20	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.7	3.5	mg/kg	1	07/27/10 18:37	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	344		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	81		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	81		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	739	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	9.13		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-A-3-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-3A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	81.0
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	46.2	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	3.31	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	118	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2431

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-A-3-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-3A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	81.0
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	4.52		ratio	1	07/28/10 14:52	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-1-1/2						
Lab Sample ID:	D15557-4				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8260B				Percent Solids:	84.9	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V05973.D	1	07/24/10	DC	n/a	n/a	V3V313
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.8	1.7	ug/kg	
108-88-3	Toluene	ND	12	5.8	ug/kg	
100-41-4	Ethylbenzene	ND	12	2.3	ug/kg	
	m,p-Xylene	ND	23	4.1	ug/kg	
95-47-6	o-Xylene	ND	12	4.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	91%		70-130%
460-00-4	4-Bromofluorobenzene	78%		70-130%
17060-07-0	1,2-Dichloroethane-D4	84%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-1-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-4	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.9
Method:	SW846 8270C BY SIM SW846 3545A		
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10812.D	10	07/27/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	5.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5900	1500	ug/kg	
208-96-8	Acenaphthylene	ND	5900	1500	ug/kg	
120-12-7	Anthracene	ND	5900	1500	ug/kg	
56-55-3	Benzo(a)anthracene	ND	590	180	ug/kg	
50-32-8	Benzo(a)pyrene	ND	590	180	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	590	180	ug/kg	
191-24-2	Benzo(g,h,i)perylene	307	590	180	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	590	180	ug/kg	
218-01-9	Chrysene	ND	590	180	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	590	180	ug/kg	
206-44-0	Fluoranthene	ND	5900	1500	ug/kg	
86-73-7	Fluorene	ND	5900	1500	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	590	180	ug/kg	
90-12-0	1-Methylnaphthalene	ND	5900	1500	ug/kg	
91-57-6	2-Methylnaphthalene	ND	5900	1500	ug/kg	
91-20-3	Naphthalene	ND	5900	1500	ug/kg	
85-01-8	Phenanthrene	ND	5900	1500	ug/kg	
129-00-0	Pyrene	ND	5900	1500	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	48%		20-115%
321-60-8	2-Fluorobiphenyl	71%		25-106%
1718-51-0	Terphenyl-d14	106%		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-1-1/2						
Lab Sample ID:	D15557-4				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	84.9	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50350.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.1 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.6	4.8	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	95%		36-148%		

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-1-1/2		
Lab Sample ID:	D15557-4	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	84.9
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD3074.D	5	07/29/10	CP	07/28/10	OP2239	GFD145
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	813	78	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	92%		63-130%	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-B-1-1/2**Lab Sample ID:** D15557-4**Matrix:** SO - Soil**Date Sampled:** 07/22/10**Date Received:** 07/23/10**Percent Solids:** 84.9**Project:** Gilltiam Pit Chevron/Schwake

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.1	0.46	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	127	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	7.4	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	7.2	0.57	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	7.4	5.7	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.077	0.077	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	5.9	3.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.7	5.7	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.4	3.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	18.6	3.4	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA854

(3) Instrument QC Batch: MA855

(4) Instrument QC Batch: MA856

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-B-1-1/2**Lab Sample ID:** D15557-4**Matrix:** SO - Soil**Date Sampled:** 07/22/10**Date Received:** 07/23/10**Percent Solids:** 84.9**Project:** Gilltiam Pit Chevron/Schwake

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	07/27/10 16:20	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	6.7	3.4	mg/kg	1	07/27/10 18:42	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	353		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	86.1		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	84.9		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	375	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	9.01		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-1-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-4A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	86.1
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	29.7	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	1.45	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	44.8	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2431

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-1-1/2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-4A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	86.1
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	2.18		ratio	1	07/28/10 15:10	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-2-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-5	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	86.3
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V05974.D	1	07/24/10	DC	n/a	n/a	V3V313
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.8	1.7	ug/kg	
108-88-3	Toluene	ND	12	5.8	ug/kg	
100-41-4	Ethylbenzene	ND	12	2.3	ug/kg	
	m,p-Xylene	ND	23	4.1	ug/kg	
95-47-6	o-Xylene	ND	12	4.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	80%		70-130%
17060-07-0	1,2-Dichloroethane-D4	89%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-2-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-5	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	86.3
Method:	SW846 8270C BY SIM SW846 3545A		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10813.D	5	07/27/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	5.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	2900	720	ug/kg	
208-96-8	Acenaphthylene	ND	2900	720	ug/kg	
120-12-7	Anthracene	ND	2900	720	ug/kg	
56-55-3	Benzo(a)anthracene	ND	290	87	ug/kg	
50-32-8	Benzo(a)pyrene	ND	290	87	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	290	87	ug/kg	
191-24-2	Benzo(g,h,i)perylene	205	290	87	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	290	87	ug/kg	
218-01-9	Chrysene	ND	290	87	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	290	87	ug/kg	
206-44-0	Fluoranthene	ND	2900	720	ug/kg	
86-73-7	Fluorene	ND	2900	720	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	290	87	ug/kg	
90-12-0	1-Methylnaphthalene	ND	2900	720	ug/kg	
91-57-6	2-Methylnaphthalene	ND	2900	720	ug/kg	
91-20-3	Naphthalene	ND	2900	720	ug/kg	
85-01-8	Phenanthrene	ND	2900	720	ug/kg	
129-00-0	Pyrene	ND	2900	720	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	53%		20-115%
321-60-8	2-Fluorobiphenyl	75%		25-106%
1718-51-0	Terphenyl-d14	123%		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-2-2						
Lab Sample ID:	D15557-5				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	86.3	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50351.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.1 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.6	4.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	94%		36-148%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-2-2		
Lab Sample ID:	D15557-5	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	86.3
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD3003.D	1	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	250	15	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	73%		63-130%	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-B-2-2

Lab Sample ID: D15557-5

Matrix: SO - Soil

Date Sampled: 07/22/10

Date Received: 07/23/10

Percent Solids: 86.3

Project: Giltiam Pit Chevron/Schwake

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.2	0.42	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	137	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	8.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	8.1	0.53	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	8.3	5.3	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.070	0.070	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	6.6	3.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.3	5.3	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.2	3.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	21.0	3.2	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA854

(3) Instrument QC Batch: MA855

(4) Instrument QC Batch: MA856

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-B-2-2	Date Sampled: 07/22/10
Lab Sample ID: D15557-5	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 86.3
Project: Gilltiam Pit Chevron/Schwake	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	07/27/10 16:20	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	6.9	3.4	mg/kg	1	07/27/10 18:51	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	315		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	86.1		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	86.3		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	326	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	9.35		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-2-2		
Lab Sample ID:	D15557-5A	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
		Percent Solids:	86.1
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	23.8	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	1.71	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	60.1	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

- (1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2431

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-2-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-5A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	86.1
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	3.20		ratio	1	07/28/10 15:34	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-3-2		
Lab Sample ID:	D15557-6	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846 8260B	Percent Solids:	83.8
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V05975.D	1	07/24/10	DC	n/a	n/a	V3V313
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.9	1.8	ug/kg	
108-88-3	Toluene	ND	12	5.9	ug/kg	
100-41-4	Ethylbenzene	ND	12	2.3	ug/kg	
	m,p-Xylene	ND	23	4.1	ug/kg	
95-47-6	o-Xylene	ND	12	4.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	90%		70-130%
460-00-4	4-Bromofluorobenzene	83%		70-130%
17060-07-0	1,2-Dichloroethane-D4	92%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-3-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-6	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	83.8
Method:	SW846 8270C BY SIM SW846 3545A		
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10814.D	2	07/27/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	240	60	ug/kg	
208-96-8	Acenaphthylene	ND	240	60	ug/kg	
120-12-7	Anthracene	ND	240	60	ug/kg	
56-55-3	Benzo(a)anthracene	ND	24	7.2	ug/kg	
50-32-8	Benzo(a)pyrene	ND	24	7.2	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	24	7.2	ug/kg	
191-24-2	Benzo(g,h,i)perylene	26.2	24	7.2	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	24	7.2	ug/kg	
218-01-9	Chrysene	ND	24	7.2	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	24	7.2	ug/kg	
206-44-0	Fluoranthene	ND	240	60	ug/kg	
86-73-7	Fluorene	ND	240	60	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	24	7.2	ug/kg	
90-12-0	1-Methylnaphthalene	ND	240	60	ug/kg	
91-57-6	2-Methylnaphthalene	ND	240	60	ug/kg	
91-20-3	Naphthalene	ND	240	60	ug/kg	
85-01-8	Phenanthrene	ND	240	60	ug/kg	
129-00-0	Pyrene	ND	240	60	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	92%		20-115%
321-60-8	2-Fluorobiphenyl	96%		25-106%
1718-51-0	Terphenyl-d14	128%		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-3-2						
Lab Sample ID:	D15557-6				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	83.8	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50353.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.0 g	1.0 ml	10.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	14	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	96%		36-148%		

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-3-2		
Lab Sample ID:	D15557-6	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	83.8
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD3006.D	1	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	43.0	16	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	69%		63-130%	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-B-3-2**Lab Sample ID:** D15557-6**Matrix:** SO - Soil**Date Sampled:** 07/22/10**Date Received:** 07/23/10**Percent Solids:** 83.8**Project:** Gilltiam Pit Chevron/Schwake**Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7	0.46	mg/kg	5	07/27/10	07/28/10 GJ	SW846 6020 ⁴	SW846 3050B ⁶
Barium	161	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	10.9	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	10.6	0.57	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ³	SW846 3050B ⁵
Lead	9.9	5.7	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.078	0.078	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ²	SW846 7471A ⁷
Nickel	9.6	3.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.7	5.7	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.4	3.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	30.3	3.4	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ³	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA855

(3) Instrument QC Batch: MA856

(4) Instrument QC Batch: MA857

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-B-3-2
Lab Sample ID: D15557-6
Matrix: SO - Soil

Date Sampled: 07/22/10
Date Received: 07/23/10
Percent Solids: 83.8

Project: Gilltiam Pit Chevron/Schwake

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	07/27/10 16:20	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	9.3	3.4	mg/kg	1	07/27/10 19:00	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	292		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	85.4		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	83.8		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	11300	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	9.77		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-3-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-6A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.4
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	97.6	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	3.58	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	2780	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2431

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-3-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-6A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.4
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	75.2		ratio	1	07/28/10 15:41	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-4-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-7	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	89.7
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V05976.D	1	07/24/10	DC	n/a	n/a	V3V313
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.6	1.7	ug/kg	
108-88-3	Toluene	ND	11	5.6	ug/kg	
100-41-4	Ethylbenzene	ND	11	2.2	ug/kg	
	m,p-Xylene	ND	22	3.9	ug/kg	
95-47-6	o-Xylene	ND	11	3.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	88%		70-130%
460-00-4	4-Bromofluorobenzene	83%		70-130%
17060-07-0	1,2-Dichloroethane-D4	92%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-4-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-7	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	89.7
Method:	SW846 8270C BY SIM SW846 3545A		
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10815.D	2	07/27/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	220	56	ug/kg	
208-96-8	Acenaphthylene	ND	220	56	ug/kg	
120-12-7	Anthracene	ND	220	56	ug/kg	
56-55-3	Benzo(a)anthracene	ND	22	6.7	ug/kg	
50-32-8	Benzo(a)pyrene	ND	22	6.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	22	6.7	ug/kg	
191-24-2	Benzo(g,h,i)perylene	21.6	22	6.7	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	22	6.7	ug/kg	
218-01-9	Chrysene	ND	22	6.7	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	22	6.7	ug/kg	
206-44-0	Fluoranthene	ND	220	56	ug/kg	
86-73-7	Fluorene	ND	220	56	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	22	6.7	ug/kg	
90-12-0	1-Methylnaphthalene	ND	220	56	ug/kg	
91-57-6	2-Methylnaphthalene	ND	220	56	ug/kg	
91-20-3	Naphthalene	ND	220	56	ug/kg	
85-01-8	Phenanthrene	ND	220	56	ug/kg	
129-00-0	Pyrene	ND	220	56	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	88%		20-115%
321-60-8	2-Fluorobiphenyl	90%		25-106%
1718-51-0	Terphenyl-d14	122%		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-4-2						
Lab Sample ID:	D15557-7				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	89.7	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50354.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.1 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.1	4.4	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	94%		36-148%		

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-4-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-7	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	89.7
Method:	SW846-8015B SW846 3550B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2985.D	1	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	39.8	15	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	72%		63-130%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-B-4-2**Lab Sample ID:** D15557-7**Matrix:** SO - Soil**Date Sampled:** 07/22/10**Date Received:** 07/23/10**Percent Solids:** 89.7**Project:** Gilltiam Pit Chevron/Schwake**Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	0.83	0.41	mg/kg	5	07/27/10	07/28/10 GJ	SW846 6020 ⁴	SW846 3050B ⁶
Barium	185	1.0	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.0	1.0	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	6.5	1.0	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	6.7	0.51	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ³	SW846 3050B ⁵
Lead	5.9	5.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.073	0.073	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ²	SW846 7471A ⁷
Nickel	5.2	3.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.1	5.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.1	3.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	15.9	3.1	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ³	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA855

(3) Instrument QC Batch: MA856

(4) Instrument QC Batch: MA857

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-B-4-2
Lab Sample ID: D15557-7
Matrix: SO - Soil

Date Sampled: 07/22/10
Date Received: 07/23/10
Percent Solids: 89.7

Project: Gilltiam Pit Chevron/Schwake

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.2	2.2	mg/kg	1	07/27/10 16:20	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	5.2	3.2	mg/kg	1	07/27/10 19:06	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	369		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	90		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	89.7		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	2460	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	9.65		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-4-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-7A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	90.0
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	25.5	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	1.39	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	555	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2431

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-4-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-7A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	90.0
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	29.0		ratio	1	07/28/10 15:50	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-5-2		
Lab Sample ID:	D15557-8	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846 8260B	Percent Solids:	84.2
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V05977.D	1	07/24/10	DC	n/a	n/a	V3V313
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.6	1.7	ug/kg	
108-88-3	Toluene	ND	11	5.6	ug/kg	
100-41-4	Ethylbenzene	ND	11	2.3	ug/kg	
	m,p-Xylene	ND	23	4.0	ug/kg	
95-47-6	o-Xylene	ND	11	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%
17060-07-0	1,2-Dichloroethane-D4	97%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-5-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-8	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.2
Method:	SW846 8270C BY SIM SW846 3545A		
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10843.D	1	07/28/10	ANC	07/26/10	C:OP2446	C:EX526
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	120	30	ug/kg	
208-96-8	Acenaphthylene	ND	120	30	ug/kg	
120-12-7	Anthracene	ND	120	30	ug/kg	
56-55-3	Benzo(a)anthracene	ND	12	3.6	ug/kg	
50-32-8	Benzo(a)pyrene	ND	12	3.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	12	3.6	ug/kg	
191-24-2	Benzo(g,h,i)perylene	7.5	12	3.6	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	12	3.6	ug/kg	
218-01-9	Chrysene	ND	12	3.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	12	3.6	ug/kg	
206-44-0	Fluoranthene	ND	120	30	ug/kg	
86-73-7	Fluorene	ND	120	30	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	12	3.6	ug/kg	
90-12-0	1-Methylnaphthalene	ND	120	30	ug/kg	
91-57-6	2-Methylnaphthalene	ND	120	30	ug/kg	
91-20-3	Naphthalene	ND	120	30	ug/kg	
85-01-8	Phenanthrene	ND	120	30	ug/kg	
129-00-0	Pyrene	ND	120	30	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	93%		20-115%
321-60-8	2-Fluorobiphenyl	102%		25-106%
1718-51-0	Terphenyl-d14	146% ^b		50-140%

(a) Analysis performed at Accutest Laboratories, San Jose, CA.

(b) Outside laboratory control limits (high bias).

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-5-2						
Lab Sample ID:	D15557-8				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	84.2	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50355.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.1 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.3	4.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	100%		36-148%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-5-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-8	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.2
Method:	SW846-8015B SW846 3550B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2986.D	1	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	ND	15	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	72%		63-130%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-B-5-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-8	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.2
Project:	Gilltiam Pit Chevron/Schwake		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.0	0.36	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	88.2	0.91	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Cadmium	< 0.91	0.91	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	4.5	0.91	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	5.9	0.46	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	< 4.6	4.6	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.085	0.085	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	4.4	2.7	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 4.6	4.6	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 2.7	2.7	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	10.0	2.7	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

- (1) Instrument QC Batch: MA852
 (2) Instrument QC Batch: MA854
 (3) Instrument QC Batch: MA855
 (4) Instrument QC Batch: MA856
 (5) Prep QC Batch: MP2424
 (6) Prep QC Batch: MP2425
 (7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-B-5-2	Date Sampled: 07/22/10
Lab Sample ID: D15557-8	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 84.2
Project: Gilltiam Pit Chevron/Schwake	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.2	2.2	mg/kg	1	07/27/10 16:20	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	4.5	3.1	mg/kg	1	07/27/10 19:15	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	383		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	88.5		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	84.2		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	312	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	9.31		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-5-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-8A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	88.5
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	47.4	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	2.37	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	44.4	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2431

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-B-5-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-8A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	88.5
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	1.70		ratio	1	07/28/10 16:34	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-C-1-2						
Lab Sample ID:	D15557-9				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8260B				Percent Solids:	82.6	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V05978.D	1	07/24/10	DC	n/a	n/a	V3V313
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	6.0	1.8	ug/kg	
108-88-3	Toluene	ND	12	6.0	ug/kg	
100-41-4	Ethylbenzene	ND	12	2.4	ug/kg	
	m,p-Xylene	ND	24	4.2	ug/kg	
95-47-6	o-Xylene	ND	12	4.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	90%		70-130%
460-00-4	4-Bromofluorobenzene	76%		70-130%
17060-07-0	1,2-Dichloroethane-D4	91%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-C-1-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-9	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	82.6
Method:	SW846 8270C BY SIM SW846 3545A		
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10816.D	2	07/28/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	5.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1200	300	ug/kg	
208-96-8	Acenaphthylene	ND	1200	300	ug/kg	
120-12-7	Anthracene	ND	1200	300	ug/kg	
56-55-3	Benzo(a)anthracene	ND	120	36	ug/kg	
50-32-8	Benzo(a)pyrene	ND	120	36	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	120	36	ug/kg	
191-24-2	Benzo(g,h,i)perylene	159	120	36	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	120	36	ug/kg	
218-01-9	Chrysene	ND	120	36	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	120	36	ug/kg	
206-44-0	Fluoranthene	ND	1200	300	ug/kg	
86-73-7	Fluorene	ND	1200	300	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	120	36	ug/kg	
90-12-0	1-Methylnaphthalene	ND	1200	300	ug/kg	
91-57-6	2-Methylnaphthalene	ND	1200	300	ug/kg	
91-20-3	Naphthalene	ND	1200	300	ug/kg	
85-01-8	Phenanthrene	ND	1200	300	ug/kg	
129-00-0	Pyrene	ND	1200	300	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68% ^b		20-115%
321-60-8	2-Fluorobiphenyl	76% ^b		25-106%
1718-51-0	Terphenyl-d14	91% ^b		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

(b) Surrogate recoveries corrected for double spike.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-C-1-2	
Lab Sample ID:	D15557-9	Date Sampled: 07/22/10
Matrix:	SO - Soil	Date Received: 07/23/10
Method:	SW846 8015	Percent Solids: 82.6
Project:	Gilltiam Pit Chevron/Schwake	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50356.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.1 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	7.0	5.1	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	85%		36-148%		

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-C-1-2						
Lab Sample ID:	D15557-9				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846-8015B SW846 3550B				Percent Solids:	82.6	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2987.D	5	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	523	80	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	75%		63-130%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-C-1-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-9	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	82.6
Project:	Gilltiam Pit Chevron/Schwake		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.3	0.47	mg/kg	5	07/27/10	07/28/10 GJ	SW846 6020 ⁴	SW846 3050B ⁶
Barium	156	1.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.2	1.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	11.0	1.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	9.5	0.58	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ³	SW846 3050B ⁵
Lead	9.1	5.8	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.089	0.089	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ²	SW846 7471A ⁷
Nickel	9.1	3.5	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.8	5.8	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.5	3.5	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	28.3	3.5	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ³	SW846 3050B ⁵

- (1) Instrument QC Batch: MA852
 (2) Instrument QC Batch: MA855
 (3) Instrument QC Batch: MA856
 (4) Instrument QC Batch: MA857
 (5) Prep QC Batch: MP2424
 (6) Prep QC Batch: MP2425
 (7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-C-1-2
Lab Sample ID: D15557-9
Matrix: SO - Soil
Project: Gilltiam Pit Chevron/Schwake

Date Sampled: 07/22/10
Date Received: 07/23/10
Percent Solids: 82.6

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.4	2.4	mg/kg	1	07/27/10 16:20	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	11.0	3.6	mg/kg	1	07/27/10 19:35	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	312		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	83		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	82.6		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	9370	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	9.67		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-C-1-2		
Lab Sample ID:	D15557-9A	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
		Percent Solids:	83.0
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	86.2	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	3.24	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	2190	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2431

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-C-1-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-9A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	83.0
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	63.0		ratio	1	07/28/10 16:03	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-2-1-2(DUP)	Date Sampled:	07/22/10
Lab Sample ID:	D15557-10	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.7
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V05979.D	1	07/24/10	DC	n/a	n/a	V3V313
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	6.0	1.8	ug/kg	
108-88-3	Toluene	ND	12	6.0	ug/kg	
100-41-4	Ethylbenzene	ND	12	2.4	ug/kg	
	m,p-Xylene	ND	24	4.2	ug/kg	
95-47-6	o-Xylene	ND	12	4.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	77%		70-130%
17060-07-0	1,2-Dichloroethane-D4	94%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2-1-2(DUP)		
Lab Sample ID:	D15557-10	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846 8270C BY SIM SW846 3545A	Percent Solids:	84.7
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10817.D	5	07/28/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	5.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	3000	740	ug/kg	
208-96-8	Acenaphthylene	ND	3000	740	ug/kg	
120-12-7	Anthracene	ND	3000	740	ug/kg	
56-55-3	Benzo(a)anthracene	ND	300	89	ug/kg	
50-32-8	Benzo(a)pyrene	ND	300	89	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	300	89	ug/kg	
191-24-2	Benzo(g,h,i)perylene	366	300	89	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	300	89	ug/kg	
218-01-9	Chrysene	ND	300	89	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	300	89	ug/kg	
206-44-0	Fluoranthene	ND	3000	740	ug/kg	
86-73-7	Fluorene	ND	3000	740	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	99.6	300	89	ug/kg	J
90-12-0	1-Methylnaphthalene	ND	3000	740	ug/kg	
91-57-6	2-Methylnaphthalene	ND	3000	740	ug/kg	
91-20-3	Naphthalene	ND	3000	740	ug/kg	
85-01-8	Phenanthrene	ND	3000	740	ug/kg	
129-00-0	Pyrene	ND	3000	740	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	90%		20-115%
321-60-8	2-Fluorobiphenyl	104%		25-106%
1718-51-0	Terphenyl-d14	142% ^b		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

(b) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2-1-2(DUP)	Date Sampled:	07/22/10
Lab Sample ID:	D15557-10	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.7
Method:	SW846 8015		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50357.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.2 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.8	5.0	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	92%		36-148%		

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2-1-2(DUP)		
Lab Sample ID:	D15557-10	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	84.7
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2988.D	5	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	317	79	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	70%		63-130%	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-2-1-2(DUP)**Lab Sample ID:** D15557-10**Matrix:** SO - Soil**Date Sampled:** 07/22/10**Date Received:** 07/23/10**Percent Solids:** 84.7**Project:** Gilltiam Pit Chevron/Schwake**Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.5	0.45	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	168	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	10.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	10.2	0.57	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	11.9	5.7	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.071	0.071	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	8.8	3.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.7	5.7	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.4	3.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	33.8	3.4	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA854

(3) Instrument QC Batch: MA855

(4) Instrument QC Batch: MA856

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-2-1-2(DUP)**Lab Sample ID:** D15557-10**Matrix:** SO - Soil**Date Sampled:** 07/22/10**Date Received:** 07/23/10**Percent Solids:** 84.7**Project:** Gilltiam Pit Chevron/Schwake

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	07/27/10 16:24	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	9.3	3.4	mg/kg	1	07/27/10 19:41	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	343		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	83.8		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	84.7		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	11500	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	9.67		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-2-1-2(DUP)	Date Sampled:	07/22/10
Lab Sample ID:	D15557-10A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	83.8
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	141	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	6.05	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	2760	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2431

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-2-1-2(DUP)	Date Sampled:	07/22/10
Lab Sample ID:	D15557-10A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	83.8
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	61.8		ratio	1	07/28/10 16:13	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-C-2-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-11	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	78.7
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	5V09357.D	1	07/26/10	DC	n/a	n/a	V5V511
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	10.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	140	41	ug/kg	
108-88-3	Toluene	ND	270	140	ug/kg	
100-41-4	Ethylbenzene	ND	270	55	ug/kg	
	m,p-Xylene	ND	550	95	ug/kg	
95-47-6	o-Xylene	ND	270	95	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%
17060-07-0	1,2-Dichloroethane-D4	79%		70-130%

(a) Dilution required due to matrix interference (non-target compounds above calibration range).

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-C-2-2	
Lab Sample ID:	D15557-11	Date Sampled: 07/22/10
Matrix:	SO - Soil	Date Received: 07/23/10
Method:	SW846 8270C BY SIM SW846 3545A	Percent Solids: 78.7
Project:	Gilltiam Pit Chevron/Schwake	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10818.D	25	07/28/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	5.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	16000	4000	ug/kg	
208-96-8	Acenaphthylene	ND	16000	4000	ug/kg	
120-12-7	Anthracene	ND	16000	4000	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1600	480	ug/kg	
50-32-8	Benzo(a)pyrene	807	1600	480	ug/kg	J
205-99-2	Benzo(b)fluoranthene	1290	1600	480	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	2550	1600	480	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	1600	480	ug/kg	
218-01-9	Chrysene	2520	1600	480	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	1600	480	ug/kg	
206-44-0	Fluoranthene	ND	16000	4000	ug/kg	
86-73-7	Fluorene	ND	16000	4000	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	667	1600	480	ug/kg	J
90-12-0	1-Methylnaphthalene	ND	16000	4000	ug/kg	
91-57-6	2-Methylnaphthalene	ND	16000	4000	ug/kg	
91-20-3	Naphthalene	ND	16000	4000	ug/kg	
85-01-8	Phenanthrene	ND	16000	4000	ug/kg	
129-00-0	Pyrene	ND	16000	4000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	114%		20-115%
321-60-8	2-Fluorobiphenyl	125% ^b		25-106%
1718-51-0	Terphenyl-d14	145% ^b		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

(b) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-C-2-2	
Lab Sample ID:	D15557-11	Date Sampled: 07/22/10
Matrix:	SO - Soil	Date Received: 07/23/10
Method:	SW846 8015	Percent Solids: 78.7
Project:	Gilltiam Pit Chevron/Schwake	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50358.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.3 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	22.3	7.2	5.3	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	126%		36-148%		

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-C-2-2		
Lab Sample ID:	D15557-11	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	78.7
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2989.D	10	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	14900	830	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	289% ^a		63-130%	

(a) Outside control limits due to dilution and matrix interference.

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-C-2-2	Date Sampled: 07/22/10
Lab Sample ID: D15557-11	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 78.7
Project: Gilltiam Pit Chevron/Schwake	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.6	0.47	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	167	1.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.2	1.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	10.8	1.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	10.4	0.59	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	11.5	5.9	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	0.12	0.083	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	9.0	3.5	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.9	5.9	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.5	3.5	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	38.9	3.5	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

- (1) Instrument QC Batch: MA852
 (2) Instrument QC Batch: MA854
 (3) Instrument QC Batch: MA855
 (4) Instrument QC Batch: MA856
 (5) Prep QC Batch: MP2424
 (6) Prep QC Batch: MP2425
 (7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-C-2-2
Lab Sample ID: D15557-11
Matrix: SO - Soil
Project: Gilltiam Pit Chevron/Schwake

Date Sampled: 07/22/10
Date Received: 07/23/10
Percent Solids: 78.7

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.1	2.1	mg/kg	1	07/27/10 16:24	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	10.0	3.3	mg/kg	1	07/27/10 19:47	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	356		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	80.5		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	78.7		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	3040	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	9.38		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-C-2-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-11A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	80.5
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	36.1	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	2.48	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	669	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2431

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-C-2-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-11A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	80.5
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	29.0		ratio	1	07/28/10 16:23	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-D-1-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-12	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.3
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V05980.D	1	07/24/10	DC	n/a	n/a	V3V313
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.9	1.8	ug/kg	
108-88-3	Toluene	ND	12	5.9	ug/kg	
100-41-4	Ethylbenzene	ND	12	2.3	ug/kg	
	m,p-Xylene	ND	23	4.1	ug/kg	
95-47-6	o-Xylene	ND	12	4.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	81%		70-130%
17060-07-0	1,2-Dichloroethane-D4	96%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-D-1-2		
Lab Sample ID:	D15557-12	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846 8270C BY SIM SW846 3545A	Percent Solids:	85.3
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10819.D	2	07/28/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	230	59	ug/kg	
208-96-8	Acenaphthylene	ND	230	59	ug/kg	
120-12-7	Anthracene	ND	230	59	ug/kg	
56-55-3	Benzo(a)anthracene	ND	23	7.0	ug/kg	
50-32-8	Benzo(a)pyrene	ND	23	7.0	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	23	7.0	ug/kg	
191-24-2	Benzo(g,h,i)perylene	13.2	23	7.0	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	23	7.0	ug/kg	
218-01-9	Chrysene	ND	23	7.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	23	7.0	ug/kg	
206-44-0	Fluoranthene	ND	230	59	ug/kg	
86-73-7	Fluorene	ND	230	59	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	23	7.0	ug/kg	
90-12-0	1-Methylnaphthalene	ND	230	59	ug/kg	
91-57-6	2-Methylnaphthalene	ND	230	59	ug/kg	
91-20-3	Naphthalene	ND	230	59	ug/kg	
85-01-8	Phenanthrene	ND	230	59	ug/kg	
129-00-0	Pyrene	ND	230	59	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	49%		20-115%
321-60-8	2-Fluorobiphenyl	57%		25-106%
1718-51-0	Terphenyl-d14	135%		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-D-1-2						
Lab Sample ID:	D15557-12				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	85.3	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50359.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.1 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.7	4.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	106%		36-148%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-D-1-2		
Lab Sample ID:	D15557-12	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	85.3
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD3007.D	1	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	37.2	16	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	74%		63-130%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-D-1-2	Date Sampled: 07/22/10
Lab Sample ID: D15557-12	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 85.3
Project: Giltiam Pit Chevron/Schwake	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.4	0.43	mg/kg	5	07/27/10	07/28/10 GJ	SW846 6020 ⁴	SW846 3050B ⁶
Barium	202	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	8.9	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	8.0	0.54	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ³	SW846 3050B ⁵
Lead	8.4	5.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.077	0.077	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ²	SW846 7471A ⁷
Nickel	7.7	3.3	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.4	5.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.3	3.3	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	24.2	3.3	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ³	SW846 3050B ⁵

- (1) Instrument QC Batch: MA852
 (2) Instrument QC Batch: MA855
 (3) Instrument QC Batch: MA856
 (4) Instrument QC Batch: MA857
 (5) Prep QC Batch: MP2424
 (6) Prep QC Batch: MP2425
 (7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-D-1-2**Lab Sample ID:** D15557-12**Matrix:** SO - Soil**Date Sampled:** 07/22/10**Date Received:** 07/23/10**Percent Solids:** 85.3**Project:** Gilltiam Pit Chevron/Schwake**General Chemistry**

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	07/27/10 16:24	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.9	3.4	mg/kg	1	07/27/10 19:52	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	287		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	85.3		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	85.3		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	4110	1.0	umhos/cm	1	07/27/10	JD	DEPT.OF AG, BOOK N9
pH	10.10		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-D-1-2		
Lab Sample ID:	D15557-12A	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
		Percent Solids:	85.3
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	7.15	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Magnesium	< 1.0	1.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²
Sodium	991	2.0	mg/l	1	07/27/10	07/28/10 JM	SW846 6010B ¹	EPA 200.7 ²

- (1) Instrument QC Batch: MA856
(2) Prep QC Batch: MP2431

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-D-1-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-12A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.3
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	95.8		ratio	1	07/28/10 16:29	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-D-1-2(DUP)	Date Sampled:	07/22/10
Lab Sample ID:	D15557-13	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.8
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V06002.D	1	07/25/10	DC	n/a	n/a	V3V314
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.9	1.8	ug/kg	
108-88-3	Toluene	ND	12	5.9	ug/kg	
100-41-4	Ethylbenzene	ND	12	2.4	ug/kg	
	m,p-Xylene	ND	24	4.1	ug/kg	
95-47-6	o-Xylene	ND	12	4.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	79%		70-130%
17060-07-0	1,2-Dichloroethane-D4	104%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-D-1-2(DUP)	Date Sampled:	07/22/10
Lab Sample ID:	D15557-13	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.8
Method:	SW846 8270C BY SIM SW846 3545A		
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10820.D	2	07/28/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	230	58	ug/kg	
208-96-8	Acenaphthylene	ND	230	58	ug/kg	
120-12-7	Anthracene	ND	230	58	ug/kg	
56-55-3	Benzo(a)anthracene	ND	23	7.0	ug/kg	
50-32-8	Benzo(a)pyrene	ND	23	7.0	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	23	7.0	ug/kg	
191-24-2	Benzo(g,h,i)perylene	12.2	23	7.0	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	23	7.0	ug/kg	
218-01-9	Chrysene	ND	23	7.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	23	7.0	ug/kg	
206-44-0	Fluoranthene	ND	230	58	ug/kg	
86-73-7	Fluorene	ND	230	58	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	23	7.0	ug/kg	
90-12-0	1-Methylnaphthalene	ND	230	58	ug/kg	
91-57-6	2-Methylnaphthalene	ND	230	58	ug/kg	
91-20-3	Naphthalene	ND	230	58	ug/kg	
85-01-8	Phenanthrene	ND	230	58	ug/kg	
129-00-0	Pyrene	ND	230	58	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	48%		20-115%
321-60-8	2-Fluorobiphenyl	55%		25-106%
1718-51-0	Terphenyl-d14	96%		50-140%

(a) Reporting limits raised due to the dark color of the sample extract. Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-D-1-2(DUP)		
Lab Sample ID:	D15557-13	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846 8015	Percent Solids:	85.8
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50360.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.1 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.7	4.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	86%		36-148%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-D-1-2(DUP)		
Lab Sample ID:	D15557-13	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	85.8
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2991.D	1	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	47.8	16	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	68%		63-130%	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-D-1-2(DUP)**Lab Sample ID:** D15557-13**Date Sampled:** 07/22/10**Matrix:** SO - Soil**Date Received:** 07/23/10**Percent Solids:** 85.8**Project:** Giltiam Pit Chevron/Schwake**Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.6	0.44	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	205	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	8.7	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	8.0	0.55	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	7.8	5.5	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.070	0.070	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	7.3	3.3	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.5	5.5	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.3	3.3	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	23.6	3.3	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA854

(3) Instrument QC Batch: MA855

(4) Instrument QC Batch: MA856

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-D-1-2(DUP)**Lab Sample ID:** D15557-13**Matrix:** SO - Soil**Date Sampled:** 07/22/10**Date Received:** 07/23/10**Percent Solids:** 85.8**Project:** Gilltiam Pit Chevron/Schwake

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	07/27/10 16:24	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.7	3.4	mg/kg	1	07/27/10 20:01	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	282		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	85		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	85.8		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	6440	1.0	umhos/cm	1	07/28/10	JD	DEPT.OF AG, BOOK N9
pH	10.04		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-D-1-2(DUP)	Date Sampled:	07/22/10
Lab Sample ID:	D15557-13A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.0
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	10.4	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Magnesium	1.34	1.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Sodium	1460	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ²	EPA 200.7 ³

- (1) Instrument QC Batch: MA856
- (2) Instrument QC Batch: MA858
- (3) Prep QC Batch: MP2440

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-D-1-2(DUP)	Date Sampled:	07/22/10
Lab Sample ID:	D15557-13A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	85.0
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	113		ratio	1	07/29/10 09:58	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-D-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-14	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.2
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V06003.D	1	07/25/10	DC	n/a	n/a	V3V314
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.8	1.7	ug/kg	
108-88-3	Toluene	ND	12	5.8	ug/kg	
100-41-4	Ethylbenzene	ND	12	2.3	ug/kg	
	m,p-Xylene	ND	23	4.0	ug/kg	
95-47-6	o-Xylene	ND	12	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	77%		70-130%
17060-07-0	1,2-Dichloroethane-D4	100%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-D-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-14	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.2
Method:	SW846 8270C BY SIM SW846 3545A		
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10821.D	2	07/28/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	2400	590	ug/kg	
208-96-8	Acenaphthylene	ND	2400	590	ug/kg	
120-12-7	Anthracene	ND	2400	590	ug/kg	
56-55-3	Benzo(a)anthracene	ND	240	71	ug/kg	
50-32-8	Benzo(a)pyrene	ND	240	71	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	240	71	ug/kg	
191-24-2	Benzo(g,h,i)perylene	281	240	71	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	240	71	ug/kg	
218-01-9	Chrysene	ND	240	71	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	240	71	ug/kg	
206-44-0	Fluoranthene	ND	2400	590	ug/kg	
86-73-7	Fluorene	ND	2400	590	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	240	71	ug/kg	
90-12-0	1-Methylnaphthalene	ND	2400	590	ug/kg	
91-57-6	2-Methylnaphthalene	ND	2400	590	ug/kg	
91-20-3	Naphthalene	ND	2400	590	ug/kg	
85-01-8	Phenanthrene	ND	2400	590	ug/kg	
129-00-0	Pyrene	ND	2400	590	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	112%		20-115%
321-60-8	2-Fluorobiphenyl	115% ^b		25-106%
1718-51-0	Terphenyl-d14	142% ^b		50-140%

(a) Reporting limits raised due to the nature of the sample extract(Oily, non-target compounds and hard to blowdown). Analysis performed at Accutest Laboratories, San Jose, CA.

(b) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-D-2						
Lab Sample ID:	D15557-14				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	84.2	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50361.D	1	07/28/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.1 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.5	4.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	90%		36-148%		

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-D-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-14	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.2
Method:	SW846-8015B SW846 3550B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2993.D	1	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	205	15	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	70%		63-130%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-D-2

Lab Sample ID: D15557-14

Matrix: SO - Soil

Date Sampled: 07/22/10

Date Received: 07/23/10

Percent Solids: 84.2

Project: Giltiam Pit Chevron/Schwake

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.2	0.44	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	106	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	6.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	5.4	0.54	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	6.3	5.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.072	0.072	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	4.8	3.3	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.4	5.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.3	3.3	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	17.0	3.3	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA854

(3) Instrument QC Batch: MA855

(4) Instrument QC Batch: MA856

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-D-2	Date Sampled: 07/22/10
Lab Sample ID: D15557-14	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 84.2
Project: Gilltiam Pit Chevron/Schwake	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	07/27/10 16:24	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	6.1	3.4	mg/kg	1	07/27/10 20:10	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	310		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	86.7		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	84.2		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	1160	1.0	umhos/cm	1	07/28/10	JD	DEPT.OF AG, BOOK N9
pH	10.02		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-D-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-14A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	86.7
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	23.0	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Magnesium	4.39	1.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Sodium	255	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ²	EPA 200.7 ³

- (1) Instrument QC Batch: MA856
- (2) Instrument QC Batch: MA858
- (3) Prep QC Batch: MP2440

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-D-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-14A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	86.7
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	12.8		ratio	1	07/29/10 10:46	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-E-2		
Lab Sample ID:	D15557-15	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846 8260B	Percent Solids:	78.5
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V09353.D	1	07/26/10	DC	n/a	n/a	V5V511
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	10.0 ml	500 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	399	35	11	ug/kg	
108-88-3	Toluene	161	70	35	ug/kg	
100-41-4	Ethylbenzene	304	70	14	ug/kg	
	m,p-Xylene	633	140	25	ug/kg	
95-47-6	o-Xylene	504	70	25	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	108%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%
17060-07-0	1,2-Dichloroethane-D4	93%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-E-2		
Lab Sample ID:	D15557-15	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846 8270C BY SIM SW846 3545A	Percent Solids:	78.5
Project:	Gilltiam Pit Chevron/Schwake		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10822.D	5	07/28/10	ANC	07/26/10	C:OP2446	C:EX525
Run #2							

Run #	Initial Weight	Final Volume
Run #1	4.80 g	10.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	13000	3300	ug/kg	
208-96-8	Acenaphthylene	ND	13000	3300	ug/kg	
120-12-7	Anthracene	ND	13000	3300	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1300	400	ug/kg	
50-32-8	Benzo(a)pyrene	459	1300	400	ug/kg	J
205-99-2	Benzo(b)fluoranthene	732	1300	400	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	1310	1300	400	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	1300	400	ug/kg	
218-01-9	Chrysene	1620	1300	400	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	1300	400	ug/kg	
206-44-0	Fluoranthene	ND	13000	3300	ug/kg	
86-73-7	Fluorene	ND	13000	3300	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1300	400	ug/kg	
90-12-0	1-Methylnaphthalene	6980	13000	3300	ug/kg	J
91-57-6	2-Methylnaphthalene	8490	13000	3300	ug/kg	J
91-20-3	Naphthalene	5140	13000	3300	ug/kg	J
85-01-8	Phenanthrene	ND	13000	3300	ug/kg	
129-00-0	Pyrene	ND	13000	3300	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	144% ^b		20-115%
321-60-8	2-Fluorobiphenyl	135% ^b		25-106%
1718-51-0	Terphenyl-d14	134%		50-140%

(a) Reporting limits raised due to the nature of the sample extract(Oily, non-target compounds and hard to blowdown). Analysis performed at Accutest Laboratories, San Jose, CA.

(b) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-E-2						
Lab Sample ID:	D15557-15				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	78.5	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50363.D	1	07/29/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.4 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	829	9.8	7.1	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	128%		36-148%		

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-E-2		
Lab Sample ID:	D15557-15	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	78.5
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2995.D	10	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	11800	200	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	150% ^a		63-130%	

(a) Outside control limits due to matrix interference.

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-E-2

Lab Sample ID: D15557-15

Matrix: SO - Soil

Date Sampled: 07/22/10

Date Received: 07/23/10

Percent Solids: 78.5

Project: Giltiam Pit Chevron/Schwake

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.9	0.56	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	88.0	1.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.4	1.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	9.0	1.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	12.3	0.70	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	65.0	7.0	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	0.24	0.085	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	16.1	4.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 7.0	7.0	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 4.2	4.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	58.8	4.2	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA854

(3) Instrument QC Batch: MA855

(4) Instrument QC Batch: MA856

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-E-2

Lab Sample ID: D15557-15

Matrix: SO - Soil

Date Sampled: 07/22/10

Date Received: 07/23/10

Percent Solids: 78.5

Project: Gilltiam Pit Chevron/Schwake

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.9	2.9	mg/kg	1	07/27/10 16:24	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.5	4.3	mg/kg	1	07/27/10 20:16	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	272		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	66.3		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	78.5		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	2930	1.0	umhos/cm	1	07/28/10	JD	DEPT.OF AG, BOOK N9
pH	9.64		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-E-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-15A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	66.3
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	4.41	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Magnesium	< 1.0	1.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Sodium	698	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ²	EPA 200.7 ³

- (1) Instrument QC Batch: MA856
- (2) Instrument QC Batch: MA858
- (3) Prep QC Batch: MP2440

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-E-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-15A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	66.3
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	84.3		ratio	1	07/29/10 10:52	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-F-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-16	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.2
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V06004.D	1	07/25/10	DC	n/a	n/a	V3V314
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.9	1.8	ug/kg	
108-88-3	Toluene	ND	12	5.9	ug/kg	
100-41-4	Ethylbenzene	ND	12	2.4	ug/kg	
	m,p-Xylene	ND	24	4.1	ug/kg	
95-47-6	o-Xylene	ND	12	4.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	87%		70-130%
460-00-4	4-Bromofluorobenzene	79%		70-130%
17060-07-0	1,2-Dichloroethane-D4	107%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-F-2		
Lab Sample ID:	D15557-16	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846 8270C BY SIM SW846 3545A	Percent Solids:	84.2
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10836.D	1	07/28/10	ANC	07/26/10	C:OP2446	C:EX526
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	120	30	ug/kg	
208-96-8	Acenaphthylene	ND	120	30	ug/kg	
120-12-7	Anthracene	ND	120	30	ug/kg	
56-55-3	Benzo(a)anthracene	ND	12	3.6	ug/kg	
50-32-8	Benzo(a)pyrene	ND	12	3.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	3.9	12	3.6	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	ND	12	3.6	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	12	3.6	ug/kg	
218-01-9	Chrysene	ND	12	3.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	12	3.6	ug/kg	
206-44-0	Fluoranthene	ND	120	30	ug/kg	
86-73-7	Fluorene	ND	120	30	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	12	3.6	ug/kg	
90-12-0	1-Methylnaphthalene	ND	120	30	ug/kg	
91-57-6	2-Methylnaphthalene	ND	120	30	ug/kg	
91-20-3	Naphthalene	ND	120	30	ug/kg	
85-01-8	Phenanthrene	ND	120	30	ug/kg	
129-00-0	Pyrene	ND	120	30	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	34%		20-115%
321-60-8	2-Fluorobiphenyl	44%		25-106%
1718-51-0	Terphenyl-d14	117%		50-140%

(a) Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-F-2						
Lab Sample ID:	D15557-16				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	84.2	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50364.D	1	07/29/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.1 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.8	4.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	103%		36-148%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-F-2		
Lab Sample ID:	D15557-16	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	84.2
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2997.D	1	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	ND	16	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	64%		63-130%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-F-2	Date Sampled: 07/22/10
Lab Sample ID: D15557-16	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 84.2
Project: Gilltiam Pit Chevron/Schwake	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.9	0.45	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	136	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	9.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	8.2	0.56	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	8.9	5.6	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.070	0.070	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	6.9	3.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.6	5.6	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.4	3.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	26.8	3.4	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

- (1) Instrument QC Batch: MA852
 (2) Instrument QC Batch: MA854
 (3) Instrument QC Batch: MA855
 (4) Instrument QC Batch: MA856
 (5) Prep QC Batch: MP2424
 (6) Prep QC Batch: MP2425
 (7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-F-2
Lab Sample ID: D15557-16
Matrix: SO - Soil
Project: Gilltiam Pit Chevron/Schwake

Date Sampled: 07/22/10
Date Received: 07/23/10
Percent Solids: 84.2

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.4	2.4	mg/kg	1	07/27/10 16:24	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.5	3.5	mg/kg	1	07/27/10 20:21	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	312		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	84.6		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	84.2		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	980	1.0	umhos/cm	1	07/28/10	JD	DEPT.OF AG, BOOK N9
pH	9.43		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-F-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-16A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.6
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	< 2.0	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Magnesium	< 1.0	1.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Sodium	188	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ²	EPA 200.7 ³

- (1) Instrument QC Batch: MA856
- (2) Instrument QC Batch: MA858
- (3) Prep QC Batch: MP2440

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-F-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-16A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	84.6
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	33.0		ratio	1	07/29/10 11:09	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-G-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-17	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	82.8
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V06005.D	1	07/25/10	DC	n/a	n/a	V3V314
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	6.1	1.8	ug/kg	
108-88-3	Toluene	ND	12	6.1	ug/kg	
100-41-4	Ethylbenzene	ND	12	2.4	ug/kg	
	m,p-Xylene	ND	24	4.3	ug/kg	
95-47-6	o-Xylene	ND	12	4.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	88%		70-130%
460-00-4	4-Bromofluorobenzene	79%		70-130%
17060-07-0	1,2-Dichloroethane-D4	100%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-G-2		
Lab Sample ID:	D15557-17	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846 8270C BY SIM SW846 3545A	Percent Solids:	82.8
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10839.D	1	07/28/10	ANC	07/26/10	C:OP2449	C:EX526
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	120	30	ug/kg	
208-96-8	Acenaphthylene	ND	120	30	ug/kg	
120-12-7	Anthracene	ND	120	30	ug/kg	
56-55-3	Benzo(a)anthracene	ND	12	3.6	ug/kg	
50-32-8	Benzo(a)pyrene	ND	12	3.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	3.8	12	3.6	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	ND	12	3.6	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	12	3.6	ug/kg	
218-01-9	Chrysene	ND	12	3.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	12	3.6	ug/kg	
206-44-0	Fluoranthene	ND	120	30	ug/kg	
86-73-7	Fluorene	ND	120	30	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	12	3.6	ug/kg	
90-12-0	1-Methylnaphthalene	ND	120	30	ug/kg	
91-57-6	2-Methylnaphthalene	ND	120	30	ug/kg	
91-20-3	Naphthalene	ND	120	30	ug/kg	
85-01-8	Phenanthrene	ND	120	30	ug/kg	
129-00-0	Pyrene	ND	120	30	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		20-115%
321-60-8	2-Fluorobiphenyl	68%		25-106%
1718-51-0	Terphenyl-d14	127%		50-140%

(a) Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-G-2						
Lab Sample ID:	D15557-17				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	82.8	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50365.D	1	07/29/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.1 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	7.1	5.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	98%		36-148%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-G-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-17	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	82.8
Method:	SW846-8015B SW846 3550B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2998.D	1	07/27/10	CP	07/26/10	OP2222	GFD143
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	ND	16	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	72%		63-130%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-G-2

Lab Sample ID: D15557-17

Matrix: SO - Soil

Date Sampled: 07/22/10

Date Received: 07/23/10

Percent Solids: 82.8

Project: Gilltiam Pit Chevron/Schwake

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.3	0.47	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	160	1.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.2	1.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	9.6	1.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	8.6	0.59	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	9.4	5.9	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.069	0.069	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	6.7	3.5	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.9	5.9	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.5	3.5	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	27.8	3.5	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA854

(3) Instrument QC Batch: MA855

(4) Instrument QC Batch: MA856

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-G-2	Date Sampled: 07/22/10
Lab Sample ID: D15557-17	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 82.8
Project: Gilltiam Pit Chevron/Schwake	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.4	2.4	mg/kg	1	07/27/10 16:24	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	9.0	3.6	mg/kg	1	07/27/10 20:27	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	391		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	82.1		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	82.8		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	6030	1.0	umhos/cm	1	07/28/10	JD	DEPT.OF AG, BOOK N9
pH	6.19		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-G-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-17A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	82.1
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	61.4	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Magnesium	21.2	1.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Sodium	1280	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ²	EPA 200.7 ³

- (1) Instrument QC Batch: MA856
- (2) Instrument QC Batch: MA858
- (3) Prep QC Batch: MP2440

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-G-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-17A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	82.1
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	35.9		ratio	1	07/29/10 11:15	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-H-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-18	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	87.8
Method:	SW846 8260B		
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V06006.D	1	07/25/10	DC	n/a	n/a	V3V314
Run #2							

	Initial Weight
Run #1	1.00 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.7	1.7	ug/kg	
108-88-3	Toluene	ND	11	5.7	ug/kg	
100-41-4	Ethylbenzene	ND	11	2.3	ug/kg	
	m,p-Xylene	ND	23	4.0	ug/kg	
95-47-6	o-Xylene	ND	11	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	88%		70-130%
460-00-4	4-Bromofluorobenzene	81%		70-130%
17060-07-0	1,2-Dichloroethane-D4	108%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-H-2		
Lab Sample ID:	D15557-18	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846 8270C BY SIM SW846 3545A	Percent Solids:	87.8
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X10840.D	1	07/28/10	ANC	07/26/10	C:OP2449	C:EX526
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	110	28	ug/kg	
208-96-8	Acenaphthylene	ND	110	28	ug/kg	
120-12-7	Anthracene	ND	110	28	ug/kg	
56-55-3	Benzo(a)anthracene	4.6	11	3.4	ug/kg	J
50-32-8	Benzo(a)pyrene	6.2	11	3.4	ug/kg	J
205-99-2	Benzo(b)fluoranthene	7.8	11	3.4	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	11.1	11	3.4	ug/kg	
207-08-9	Benzo(k)fluoranthene	6.5	11	3.4	ug/kg	J
218-01-9	Chrysene	6.2	11	3.4	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	5.8	11	3.4	ug/kg	J
206-44-0	Fluoranthene	ND	110	28	ug/kg	
86-73-7	Fluorene	ND	110	28	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	7.5	11	3.4	ug/kg	J
90-12-0	1-Methylnaphthalene	ND	110	28	ug/kg	
91-57-6	2-Methylnaphthalene	ND	110	28	ug/kg	
91-20-3	Naphthalene	ND	110	28	ug/kg	
85-01-8	Phenanthrene	ND	110	28	ug/kg	
129-00-0	Pyrene	ND	110	28	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		20-115%
321-60-8	2-Fluorobiphenyl	72%		25-106%
1718-51-0	Terphenyl-d14	135%		50-140%

(a) Analysis performed at Accutest Laboratories, San Jose, CA.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-H-2						
Lab Sample ID:	D15557-18				Date Sampled:	07/22/10	
Matrix:	SO - Soil				Date Received:	07/23/10	
Method:	SW846 8015				Percent Solids:	87.8	
Project:	Gilltiam Pit Chevron/Schwake						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	WX50366.D	1	07/29/10	AMA	n/a	n/a	M:GWX2386
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.1 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.4	4.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	95%		36-148%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-H-2		
Lab Sample ID:	D15557-18	Date Sampled:	07/22/10
Matrix:	SO - Soil	Date Received:	07/23/10
Method:	SW846-8015B SW846 3550B	Percent Solids:	87.8
Project:	Gilltiam Pit Chevron/Schwake		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FE3474.D	1	07/27/10	CP	07/26/10	OP2224	GFE202
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	43.0	15	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	107%		63-130%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-H-2

Lab Sample ID: D15557-18

Matrix: SO - Soil

Date Sampled: 07/22/10

Date Received: 07/23/10

Percent Solids: 87.8

Project: Giltiam Pit Chevron/Schwake

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.6	0.43	mg/kg	5	07/27/10	07/27/10 GJ	SW846 6020 ²	SW846 3050B ⁶
Barium	140	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Chromium	8.2	1.1	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Copper	7.5	0.54	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵
Lead	8.3	5.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Mercury	< 0.072	0.072	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ³	SW846 7471A ⁷
Nickel	6.7	3.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Selenium	< 5.4	5.4	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Silver	< 3.2	3.2	mg/kg	1	07/27/10	07/27/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	23.8	3.2	mg/kg	1	07/27/10	07/28/10 JM	SW846 6010B ⁴	SW846 3050B ⁵

(1) Instrument QC Batch: MA852

(2) Instrument QC Batch: MA854

(3) Instrument QC Batch: MA855

(4) Instrument QC Batch: MA856

(5) Prep QC Batch: MP2424

(6) Prep QC Batch: MP2425

(7) Prep QC Batch: MP2432

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-H-2	Date Sampled: 07/22/10
Lab Sample ID: D15557-18	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 87.8
Project: Gilltiam Pit Chevron/Schwake	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	07/27/10 16:24	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	7.8	3.4	mg/kg	1	07/27/10 20:32	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	342		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	87.6		%	1	07/25/10	SWT	SM19 2540B M
Solids, Percent ^c	87.8		%	1	07/26/10	ANC	SM18 2540G
Specific Conductivity	2620	1.0	umhos/cm	1	07/28/10	JD	DEPT.OF AG, BOOK N9
pH	9.26		su	1	07/25/10 05:15	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

(c) Analysis performed at Accutest Laboratories, San Jose, CA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-H-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-18A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	87.6
Project:	Gilltiam Pit Chevron/Schwake		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	25.9	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Magnesium	4.52	1.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ¹	EPA 200.7 ³
Sodium	490	2.0	mg/l	1	07/28/10	07/29/10 JM	SW846 6010B ²	EPA 200.7 ³

- (1) Instrument QC Batch: MA856
- (2) Instrument QC Batch: MA858
- (3) Prep QC Batch: MP2440

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-H-2	Date Sampled:	07/22/10
Lab Sample ID:	D15557-18A	Date Received:	07/23/10
Matrix:	SO - Soil	Percent Solids:	87.6
Project:	Gilltiam Pit Chevron/Schwake		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	23.3		ratio	1	07/29/10 11:25	JM	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)		Matrix Codes										
Company Name: Envir. Res. Mgmt. Street Address: 15810 Park Ten Pl. #300 City, State, Zip: Houston, TX 77084 Project Contact: John Boone John.Boone@ERBM.com Phone #: 281-600-1147 Fax #: 281-600-1001 Sampler(s) Name(s): John Boone		Project Name: Chevron/Schwabe/Gillham Air Street: C.R.74 City, State, Zip: Pectez CO Project #: 0104862 Client Purchase Order #: 0104862 Project Manager: John Boone		Billing Information (if different from Report to): Company Name: Street Address: City, State, Zip: Attention:		Matrix Codes: DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank										
Accutest Sample #	Field ID / Point of Collection	MECH/DI Val #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NH ₄	NH ₃	H ₂ SO ₄	HCN	D/Water	MECH	ENCORE	LAB USE ONLY
	B-D-1-Z (DUP)		7/22/10	1422	JLB	S	5					X				13
	B-D-2			1422												14
	B-E-2			1444												15
	B-F-2			1515												16
	B-G-2			1525												17
	B-H-2			1540												18
Turnaround Time (Business days)		Approved By (Accutest PM) / Date:		Data Deliverable Information		Comments / Special Instructions										
<input type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> UST Analysis 3-5 Days <input type="checkbox"/> 6 - 9 Day RUSH <input checked="" type="checkbox"/> 3 - 5 Day RUSH <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY				<input checked="" type="checkbox"/> Level 1 <input checked="" type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 Level 1 = Results Only Level 2 = Results + QC Summary + Case Narrative Level 3 = Results + QC Summary + Partial Raw data Level 4 = Full Deliverable		<input checked="" type="checkbox"/> PDF <input type="checkbox"/> EDD Format <input type="checkbox"/> Other										
Emergency & Rush T/A data available via Lablink																
Sample Custody must be documented below each time samples change possession, including courier delivery.																
Relinquished by Sampler:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:				
3		7/23/10 1714		3		7/23/10 1714		4		7/23/10 1714		4				
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:				
5				5				5				5				
Custody Seal #		<input type="checkbox"/> Intact		<input type="checkbox"/> Not intact		Preserved where applicable		<input type="checkbox"/> On Ice		<input type="checkbox"/> Cooler Temp.						



GC/MS Volatiles

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V313-MB1	3V05967.D	1	07/24/10	DC	n/a	n/a	V3V313

The QC reported here applies to the following samples:

Method: SW846 8260B

D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-12

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	10	2.0	ug/kg	
108-88-3	Toluene	ND	10	5.0	ug/kg	
	m,p-Xylene	ND	20	3.5	ug/kg	
95-47-6	o-Xylene	ND	10	3.5	ug/kg	

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	89% 70-130%
460-00-4	4-Bromofluorobenzene	79% 70-130%
17060-07-0	1,2-Dichloroethane-D4	94% 70-130%

Method Blank Summary

Page 1 of 1

Job Number: D15557
Account: ERMTTXH ERM
Project: Gilltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V314-MB1	3V05989.D	1	07/25/10	DC	n/a	n/a	V3V314

The QC reported here applies to the following samples:

Method: SW846 8260B

D15557-13, D15557-14, D15557-16, D15557-17, D15557-18

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	10	2.0	ug/kg	
108-88-3	Toluene	ND	10	5.0	ug/kg	
	m,p-Xylene	ND	20	3.5	ug/kg	
95-47-6	o-Xylene	ND	10	3.5	ug/kg	

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	87% 70-130%
460-00-4	4-Bromofluorobenzene	82% 70-130%
17060-07-0	1,2-Dichloroethane-D4	94% 70-130%

Method Blank Summary

Page 1 of 1

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V511-MB1	5V09351.D	1	07/26/10	DC	n/a	n/a	V5V511

The QC reported here applies to the following samples:

Method: SW846 8260B

D15557-1, D15557-11, D15557-15

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	100	30	ug/kg	
100-41-4	Ethylbenzene	ND	200	40	ug/kg	
108-88-3	Toluene	ND	200	100	ug/kg	
	m,p-Xylene	ND	400	70	ug/kg	
95-47-6	o-Xylene	ND	200	70	ug/kg	

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	94% 70-130%
460-00-4	4-Bromofluorobenzene	85% 70-130%
17060-07-0	1,2-Dichloroethane-D4	92% 70-130%

Blank Spike Summary

Page 1 of 1

Job Number: D15557

Account: ERMTTXH ERM

Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V313-BS1	3V05968.D	1	07/24/10	DC	n/a	n/a	V3V313

The QC reported here applies to the following samples:

Method: SW846 8260B

D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	52.8	106	68-130
100-41-4	Ethylbenzene	50	56.9	114	70-130
108-88-3	Toluene	50	54.8	110	70-130
	m,p-Xylene	50	48.7	97	53-130
95-47-6	o-Xylene	50	49.8	100	61-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	89%	70-130%
460-00-4	4-Bromofluorobenzene	88%	70-130%
17060-07-0	1,2-Dichloroethane-D4	88%	70-130%

Blank Spike Summary

Page 1 of 1

Job Number: D15557

Account: ERMTTXH ERM

Project: Gilltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V314-BS1	3V05990.D	1	07/25/10	DC	n/a	n/a	V3V314

The QC reported here applies to the following samples:

Method: SW846 8260B

D15557-13, D15557-14, D15557-16, D15557-17, D15557-18

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	49.9	100	68-130
100-41-4	Ethylbenzene	50	54.7	109	70-130
108-88-3	Toluene	50	53.0	106	70-130
	m,p-Xylene	50	46.4	93	53-130
95-47-6	o-Xylene	50	47.3	95	61-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	89%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%
17060-07-0	1,2-Dichloroethane-D4	85%	70-130%

Blank Spike Summary

Page 1 of 1

Job Number: D15557

Account: ERMTTXH ERM

Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V511-BS1	5V09352.D	1	07/26/10	DC	n/a	n/a	V5V511

The QC reported here applies to the following samples:

Method: SW846 8260B

D15557-1, D15557-11, D15557-15

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	50.5	101	68-130
100-41-4	Ethylbenzene	50	58.8	118	70-130
108-88-3	Toluene	50	53.7	107	70-130
	m,p-Xylene	50	50.2	100	53-130
95-47-6	o-Xylene	50	51.1	102	61-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	95%	70-130%
460-00-4	4-Bromofluorobenzene	105%	70-130%
17060-07-0	1,2-Dichloroethane-D4	79%	70-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D15557-3MS	3V05971.D	1	07/24/10	DC	n/a	n/a	V3V313
D15557-3MSD	3V05972.D	1	07/24/10	DC	n/a	n/a	V3V313
D15557-3	3V05970.D	1	07/24/10	DC	n/a	n/a	V3V313

The QC reported here applies to the following samples:

Method: SW846 8260B

D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-12

CAS No.	Compound	D15557-3 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		309	314	102	312	101	1	55-140/30
100-41-4	Ethylbenzene	ND		309	331	107	342	111	3	56-139/30
108-88-3	Toluene	ND		309	343	111	352	114	3	57-144/30
	m,p-Xylene	ND		309	285	92	294	95	3	47-130/30
95-47-6	o-Xylene	ND		309	284	92	293	95	3	51-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D15557-3	Limits
2037-26-5	Toluene-D8	89%	91%	86%	70-130%
460-00-4	4-Bromofluorobenzene	83%	82%	82%	70-130%
17060-07-0	1,2-Dichloroethane-D4	82%	83%	87%	70-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D15564-1MS	3V05992.D	1	07/25/10	DC	n/a	n/a	V3V314
D15564-1MSD	3V05993.D	1	07/25/10	DC	n/a	n/a	V3V314
D15564-1	3V05991.D	1	07/25/10	DC	n/a	n/a	V3V314

The QC reported here applies to the following samples:

Method: SW846 8260B

D15557-13, D15557-14, D15557-16, D15557-17, D15557-18

CAS No.	Compound	D15564-1 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		288	284	99	281	98	1	55-140/30
100-41-4	Ethylbenzene	ND		288	297	103	281	98	6	56-139/30
108-88-3	Toluene	ND		288	296	103	284	99	4	57-144/30
	m,p-Xylene	ND		288	271	94	273	95	1	47-130/30
95-47-6	o-Xylene	5.8	J	288	283	96	288	98	2	51-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D15564-1	Limits
2037-26-5	Toluene-D8	89%	89%	89%	70-130%
460-00-4	4-Bromofluorobenzene	88%	89%	84%	70-130%
17060-07-0	1,2-Dichloroethane-D4	89%	86%	98%	70-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D15557-15MS	5V09354.D	1	07/26/10	DC	n/a	n/a	V5V511
D15557-15MSD	5V09355.D	1	07/26/10	DC	n/a	n/a	V5V511
D15557-15	5V09353.D	1	07/26/10	DC	n/a	n/a	V5V511

The QC reported here applies to the following samples:

Method: SW846 8260B

D15557-1, D15557-11, D15557-15

CAS No.	Compound	D15557-15 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	399		17600	22700	127	23100	129	2	55-140/30
100-41-4	Ethylbenzene	304		17600	24500	137	24300	136	1	56-139/30
108-88-3	Toluene	161		17600	21000	118	21600	122	3	57-144/30
	m,p-Xylene	633		17600	24400	135* a	24400	135* a	0	47-130/30
95-47-6	o-Xylene	504		17600	23700	132* a	23400	130	1	51-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D15557-15	Limits
2037-26-5	Toluene-D8	101%	103%	108%	70-130%
460-00-4	4-Bromofluorobenzene	111%	109%	101%	70-130%
17060-07-0	1,2-Dichloroethane-D4	81%	78%	93%	70-130%

(a) Outside control limits due to matrix interference.



GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2222-MB	FD2971.D	1	07/26/10	CP	07/26/10	OP2222	GFD143

The QC reported here applies to the following samples:

Method: SW846-8015B

D15557-1, D15557-2, D15557-3, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	ND	13	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	77% 63-130%

Method Blank Summary

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2239-MB	FD3070.D	1	07/29/10	CP	07/28/10	OP2239	GFD145

The QC reported here applies to the following samples: Method: SW846-8015B

D15557-4

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	ND	13	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	122% 63-130%

Method Blank Summary

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2224-MB	FE3450.D	1	07/26/10	CP	07/26/10	OP2224	GFE202

The QC reported here applies to the following samples: Method: SW846-8015

D15557-18

CAS No.	Compound	Result	RL	MDL	Units	Q
	Diesel Fuel (No. 2)	ND	13	13	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	108% 63-130%

Blank Spike Summary

Page 1 of 1

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2222-BS	FD2972.D	1	07/26/10	CP	07/26/10	OP2222	GFD143

The QC reported here applies to the following samples:

Method: SW846-8015B

D15557-1, D15557-2, D15557-3, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	586	88	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	89%	63-130%

Blank Spike Summary

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2239-BS	FD3071.D	1	07/29/10	CP	07/28/10	OP2239	GFD145

The QC reported here applies to the following samples: Method: SW846-8015B

D15557-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	814	122	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	118%	63-130%

Blank Spike Summary

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2224-BS	FE3451.D	1	07/26/10	CP	07/26/10	OP2224	GFE202

The QC reported here applies to the following samples: Method: SW846-8015

D15557-18

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	Diesel Fuel (No. 2)	667	754	113	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	116%	63-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2222-MS	FD2973.D	1	07/26/10	CP	07/26/10	OP2222	GFD143
OP2222-MSD	FD2974.D	1	07/27/10	CP	07/26/10	OP2222	GFD143
D15557-7	FD2985.D	1	07/27/10	CP	07/26/10	OP2222	GFD143

The QC reported here applies to the following samples: Method: SW846-8015B

D15557-1, D15557-2, D15557-3, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17

CAS No.	Compound	D15557-7 mg/kg	Spike Q	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	39.8	739	599	76	603	76	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D15557-7	Limits
84-15-1	o-Terphenyl	70%	72%	72%	63-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D15557

Account: ERMTTXH ERM

Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2239-MS	FD3072.D	1	07/29/10	CP	07/28/10	OP2239	GFD145
OP2239-MSD	FD3073.D	1	07/29/10	CP	07/28/10	OP2239	GFD145
D15584-1	FD3076.D	1	07/29/10	CP	07/28/10	OP2239	GFD145

The QC reported here applies to the following samples:

Method: SW846-8015B

D15557-4

CAS No.	Compound	D15584-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	134		721	909	108	974	116	7	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D15584-1	Limits
84-15-1	o-Terphenyl	102%	110%	115%	63-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D15557
Account: ERMTTXH ERM
Project: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2224-MS	FE3452.D	1	07/26/10	CP	07/26/10	OP2224	GFE202
OP2224-MSD	FE3453.D	1	07/26/10	CP	07/26/10	OP2224	GFE202
D15516-1	FE3454.D	1	07/26/10	CP	07/26/10	OP2224	GFE202

The QC reported here applies to the following samples: Method: SW846-8015

D15557-18

CAS No.	Compound	D15516-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	Diesel Fuel (No. 2)	130		724	814	94	997	119	20	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D15516-1	Limits
84-15-1	o-Terphenyl	96%	118%	106%	63-130%



Metals Analysis

QC Data Summaries

Includes the following where applicable:

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2424
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 07/27/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.7	2		
Antimony	3.0	.17	.5		
Arsenic	2.5	.28	.72		
Barium	1.0	.014	.05	0.030	<1.0
Beryllium	1.0	.14	.21		
Boron	5.0	.35	.91		
Cadmium	1.0	.022	.12	0.11	<1.0
Calcium	40	1.7	2.7		
Chromium	1.0	.027	.18	0.15	<1.0
Cobalt	0.50	.048	.058		
Copper	0.50	.16	.38	0.19	<0.50
Iron	7.0	.77	.91		
Lead	5.0	.13	.24	0.47	<5.0
Lithium	0.20	.076	.09		
Magnesium	20	.58	.93		
Manganese	0.50	.021	.028		
Molybdenum	1.0	.041	.16		
Nickel	3.0	.038	.075	-0.020	<3.0
Phosphorus	10	1.5	3.5		
Potassium	200	38	130		
Selenium	5.0	.28	.54	0.25	<5.0
Silicon	5.0	1.2	.68		
Silver	3.0	.098	.068	-0.10	<3.0
Sodium	40	23	6.3		
Strontium	5.0	.0091	.02		
Thallium	1.0	.31	.21		
Tin	5.0	1.4	.56		
Titanium	1.0	.0098	.041		
Uranium	5.0	.22	.53		
Vanadium	1.0	.027	.034		
Zinc	3.0	.076	.49	0.20	<3.0

Associated samples MP2424: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2424
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2424
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 07/27/10

Metal	D15557-1 Original MS		SpikeLot MPICPAL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic					
Barium	106	299	221	87.5	75-125
Beryllium					
Boron					
Cadmium	0.17	51.4	55.2	92.9	75-125
Calcium					
Chromium	6.6	58.4	55.2	93.9	75-125
Cobalt					
Copper	7.0	60.3	55.2	96.6	75-125
Iron					
Lead	7.9	106	110	88.9	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	6.1	54.8	55.2	88.3	75-125
Phosphorus					
Potassium					
Selenium	0.78	96.6	110	86.8	75-125
Silicon					
Silver	0.0	20.2	22.1	91.5	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	20.3	56.9	55.2	66.3N(a)	75-125

Associated samples MP2424: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilttiam Pit Chevron/Schwake

QC Batch ID: MP2424
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2424
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 07/27/10

Metal	D15557-1 Original	MSD	Spikelot MPICPAL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium	106	293	225	83.1	2.0	20
Beryllium						
Boron						
Cadmium	0.17	51.4	56.2	91.1	0.0	20
Calcium						
Chromium	6.6	58.3	56.2	91.9	0.2	20
Cobalt						
Copper	7.0	61.4	56.2	96.7	1.8	20
Iron						
Lead	7.9	107	112	88.1	0.9	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	6.1	55.1	56.2	87.1	0.5	20
Phosphorus						
Potassium						
Selenium	0.78	99.1	112	87.4	2.6	20
Silicon						
Silver	0.0	20.2	22.5	89.8	0.0	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	20.3	61.3	56.2	72.9N(a)	7.4	20

Associated samples MP2424: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2424
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15557
 Account: ERMTTXH - ERM
 Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2424
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 07/27/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	178	200	89.0	80-120
Beryllium				
Boron				
Cadmium	50.5	50	101.0	80-120
Calcium				
Chromium	52.8	50	105.6	80-120
Cobalt				
Copper	45.4	50	90.8	80-120
Iron				
Lead	99.9	100	99.9	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	50.1	50	100.2	80-120
Phosphorus				
Potassium				
Selenium	92.9	100	92.9	80-120
Silicon				
Silver	19.8	20	99.0	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	46.5	50	93.0	80-120

Associated samples MP2424: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2424
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: D15557
 Account: ERMTTXH - ERM
 Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2424
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 07/27/10

Metal	D15557-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	1040	1120	7.0	0-10
Beryllium				
Boron				
Cadmium	1.70	3.00	76.5 (a)	0-10
Calcium				
Chromium	65.1	73.5	12.9*(b)	0-10
Cobalt				
Copper	70.4	66.0	3.6	0-10
Iron				
Lead	78.0	94.0	20.5*(b)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	59.8	66.0	10.4*(b)	0-10
Phosphorus				
Potassium				
Selenium	7.70	17.0	120.8(a)	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	210	235	17.5*(b)	0-10

Associated samples MP2424: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

SERIAL DILUTION RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2424
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

(b) Serial dilution indicates possible matrix interference.

7.1.4

7

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2425
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 07/27/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.14	.89		
Antimony	0.20	.001	.045		
Arsenic	0.40	.049	.26	-0.00040	<0.40
Barium	1.0	.0035	.17		
Beryllium	0.10	.0075	.014		
Boron	20	.97	2		
Cadmium	0.050	.023	.048		
Calcium	200	1.8	6.1		
Chromium	1.0	.021	.23		
Cobalt	0.10	.0033	.088		
Copper	1.0	.011	.14		
Iron	20	.81	6.1		
Lead	0.25	.0012	.18		
Magnesium	50	.067	1.3		
Manganese	0.50	.007	.089		
Molybdenum	0.50	.0044	.2		
Nickel	1.0	.0029	.074		
Phosphorus	30	1.8	5.6		
Potassium	100	2	9.1		
Selenium	0.20	.075	.14		
Silver	0.050	.0008	.029		
Sodium	250	.8	1.8		
Strontium	10	.004	.047		
Thallium	0.10	.015	.071		
Tin	5.0	.006	.17		
Titanium	1.0	.035	.071		
Uranium	0.25	.00038	.12		
Vanadium	2.0	.052	.99		
Zinc	5.0	.039	.53		

Associated samples MP2425: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2425
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 07/27/10

Metal	D15557-1 Original MS		SpikeLot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic	2.8	102	110	89.9	60-119
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP2425: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
 Account: ERMTTXH - ERM
 Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2425
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 07/27/10

Metal	D15557-1 Original	MSD	Spikelot MPICPAL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	2.8	108	112	93.5	5.7	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP2425: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2425
Matrix Type: SOLID

Methods: SW846 6020
Units: ug/l

Prep Date: 07/27/10

Metal	D15557-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	27.2	30.5	12.2*(a)	0-10
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP2425: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2430
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 07/27/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	35	250		
Antimony	150	8.5	65		
Arsenic	130	14	33		
Barium	50	.7	12		
Beryllium	50	7	22		
Boron	250	18	93		
Cadmium	50	1.1	6		
Calcium	2000	85	46	-50	<2000
Chromium	50	1.4	8		
Cobalt	25	2.4	1.5		
Copper	25	8	14		
Iron	350	39	50		
Lead	250	6.5	16		
Lithium	10	3.8	8		
Magnesium	1000	29	62	54.5	<1000
Manganese	25	1.1	3.5		
Molybdenum	50	2.1	6		
Nickel	150	1.9	3		
Phosphorus	500	75	270		
Potassium	5000	1900	2700		
Selenium	250	14	36		
Silicon	250	60	100		
Silver	150	4.9	1.5		
Sodium	2000	1200	110	-65	<2000
Strontium	25	.46	17		
Thallium	50	16	11		
Tin	250	70	22		
Titanium	50	.49	3.5		
Uranium	250	11	20		
Vanadium	50	1.4	1.5		
Zinc	150	3.8	8.5		

Associated samples MP2430: D15557-1A, D15557-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2430
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
 Account: ERMTTXH - ERM
 Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2430
 Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
 Units: ug/l

Prep Date: 07/27/10

Metal	D15163-2A Original MS		Spikelot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	23600	147000	125000	99.0	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	11200	127000	125000	92.6	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	29300	153000	125000	99.0	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP2430: D15557-1A, D15557-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2430
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
 Account: ERMTTXH - ERM
 Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2430
 Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
 Units: ug/l

Prep Date: 07/27/10

Metal	D15163-2A Original MSD	Spikelot MPICPAL % Rec	MSD RPD	QC Limit
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	23600	142000	125000	95.0
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	11200	131000	125000	95.8
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	29300	156000	125000	101.4
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP2430: D15557-1A, D15557-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2430
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2430
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 07/27/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	131000	125000	104.8	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	130000	125000	104.0	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	130000	125000	104.0	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP2430: D15557-1A, D15557-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2430
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2431
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 07/27/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	35	250		
Antimony	150	8.5	65		
Arsenic	130	14	33		
Barium	50	.7	12		
Beryllium	50	7	22		
Boron	250	18	93		
Cadmium	50	1.1	6		
Calcium	2000	85	46	-74	<2000
Chromium	50	1.4	8		
Cobalt	25	2.4	1.5		
Copper	25	8	14		
Iron	350	39	50		
Lead	250	6.5	16		
Lithium	10	3.8	8		
Magnesium	1000	29	62	35.0	<1000
Manganese	25	1.1	3.5		
Molybdenum	50	2.1	6		
Nickel	150	1.9	3		
Phosphorus	500	75	270		
Potassium	5000	1900	2700		
Selenium	250	14	36		
Silicon	250	60	100		
Silver	150	4.9	1.5		
Sodium	2000	1200	110	325	<2000
Strontium	25	.46	17		
Thallium	50	16	11		
Tin	250	70	22		
Titanium	50	.49	3.5		
Uranium	250	11	20		
Vanadium	50	1.4	1.5		
Zinc	150	3.8	8.5		

Associated samples MP2431: D15557-3A, D15557-4A, D15557-5A, D15557-6A, D15557-7A, D15557-8A, D15557-9A, D15557-10A, D15557-11A, D15557-12A

Results < IDL are shown as zero for calculation purposes

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2431
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2431
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 07/27/10

Metal	D15557-3A Original MS		SpikeLot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	46200	165000	125000	95.0	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	3310	123000	125000	95.8	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	118000	253000	125000	108.0	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP2431: D15557-3A, D15557-4A, D15557-5A, D15557-6A, D15557-7A, D15557-8A, D15557-9A, D15557-10A, D15557-11A, D15557-12A

Results < IDL are shown as zero for calculation purposes

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2431
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2431
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 07/27/10

Metal	D15557-3A Original MSD	Spikelot MPICPAL % Rec	MSD RPD	QC Limit
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	46200	170000	125000	99.0
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	3310	125000	125000	97.4
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	118000	260000	125000	113.6
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP2431: D15557-3A, D15557-4A, D15557-5A, D15557-6A, D15557-7A, D15557-8A, D15557-9A, D15557-10A, D15557-11A, D15557-12A

Results < IDL are shown as zero for calculation purposes

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2431
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilttiam Pit Chevron/Schwake

QC Batch ID: MP2431
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 07/27/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	114000	125000	91.2	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	115000	125000	92.0	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	125000	125000	100.0	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP2431: D15557-3A, D15557-4A, D15557-5A, D15557-6A, D15557-7A, D15557-8A, D15557-9A, D15557-10A, D15557-11A, D15557-12A

Results < IDL are shown as zero for calculation purposes

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2431
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2432
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 07/28/10

Metal	RL	IDL	MDL	MB raw	final
-------	----	-----	-----	-----------	-------

Mercury	0.080	.00084	.00098	-0.0029	<0.080
---------	-------	--------	--------	---------	--------

Associated samples MP2432: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
 Account: ERMTTXH - ERM
 Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2432
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 07/28/10

Metal	D15557-1 Original MS	Spikelot HGWSR1	% Rec	QC Limits
-------	-------------------------	--------------------	-------	--------------

Mercury 0.024 0.28 0.371 68.9N(a) 85-115

Associated samples MP2432: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

7.5.2

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
 Account: ERMTTXH - ERM
 Project: Gilttiam Pit Chevron/Schwake

QC Batch ID: MP2432
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 07/28/10

Metal	D15557-1 Original MSD	Spikelot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.024	0.27	0.365	67.3N(a) 3.6	20

Associated samples MP2432: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

7.5.2

7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2432
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 07/28/10

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
-------	---------------	--------------------	-------	--------------

Mercury 0.32 0.4 80.0 80-120

Associated samples MP2432: D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

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

7.5.3
7

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2440
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 07/28/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	35	250		
Antimony	150	8.5	65		
Arsenic	130	14	33		
Barium	50	.7	12		
Beryllium	50	7	22		
Boron	250	18	93		
Cadmium	50	1.1	6		
Calcium	2000	85	46	-59	<2000
Chromium	50	1.4	8		
Cobalt	25	2.4	1.5		
Copper	25	8	14		
Iron	350	39	50		
Lead	250	6.5	16		
Lithium	10	3.8	8		
Magnesium	1000	29	62	36.5	<1000
Manganese	25	1.1	3.5		
Molybdenum	50	2.1	6		
Nickel	150	1.9	3		
Phosphorus	500	75	270		
Potassium	5000	1900	2700		
Selenium	250	14	36		
Silicon	250	60	100		
Silver	150	4.9	1.5		
Sodium	2000	1200	110	-470	<2000
Strontium	25	.46	17		
Thallium	50	16	11		
Tin	250	70	22		
Titanium	50	.49	3.5		
Uranium	250	11	20		
Vanadium	50	1.4	1.5		
Zinc	150	3.8	8.5		

Associated samples MP2440: D15557-13A, D15557-14A, D15557-15A, D15557-16A, D15557-17A, D15557-18A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2440
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
 Account: ERMTTXH - ERM
 Project: Gilltiam Pit Chevron/Schwake

QC Batch ID: MP2440
 Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
 Units: ug/l

Prep Date: 07/28/10

Metal	D15557-13A Original MS		Spikelot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	10400	143000	125000	106.1	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	1340	124000	125000	98.1	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	1460000	1490000	125000	24.0 (a)	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP2440: D15557-13A, D15557-14A, D15557-15A, D15557-16A, D15557-17A, D15557-18A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2440
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

- (N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilttiam Pit Chevron/Schwake

QC Batch ID: MP2440
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 07/28/10

Metal	D15557-13A Original MSD		SpikeLot MPICPALL % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	10400	140000	125000	103.7	2.1	20
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium	1340	121000	125000	95.7	2.4	20
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silicon						
Silver						
Sodium	1460000	1520000	125000	48.0 (a)	2.0	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP2440: D15557-13A, D15557-14A, D15557-15A, D15557-16A, D15557-17A, D15557-18A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2440
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

- (N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Gilttiam Pit Chevron/Schwake

QC Batch ID: MP2440
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 07/28/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	131000	125000	104.8	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	118000	125000	94.4	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	137000	125000	109.6	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP2440: D15557-13A, D15557-14A, D15557-15A, D15557-16A, D15557-17A, D15557-18A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15557
Account: ERMTTXH - ERM
Project: Giltiam Pit Chevron/Schwake

QC Batch ID: MP2440
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested



General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D15557
Account: ERM TTXH - ERM
Project: Gilltiam Pit Chevron/Schwake

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Specific Conductivity	GP2429/GN5567			umhos/cm	9985	9960	99.3	90-110%
Specific Conductivity	GP2439/GN5605			umhos/cm	9985	9940	99.5	90-110%
pH	GN5531			su	8.00	8.01	100.1	99.3-100.7%
pH	GN5531			su	8.00	8.01	100.1	99.3-100.7%

Associated Samples:
Batch GN5531: D15557-1, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9
Batch GP2429: D15557-1, D15557-10, D15557-11, D15557-12, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9
Batch GP2439: D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18
(*) Outside of QC limits

8.1
8



Misc. Forms

Custody Documents and Other Forms

(Accutest Northern California, Inc.)

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #: D15557

Accutest Quote #:

AMS P.O. #:

Project No.:

Client Information			Subcontract Laboratory Information			Analytical Information					Comments											
Name	Address		Name	Address		Matrix	# of bottles	CL	NaOH	HNO3		H2SO4	None									
Accutest Mountain States (AMS)	4036 Youngfield St.		Accutest - Northern California	2105 Lundy Ave.							B8270SIMPAAH			1								
City	State	Zip	City	State	Zip																	
Wheat Ridge,	CO	80033	San Jose	CA	95131																	
Send Report to: Tiffany Pham			Contact: Sample Management																			
Any questions contact: Amanda Kissell			Phone: (408) 588-0200																			
Phone/Fax #: (303) 425-6021; (303) 425-6854																						
Field ID / Point of Collection	Date	Time	Matrix	# of bottles	CL	NaOH	HNO3	H2SO4	None													
D15557 -1	7/22/10		Soil	1						X												
-2																						
-3																						
-4																						
-5																						
-6																						
-7																						
-8																						
-9																						
-10																						
Turnaround Information			Data Deliverable Information			Comments / Remarks																
<input checked="" type="checkbox"/> 3 - 5 Business Day Rush <input type="checkbox"/> Other _____ (Days)			Approved By: _____			<input type="checkbox"/> Commercial "A" <input type="checkbox"/> Commercial "B" <input checked="" type="checkbox"/> Commercial "BN" <input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> Full Tier 1			<input type="checkbox"/> PDF <input type="checkbox"/> Compact Disk Deliverable <input type="checkbox"/> Electronic Delivery: _____ <input type="checkbox"/> State Forms <input type="checkbox"/> Other (Specify) _____			Please use Colorado regulations and RLs.										
10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.																						
Sample Custody must be documented below each time samples change possession, including courier delivery.													For Subcontract Laboratory Use Only									
Relinquished by: 1	Date & Time: 7/22/10	Received By: 1	Date & Time: 10:30	Seal #: _____ Headspace: Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>																		
Relinquished by: 2	Date & Time: _____	Received By: 2	Date & Time: _____	Preserved where applicable: <input type="checkbox"/>																		
Relinquished by: 3	Date & Time: _____	Received By: 3	Date & Time: _____	Temperature °C _____ On Ice <input type="checkbox"/>																		

D15557: Chain of Custody

Page 1 of 4

Accutest Northern California, Inc.

Accutest Mountain States Laboratory (AMS) **Subcontractor Order**

Date/Time: 7/23/10 5:41 PM
Accutest Job No. D15557
Client Project:
CSR: Amanda Kissell

Sub Lab: Accutest - Northern California
Address: 2105 Lundy Ave.
 San Jose CA 95131
Contact: Sample Management
Phone: (408) 588-0200

Sample #:	Analyses
D15557 - 1	B8270SIMPAH
2	
3	
4	
5	
6	
7	
8	
9	
10	
Turn Around 3 - 5 Business Day Rush	

Sample Managment receipt:

(Print form and sign/date. Submit this form to Login Dept. with the SUB COC.)

Date: 07/24/10

e/sop_new/subform

D15557: Chain of Custody
Page 2 of 4



ACCUTEST®

CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #:	D15557
Accutest Quote #:	
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information										Analytical Information					Comments
Name Accutest Mountain States (AMS)			Name Accutest - Northern California										B8270SMPAH					
Address 4036 Youngfield St.			Address 2105 Lundy Ave.															
City Wheat Ridge,	State CO	Zip 80033	City San Jose	State CA	Zip 95131													
Send Report to: Tiffany Pham Any questions contact: Amanda Kissell Phone/Fax #: (303) 425-6021; (303) 425-6854			Contact: Sample Management Phone: (408) 588-0200															
Collection			Preservation															
Field ID / Point of Collection	Date	Time	Matrix	# of bottles	HCL	NaOH	HNO3	H2SO4	None									
D15557 -11	7/22/10		Soil	1								X						
-12																		
-13																		
-14																		
-15																		
-16																		
-17																		
-18																		
-19																		
Turnaround Information			Data Deliverable Information										Comments / Remarks					
<input checked="" type="checkbox"/> 3 - 5 Business Day Rush <input type="checkbox"/> Other _____ (Days)			Approved By: _____			<input type="checkbox"/> Commercial "A" <input type="checkbox"/> PDF <input type="checkbox"/> Commercial "B" <input type="checkbox"/> Compact Disk Deliverable <input type="checkbox"/> Commercial "BN" <input type="checkbox"/> Electronic Delivery: _____ <input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> State Forms <input type="checkbox"/> Full Tier 1 <input type="checkbox"/> Other (Specify) _____					Please use Colorado regulations and RLs.							
10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.																		
Sample Custody must be documented below each time samples change possession, including courier delivery.																		
Relinquished by: 1			Date & Time: 7/23/10			Received By: 1			Date & Time: 10:30 07/24/10			Seal #: _____ Headspace: Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>						
Relinquished by: 2			Date & Time:			Received By: 2			Date & Time:			Preserved where applicable: <input type="checkbox"/>						
Relinquished by: 3			Date & Time:			Received By: 3			Date & Time:			Temperature °C _____ On Ice <input type="checkbox"/>						

D15557: Chain of Custody

Page 3 of 4

Accutest Mountain States Laboratory (AMS) **Subcontractor Order**

Date/Time: 7/23/10 5:42 PM
Accutest Job No. D15557
Client Project:
CSR: Amanda Kissell

Sub Lab: Accutest - Northern California
Address: 2105 Lundy Ave.
 San Jose CA 95131
Contact: Sample Management
Phone: (408) 588-0200

Sample #:	Analyses
D15557 - 11	B8270SIMPAH
12	
13	
14	
15	
16	
17	
18	
0	
0	
Turn Around 3 - 5 Business Day Rush	

Sample Managment receipt:

(Print form and sign/date. Submit this form to Login Dept. with the SUB COC.)



Date: 07/24/10

e/sop_new/subform

D15557: Chain of Custody
Page 4 of 4



GC/MS Semi-volatiles

QC Data Summaries

(Accutest Northern California, Inc.)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: D15557
Account: ALMS Accutest Mountain States
Project: ERMTTXH: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2449-MB	X10802.D	1	07/27/10	LY	07/26/10	OP2449	EX524

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D15557-17, D15557-18

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	100	25	ug/kg	
208-96-8	Acenaphthylene	ND	100	25	ug/kg	
120-12-7	Anthracene	ND	100	25	ug/kg	
56-55-3	Benzo(a)anthracene	ND	10	3.0	ug/kg	
50-32-8	Benzo(a)pyrene	ND	10	3.0	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	10	3.0	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	10	3.0	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	10	3.0	ug/kg	
218-01-9	Chrysene	ND	10	3.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	10	3.0	ug/kg	
206-44-0	Fluoranthene	ND	100	25	ug/kg	
86-73-7	Fluorene	ND	100	25	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10	3.0	ug/kg	
90-12-0	1-Methylnaphthalene	ND	100	25	ug/kg	
91-57-6	2-Methylnaphthalene	ND	100	25	ug/kg	
91-20-3	Naphthalene	ND	100	25	ug/kg	
85-01-8	Phenanthrene	ND	100	25	ug/kg	
129-00-0	Pyrene	ND	100	25	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	95% 20-115%
321-60-8	2-Fluorobiphenyl	86% 25-106%
1718-51-0	Terphenyl-d14	113% 50-140%

10.1.1
10

Method Blank Summary

Page 1 of 1

Job Number: D15557
Account: ALMS Accutest Mountain States
Project: ERMTTXH: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2446-MB	X10805.D	1	07/27/10	LY	07/26/10	OP2446	EX524

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	100	25	ug/kg	
208-96-8	Acenaphthylene	ND	100	25	ug/kg	
120-12-7	Anthracene	ND	100	25	ug/kg	
56-55-3	Benzo(a)anthracene	ND	10	3.0	ug/kg	
50-32-8	Benzo(a)pyrene	ND	10	3.0	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	10	3.0	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	10	3.0	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	10	3.0	ug/kg	
218-01-9	Chrysene	ND	10	3.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	10	3.0	ug/kg	
206-44-0	Fluoranthene	ND	100	25	ug/kg	
86-73-7	Fluorene	ND	100	25	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10	3.0	ug/kg	
90-12-0	1-Methylnaphthalene	ND	100	25	ug/kg	
91-57-6	2-Methylnaphthalene	ND	100	25	ug/kg	
91-20-3	Naphthalene	ND	100	25	ug/kg	
85-01-8	Phenanthrene	ND	100	25	ug/kg	
129-00-0	Pyrene	ND	100	25	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	72% 20-115%
321-60-8	2-Fluorobiphenyl	101% 25-106%
1718-51-0	Terphenyl-d14	142% * a 50-140%

(a) Outside laboratory control limits (high bias).

10.1.2 10

Blank Spike Summary

Page 1 of 1

Job Number: D15557
Account: ALMS Accutest Mountain States
Project: ERMTTXH: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2446-BS	X10800.D	1	07/27/10	LY	07/26/10	OP2446	EX524

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	500	460	92	19-114
208-96-8	Acenaphthylene	500	469	94	41-115
120-12-7	Anthracene	500	494	99	44-120
56-55-3	Benzo(a)anthracene	500	539	108	43-126
50-32-8	Benzo(a)pyrene	500	588	118	49-127
205-99-2	Benzo(b)fluoranthene	500	572	114	49-127
191-24-2	Benzo(g,h,i)perylene	500	541	108	46-130
207-08-9	Benzo(k)fluoranthene	500	565	113	44-129
218-01-9	Chrysene	500	527	105	44-128
53-70-3	Dibenzo(a,h)anthracene	500	558	112	48-133
206-44-0	Fluoranthene	500	525	105	54-124
86-73-7	Fluorene	500	471	94	41-119
193-39-5	Indeno(1,2,3-cd)pyrene	500	558	112	49-133
90-12-0	1-Methylnaphthalene	500	441	88	38-118
91-57-6	2-Methylnaphthalene	500	479	96	37-115
91-20-3	Naphthalene	500	428	86	38-114
85-01-8	Phenanthrene	500	449	90	45-120
129-00-0	Pyrene	500	466	93	53-125

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	108%	20-115%
321-60-8	2-Fluorobiphenyl	110% * a	25-106%
1718-51-0	Terphenyl-d14	131%	50-140%

(a) Outside laboratory control limits (high bias).

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: D15557
Account: ALMS Accutest Mountain States
Project: ERMTTXH: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2449-BS	X10803.D	1	07/27/10	LY	07/26/10	OP2449	EX524
OP2449-BSD	X10804.D	1	07/27/10	LY	07/26/10	OP2449	EX524

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D15557-17, D15557-18

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	500	332	66	407	81	20	19-114/30
208-96-8	Acenaphthylene	500	338	68	418	84	21	41-115/30
120-12-7	Anthracene	500	434	87	456	91	5	44-120/30
56-55-3	Benzo(a)anthracene	500	514	103	469	94	9	43-126/30
50-32-8	Benzo(a)pyrene	500	565	113	505	101	11	49-127/30
205-99-2	Benzo(b)fluoranthene	500	540	108	481	96	12	49-127/30
191-24-2	Benzo(g,h,i)perylene	500	539	108	480	96	12	46-130/30
207-08-9	Benzo(k)fluoranthene	500	548	110	469	94	16	44-129/30
218-01-9	Chrysene	500	506	101	457	91	10	44-128/30
53-70-3	Dibenzo(a,h)anthracene	500	559	112	496	99	12	48-133/30
206-44-0	Fluoranthene	500	487	97	487	97	0	54-124/30
86-73-7	Fluorene	500	348	70	432	86	22	41-119/30
193-39-5	Indeno(1,2,3-cd)pyrene	500	555	111	496	99	11	49-133/30
90-12-0	1-Methylnaphthalene	500	310	62	390	78	23	38-118/30
91-57-6	2-Methylnaphthalene	500	336	67	423	85	23	37-115/30
91-20-3	Naphthalene	500	320	64	400	80	22	38-114/30
85-01-8	Phenanthrene	500	359	72	419	84	15	45-120/30
129-00-0	Pyrene	500	439	88	425	85	3	53-125/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	79%	108%	20-115%
321-60-8	2-Fluorobiphenyl	79%	99%	25-106%
1718-51-0	Terphenyl-d14	123%	115%	50-140%

10.3.1
10

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D15557
Account: ALMS Accutest Mountain States
Project: ERMTTXH: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2449-MS	X10841.D	1	07/28/10	LY	07/26/10	OP2449	EX526
OP2449-MSD	X10842.D	1	07/28/10	LY	07/26/10	OP2449	EX526
D15557-18	X10840.D	1	07/28/10	LY	07/26/10	OP2449	EX526

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D15557-17, D15557-18

CAS No.	Compound	D15557-18 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		569	383	67	233	41	49* a	19-114/36
208-96-8	Acenaphthylene	ND		569	393	69	235	41	50* a	41-115/29
120-12-7	Anthracene	ND		569	521	91	489	86	6	44-120/24
56-55-3	Benzo(a)anthracene	4.6	J	569	614	107	621	108	1	43-126/35
50-32-8	Benzo(a)pyrene	6.2	J	569	614	107	622	108	1	49-127/33
205-99-2	Benzo(b)fluoranthene	7.8	J	569	633	110	643	112	2	49-127/32
191-24-2	Benzo(g,h,i)perylene	11.1		569	545	94	536	92	2	46-130/37
207-08-9	Benzo(k)fluoranthene	6.5	J	569	593	103	595	103	0	44-129/34
218-01-9	Chrysene	6.2	J	569	566	98	573	100	1	44-128/34
53-70-3	Dibenzo(a,h)anthracene	5.8	J	569	584	102	593	103	2	48-133/38
206-44-0	Fluoranthene	ND		569	627	110	624	110	0	54-124/33
86-73-7	Fluorene	ND		569	438	77	308	54	35* a	41-119/28
193-39-5	Indeno(1,2,3-cd)pyrene	7.5	J	569	601	104	612	106	2	49-133/34
90-12-0	1-Methylnaphthalene	ND		569	328	58	188	33* a	54* a	38-118/30
91-57-6	2-Methylnaphthalene	ND		569	355	62	200	35* a	56* a	37-115/31
91-20-3	Naphthalene	ND		569	315	55	180	32* a	55* a	38-114/31
85-01-8	Phenanthrene	ND		569	486	85	453	80	7	45-120/33
129-00-0	Pyrene	ND		569	586	103	596	105	2	53-125/33

CAS No.	Surrogate Recoveries	MS	MSD	D15557-18	Limits
4165-60-0	Nitrobenzene-d5	72%	44%	64%	20-115%
321-60-8	2-Fluorobiphenyl	77%	42%	72%	25-106%
1718-51-0	Terphenyl-d14	139%	134%	135%	50-140%

(a) Outside laboratory control limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D15557
Account: ALMS Accutest Mountain States
Project: ERMTTXH: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2446-MS	X10879.D	1	07/29/10	LY	07/26/10	OP2446	EX527
OP2446-MSD	X10880.D	1	07/29/10	LY	07/26/10	OP2446	EX527
D15557-16	X10836.D	1	07/28/10	LY	07/26/10	OP2446	EX526

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16

CAS No.	Compound	D15557-16 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		594	460	77	422	71	9	19-114/36
208-96-8	Acenaphthylene	ND		594	484	82	447	75	8	41-115/29
120-12-7	Anthracene	ND		594	559	94	503	85	11	44-120/24
56-55-3	Benzo(a)anthracene	ND		594	651	110	580	98	12	43-126/35
50-32-8	Benzo(a)pyrene	ND		594	681	115	606	102	12	49-127/33
205-99-2	Benzo(b)fluoranthene	3.9	J	594	667	112	595	100	11	49-127/32
191-24-2	Benzo(g,h,i)perylene	ND		594	608	102	525	88	15	46-130/37
207-08-9	Benzo(k)fluoranthene	ND		594	629	106	559	94	12	44-129/34
218-01-9	Chrysene	ND		594	602	101	537	90	11	44-128/34
53-70-3	Dibenzo(a,h)anthracene	ND		594	658	111	569	96	15	48-133/38
206-44-0	Fluoranthene	ND		594	670	113	593	100	12	54-124/33
86-73-7	Fluorene	ND		594	492	83	450	76	9	41-119/28
193-39-5	Indeno(1,2,3-cd)pyrene	ND		594	664	112	576	97	14	49-133/34
90-12-0	1-Methylnaphthalene	ND		594	412	69	383	64	7	38-118/30
91-57-6	2-Methylnaphthalene	ND		594	454	76	417	70	8	37-115/31
91-20-3	Naphthalene	ND		594	391	66	360	61	8	38-114/31
85-01-8	Phenanthrene	ND		594	506	85	458	77	10	45-120/33
129-00-0	Pyrene	ND		594	566	95	509	86	11	53-125/33

CAS No.	Surrogate Recoveries	MS	MSD	D15557-16	Limits
4165-60-0	Nitrobenzene-d5	65%	59%	34%	20-115%
321-60-8	2-Fluorobiphenyl	60%	53%	44%	25-106%
1718-51-0	Terphenyl-d14	94%	72%	117%	50-140%

10.4.2 10



Misc. Forms

Custody Documents and Other Forms

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #: D15557

Accutest Quote #:

AMS P.O. #:

Project No.:

Client Information			Subcontract Laboratory Information										Analytical Information							
Name Accutest Mountain States (AMS)			Name Accutest - New England																	
Address 4036 Youngfield St.			Address 495 Technology Center West, BLDG O																	
City Wheat Ridge,	State CO	Zip 80033	City Marlborough		State MA		Zip 01752													
Send Report to: Tiffany Pham			Contact: Sample Management																	
Any questions contact: Amanda Kissell																				
Phone/Fax #: (303) 425-6021; (303) 425-6854			Phone: (508) 481-6200																	
Field ID / Point of Collection			Collection			Matrix	# of bottles	Preservation						XCRA	±	LL	Comments			
			Date	Time				HCL	NaOH	HNO3	H2SO4	None								
D15557 -1			7/22/10			Soil	1								X	X				
-2																				
-3																				
-4																				
-5																				
-6																				
-7																				
-8																				
-9																				
-10																				
Turnaround Information			Data Deliverable Information										Comments / Remarks							
<input checked="" type="checkbox"/> 3 - 5 Business Day Rush			Approved By: _____										Please use Colorado regulations and RLs. 38							
<input type="checkbox"/> Other _____ (Days)			<input type="checkbox"/> Commercial "A" <input type="checkbox"/> PDF																	
			<input type="checkbox"/> Commercial "B" <input type="checkbox"/> Compact Disk Deliverable																	
			<input type="checkbox"/> Commercial "BN" <input type="checkbox"/> Electronic Delivery: _____																	
			<input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> State Forms																	
			<input type="checkbox"/> Full Tier 1 <input type="checkbox"/> Other (Specify) _____																	
10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.																				
Sample Custody must be documented below each time samples change possession, including courier delivery.																				
For Subcontract Laboratory Use Only																				
Relinquished by:			Date & Time:			Received By:			Date & Time:			Seal #:			Headspace:					
1			7/22/10			1 FedEx			1						Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>					
Relinquished by:			Date & Time:			Received By:			Date & Time:			Preserved where applicable:								
2 FedEx			7/24/10 10:45			2 J. Barry			2 7/24/10 10:45			<input type="checkbox"/>								
Relinquished by:			Date & Time:			Received By:			Date & Time:			Temperature °C			On Ice					
3						3			3			1-3			<input checked="" type="checkbox"/>					

D15557: Chain of Custody

Page 1 of 3

Accutest Labs of New England, Inc.



CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #: D15557
Accutest Quote #:
AMS P.O. #:
Project No.:

Client Information			Subcontract Laboratory Information										Analytical Information						
Name Accutest Mountain States (AMS)			Name Accutest - New England										<div>XCRA</div> <div>EH</div> <div>Comments</div>						
Address 4036 Youngfield St.			Address 495 Technology Center West, BLDG O																
City Wheat Ridge,		State CO	Zip 80033	City Marlborough		State MA		Zip 01752											
Send Report to: Tiffany Pham			Contact: Sample Management																
Any questions contact: Amanda Kissell			Phone: (508) 481-6200																
Phone/Fax #: (303) 425-6021; (303) 425-6854			Preservation																
Field ID / Point of Collection			Collection		Matrix	# of bottles	CO	NaOH	HNO3	H2SO4	None								
D15557 -11			Date	Time	Soil	1						X	X						
-12																			
-13																			
-14																			
-15																			
-16																			
-17																			
-18																			
Turnaround Information			Data Deliverable Information										Comments / Remarks						
<input checked="" type="checkbox"/> 3 - 5 Business Day Rush <input type="checkbox"/> Other _____ (Days)			Approved By:		<input type="checkbox"/> Commercial "A" <input type="checkbox"/> Commercial "B" <input type="checkbox"/> Commercial "BN" <input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> Full Tier 1					<input type="checkbox"/> PDF <input type="checkbox"/> Compact Disk Deliverable <input type="checkbox"/> Electronic Delivery: <input type="checkbox"/> State Forms <input type="checkbox"/> Other (Specify)					Please use Colorado regulations and RLs.				
10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.																			
Sample Custody must be documented below each time samples change possession, including courier delivery.																			
Relinquished by:			Date & Time:		Received By:			Date & Time:		Seal #:			Headspace: Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>						
1			7/23/10		1			1											
Relinquished by:			Date & Time:		Received By:			Date & Time:		Preserved where applicable:									
2					2			2		<input type="checkbox"/>									
Relinquished by:			Date & Time:		Received By:			Date & Time:		Temperature °C _____			On Ice <input type="checkbox"/>						
3					3			3											

D15557: Chain of Custody

Page 2 of 3



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D15557

Client: AMS

Immediate Client Services Action Required: No

Date / Time Received: 7/24/2010 10:45:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project: N/A

Airbill #'s: N/A

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | Infrared gun | |
| 3. Cooler media: | Ice (bag) | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume rec'd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www.accutest.com

D15557: Chain of Custody
Page 3 of 3



GC Volatiles

QC Data Summaries

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D15557
Account: ALMS Accutest Mountain States
Project: ERMTTXH: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GWX2386-MB	WX50342.D	1	07/28/10	AF	n/a	n/a	GWX2386

The QC reported here applies to the following samples: Method: SW846 8015

D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	5.0	3.6	mg/kg	

CAS No.	Surrogate Recoveries	Limits
615-59-8	2,5-Dibromotoluene	96% 36-148%

Blank Spike Summary

Job Number: D15557
Account: ALMS Accutest Mountain States
Project: ERMTTXH: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GWX2386-BSP	WX50343.D	1	07/28/10	AF	n/a	n/a	GWX2386

The QC reported here applies to the following samples: Method: SW846 8015

D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (VOA)	20	21.6	108	67-133

CAS No.	Surrogate Recoveries	BSP	Limits
615-59-8	2,5-Dibromotoluene	100%	36-148%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D15557
Account: ALMS Accutest Mountain States
Project: ERMTTXH: Giltiam Pit Chevron/Schwake

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M93162-1MS	WX50345.D	1	07/28/10	AF	n/a	n/a	GWX2386
M93162-1MSD	WX50346.D	1	07/28/10	AF	n/a	n/a	GWX2386
M93162-1	WX50344.D	1	07/28/10	AF	n/a	n/a	GWX2386

The QC reported here applies to the following samples: Method: SW846 8015

D15557-1, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18

CAS No.	Compound	M93162-1 mg/kg	Spike Q	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	ND	21.8	23.4	107	23.2	106	1	40-154/20

CAS No.	Surrogate Recoveries	MS	MSD	M93162-1	Limits
615-59-8	2,5-Dibromotoluene	102%	101%	100%	36-148%



Misc. Forms

Custody Documents and Other Forms

(Accutest Northern California, Inc.)

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #: D15557

Accutest Quote #:

AMS P.O. #:

Project No.:

Client Information			Subcontract Laboratory Information			Analytical Information					Comments
Name	Address		Name	Address		Matrix	# of bottles	Preservation	B8270SIMPAAH		
Accutest Mountain States (AMS)	4036 Youngfield St.		Accutest - Northern California	2105 Lundy Ave.							
City	State	Zip	City	State	Zip						
Wheat Ridge,	CO	80033	San Jose	CA	95131						
Send Report to: Tiffany Pham			Contact: Sample Management								
Any questions contact: Amanda Kissell			Phone: (408) 588-0200								
Phone/Fax #: (303) 425-6021; (303) 425-6854											
Collection			Data Deliverable Information			Comments / Remarks					
Field ID / Point of Collection	Date	Time	Matrix	# of bottles	Preservation						
D15557 -1	7/22/10		Soil	1							
-2											
-3											
-4											
-5											
-6											
-7											
-8											
-9											
-10											
Turnaround Information			Data Deliverable Information			Comments / Remarks					
<input checked="" type="checkbox"/> 3 - 5 Business Day Rush <input type="checkbox"/> Other _____ (Days)			Approved By: _____			Please use Colorado regulations and RLs.					
10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.			<input type="checkbox"/> Commercial "A" <input type="checkbox"/> Commercial "B" <input checked="" type="checkbox"/> Commercial "BN" <input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> Full Tier 1			<input type="checkbox"/> PDF <input type="checkbox"/> Compact Disk Deliverable <input type="checkbox"/> Electronic Delivery: <input type="checkbox"/> State Forms <input type="checkbox"/> Other (Specify) _____					
Sample Custody must be documented below each time samples change possession, including courier delivery.						For Subcontract Laboratory Use Only					
Relinquished by: 1	Date & Time: 7/22/10	Received By: 1	Date & Time: 10:30	Seal #: _____			Headspace: Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>				
Relinquished by: 2	Date & Time: _____	Received By: 2	Date & Time: _____	Preserved where applicable: <input type="checkbox"/>			On Ice <input type="checkbox"/>				
Relinquished by: 3	Date & Time: _____	Received By: 3	Date & Time: _____	Temperature °C _____							

D15557: Chain of Custody

Page 1 of 4

Accutest Northern California, Inc.

**Accutest Mountain States Laboratory (AMS)
Subcontractor Order**

Date/Time: 7/23/10 5:41 PM
Accutest Job No. D15557
Client Project:
CSR: Amanda Kissell

Sub Lab: Accutest - Northern California
Address: 2105 Lundy Ave.
San Jose CA 95131
Contact: Sample Management
Phone: (408) 588-0200

Sample #:	Analyses
D15557 - 1	B8270SIMPAH
2	
3	
4	
5	
6	
7	
8	
9	
10	
Turn Around 3 - 5 Business Day Rush	

Sample Managment receipt:

(Print form and sign/date. Submit this form to Login Dept. with the SUB COC.)

Date: 07/24/10

e/sop_new/subform

13.1
13

D15557: Chain of Custody
Page 2 of 4



ACCUTEST®

CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #:	D15557
Accutest Quote #:	
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information										Analytical Information					Comments
Name Accutest Mountain States (AMS)			Name Accutest - Northern California										B8270SMPAH					
Address 4036 Youngfield St.			Address 2105 Lundy Ave.															
City Wheat Ridge,	State CO	Zip 80033	City San Jose	State CA	Zip 95131													
Send Report to: Tiffany Pham Any questions contact: Amanda Kissell Phone/Fax #: (303) 425-6021; (303) 425-6854			Contact: Sample Management Phone: (408) 588-0200															
Collection			Preservation															
Field ID / Point of Collection	Date	Time	Matrix	# of bottles	HCL	NaOH	HNO3	H2SO4	None									
D15557 -11	7/22/10		Soil	1								X						
-12																		
-13																		
-14																		
-15																		
-16																		
-17																		
-18																		
-19																		
Turnaround Information			Data Deliverable Information										Comments / Remarks					
<input checked="" type="checkbox"/> 3 - 5 Business Day Rush <input type="checkbox"/> Other _____ (Days)			Approved By: _____			<input type="checkbox"/> Commercial "A" <input type="checkbox"/> PDF <input type="checkbox"/> Commercial "B" <input type="checkbox"/> Compact Disk Deliverable <input type="checkbox"/> Commercial "BN" <input type="checkbox"/> Electronic Delivery: _____ <input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> State Forms <input type="checkbox"/> Full Tier 1 <input type="checkbox"/> Other (Specify) _____					Please use Colorado regulations and RLs.							
10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.																		
Sample Custody must be documented below each time samples change possession, including courier delivery.																		
Relinquished by: 1			Date & Time: 7/23/10			Received By: 1			Date & Time: 10:30			Seal #: _____			Headspace: Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>			
Relinquished by: 2			Date & Time: _____			Received By: 2			Date & Time: _____			Preserved where applicable: <input type="checkbox"/>			On Ice <input type="checkbox"/>			
Relinquished by: 3			Date & Time: _____			Received By: 3			Date & Time: _____			Temperature °C _____						

D15557: Chain of Custody

Page 3 of 4

**Accutest Mountain States Laboratory (AMS)
Subcontractor Order**

Date/Time: 7/23/10 5:42 PM
Accutest Job No. D15557
Client Project:
CSR: Amanda Kissell

Sub Lab: Accutest - Northern California
Address: 2105 Lundy Ave.
San Jose CA 95131
Contact: Sample Management
Phone: (408) 588-0200

Sample #:	Analyses
D15557 - 11	B8270SIMPAH
12	
13	
14	
15	
16	
17	
18	
0	
0	
Turn Around 3 - 5 Business Day Rush	

Sample Management receipt:

(Print form and sign/date. Submit this form to Login Dept. with the SUB COC.)

Date: 07/24/10

e/sop_new/subform

13.1
13

D15557: Chain of Custody
Page 4 of 4



Misc. Forms

Custody Documents and Other Forms

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #: D15557

Accutest Quote #:

AMS P.O. #:

Project No.:

Client Information			Subcontract Laboratory Information										Analytical Information								
Name Accutest Mountain States (AMS)			Name Accutest - New England																		
Address 4036 Youngfield St.			Address 495 Technology Center West, BLDG O																		
City Wheat Ridge,	State CO	Zip 80033	City Marlborough	State MA	Zip 01752																
Send Report to: Tiffany Pham			Contact: Sample Management																		
Any questions contact: Amanda Kissell																					
Phone/Fax #: (303) 425-6021; (303) 425-6854			Phone: (508) 481-6200																		
Field ID / Point of Collection			Collection			Matrix				# of bottles			Preservation			XCRA			Comments		
Date			Time																		
D15557 -1			7/22/10			Soil				1						X			X		
-2																					
-3																					
-4																					
-5																					
-6																					
-7																					
-8																					
-9																					
-10																					
Turnaround Information			Data Deliverable Information										Comments / Remarks								
<input checked="" type="checkbox"/> 3 - 5 Business Day Rush			Approved By: _____										<input type="checkbox"/> Commercial "A" <input type="checkbox"/> PDF								
<input type="checkbox"/> Other _____ (Days)													<input type="checkbox"/> Commercial "B" <input type="checkbox"/> Compact Disk Deliverable								
													<input type="checkbox"/> Commercial "BN" <input type="checkbox"/> Electronic Delivery: _____								
													<input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> State Forms								
10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.													<input type="checkbox"/> Full Tier 1 <input type="checkbox"/> Other (Specify) _____								
Please use Colorado regulations and RLs.																					
38																					
Sample Custody must be documented below each time samples change possession, including courier delivery.																					
Relinquished by:			Date & Time:			Received By:			Date & Time:			Seal #:			Headspace:						
1			7/22/10			1 FedEx			1						Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>						
2			7/24/10 10:45			2 J. Barry			2 7/24/10 10:45						Preserved where applicable: <input type="checkbox"/>						
3						3			3						Temperature °C 1-3 <input checked="" type="checkbox"/> On Ice <input type="checkbox"/>						

D15557: Chain of Custody

Page 1 of 3

Accutest Labs of New England, Inc.



CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #: D15557
Accutest Quote #:
AMS P.O. #:
Project No.:

Client Information			Subcontract Laboratory Information										Analytical Information						
Name Accutest Mountain States (AMS)			Name Accutest - New England										<div>XCRA</div> <div>EH</div> <div>Comments</div>						
Address 4036 Youngfield St.			Address 495 Technology Center West, BLDG O																
City Wheat Ridge,		State CO	Zip 80033	City Marlborough		State MA		Zip 01752											
Send Report to: Any questions contact: Tiffany Pham Amanda Kissell			Contact: Sample Management																
Phone/Fax #: (303) 425-6021; (303) 425-6854			Phone: (508) 481-6200																
Field ID / Point of Collection			Collection		Matrix	# of bottles	IC	NaOH	HNO3	H2SO4	None								
D15557 -11			Date	Time	Soil	1						X	X						
-12																			
-13																			
-14																			
-15																			
-16																			
-17																			
-18																			
Turnaround Information			Data Deliverable Information										Comments / Remarks						
<input checked="" type="checkbox"/> 3 - 5 Business Day Rush <input type="checkbox"/> Other _____ (Days)			Approved By:		<input type="checkbox"/> Commercial "A" <input type="checkbox"/> Commercial "B" <input type="checkbox"/> Commercial "BN" <input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> Full Tier 1		<input type="checkbox"/> PDF <input type="checkbox"/> Compact Disk Deliverable <input type="checkbox"/> Electronic Delivery: <input type="checkbox"/> State Forms <input type="checkbox"/> Other (Specify)				Please use Colorado regulations and RLs.								
10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.																			
Sample Custody must be documented below each time samples change possession, including courier delivery.																			
Relinquished by:			Date & Time:		Received By:		Date & Time:		Seal #:		Headspace: Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>								
1			7/23/10		1		1												
Relinquished by:			Date & Time:		Received By:		Date & Time:		Preserved where applicable:										
2					2		2		<input type="checkbox"/>										
Relinquished by:			Date & Time:		Received By:		Date & Time:		Temperature °C		On Ice <input type="checkbox"/>								
3					3		3												

D15557: Chain of Custody

Page 2 of 3



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D15557

Client: AMS

Immediate Client Services Action Required: No

Date / Time Received: 7/24/2010 10:45:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project: N/A

Airbill #'s: N/A

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | Infrared gun | |
| 3. Cooler media: | Ice (bag) | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume rec'd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www.accutest.com

D15557: Chain of Custody

Page 3 of 3



General Chemistry

QC Data Summaries

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D15557
Account: ALMS - Accutest Mountain States
Project: ERMTTXH: Gilttiam Pit Chevron/Schwake

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP11832/GN32444	2.0	0.0	mg/kg	40	40.5	101.3	80-120%
Chromium, Hexavalent	GP11832/GN32444			mg/kg	779	798	102.4	80-120%

Associated Samples:

Batch GP11832: D15557-1, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9

(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D15557
Account: ALMS - Accutest Mountain States
Project: ERMTTXH: Gilttiam Pit Chevron/Schwake

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP11832/GN32444	D15445-3	mg/kg	0.0	0.0	0.0	0-20%
Redox Potential Vs H2	GN32457	D15557-1	mv	288	287	0.3	0-20%

Associated Samples:

Batch GN32457: D15557-1, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9

Batch GP11832: D15557-1, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D15557
Account: ALMS - Accutest Mountain States
Project: ERMTTXH: Gilttiam Pit Chevron/Schwake

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP11832/GN32444	D15445-3	mg/kg	0.0	43.3	36.6	84.5	75-125%
Chromium, Hexavalent	GP11832/GN32444	D15445-3	mg/kg	0.0	968	1100	113.6	75-125%

Associated Samples:

Batch GP11832: D15557-1, D15557-10, D15557-11, D15557-12, D15557-13, D15557-14, D15557-15, D15557-16, D15557-17, D15557-18, D15557-2, D15557-3, D15557-4, D15557-5, D15557-6, D15557-7, D15557-8, D15557-9

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

Table 1
Summary of Soil Analytical Results
Gillham Produced Water Pit #116251

August 4, 2010
Project No. 0104362

Environmental Resources Management Southwest, Inc.
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000

Table 1
Summary of Soil Analytical Results
Gillham Pit #117251
Peetz, Colorado

		Sample ID: COGCC		B-A-1-2		B-A-2-1/2			B-A-3-1/2			B-B-1-1/2			B-B-2-2			B-B-3-2			B-B-4-2			B-B-5-2			
Analysis	Units	Limit	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	
Organic Compounds in Soil																											
Volatile Organic Compounds																											
Benzene	mg/kg	0.17	ND	0.13	0	ND	0.0063	0	ND	0.0062	0	ND	0.0058	0	ND	0.0058	0	ND	0.0059	0	ND	0.0056	0	ND	0.0056	0	
Toluene	mg/kg	85	ND	0.25	0	ND	0.013	0	ND	0.012	0	ND	0.012	0	ND	0.012	0	ND	0.012	0	ND	0.011	0	ND	0.011	0	
Ethylbenzene	mg/kg	100	ND	0.25	0	ND	0.013	0	ND	0.012	0	ND	0.012	0	ND	0.012	0	ND	0.012	0	ND	0.011	0	ND	0.011	0	
Xylenes, m,p	mg/kg	—	ND	0.5	0	ND	0.025	0	ND	0.025	0	ND	0.023	0	ND	0.023	0	ND	0.023	0	ND	0.022	0	ND	0.023	0	
Xylene, o	mg/kg	—	ND	0.25	0	ND	0.013	0	ND	0.012	0	ND	0.012	0	ND	0.012	0	ND	0.012	0	ND	0.011	0	ND	0.011	0	
Xylenes (total)	mg/kg	175	ND			ND			ND			ND			ND			ND			ND			ND			
Semivolatile Organic Compounds																											
Acenaphthene	mg/kg	1,000	ND	5.9	0	ND	12	0	ND	6.2	0	ND	5.9	0	ND	2.9	0	ND	0.24	0	ND	0.22	0	ND	0.12	0	
Acenaphthylene	mg/kg	-	ND	5.9	0	ND	12	0	ND	6.2	0	ND	5.9	0	ND	2.9	0	ND	0.24	0	ND	0.22	0	ND	0.12	0	
Anthracene	mg/kg	1,000	ND	5.9	0	ND	12	0	ND	6.2	0	ND	5.9	0	ND	2.9	0	ND	0.24	0	ND	0.22	0	ND	0.12	0	
Benzo(a)anthracene	mg/kg	0.22	0.189	0.59	J	ND	1.2	0	ND	0.62	0	ND	0.59	0	ND	0.29	0	ND	0.024	0	ND	0.022	0	ND	0.012	0	
Benzo(a)pyrene	mg/kg	0.022	0.281	0.59	J	ND	1.2	0	ND	0.62	0	ND	0.59	0	ND	0.29	0	ND	0.024	0	ND	0.022	0	ND	0.012	0	
Benzo(b)fluoranthene	mg/kg	0.22	0.443	0.59	J	ND	1.2	0	ND	0.62	0	ND	0.59	0	ND	0.29	0	ND	0.024	0	ND	0.022	0	ND	0.012	0	
Benzo(g,h,i)perylene	mg/kg	—	0.63	0.59	0	1.58	1.2	0	0.517	0.62	J	0.307	0.59	J	0.205	0.29	J	0.0262	0.024	0	0.0216	0.022	J	0.0075	0.012	J	
Benzo(k)fluoranthene	mg/kg	2.2	0.221	0.59	J	ND	1.2	0	ND	0.62	0	ND	0.59	0	ND	0.29	0	ND	0.024	0	ND	0.022	0	ND	0.012	0	
Chrysene	mg/kg	22	0.802	0.59	0	ND	1.2	0	ND	0.62	0	ND	0.59	0	ND	0.29	0	ND	0.024	0	ND	0.022	0	ND	0.012	0	
Dibenzo(a,h)anthracene	mg/kg	0.022	ND	0.59	0	ND	1.2	0	ND	0.62	0	ND	0.59	0	ND	0.29	0	ND	0.024	0	ND	0.022	0	ND	0.012	0	
Fluoranthene	mg/kg	1,000	ND	5.9	0	ND	12	0	ND	6.2	0	ND	5.9	0	ND	2.9	0	ND	0.24	0	ND	0.22	0	ND	0.12	0	
Fluorene	mg/kg	1,000	ND	5.9	0	ND	12	0	ND	6.2	0	ND	5.9	0	ND	2.9	0	ND	0.24	0	ND	0.22	0	ND	0.12	0	
Indeno(1,2,3-cd)pyrene	mg/kg	0.22	ND	0.59	0	ND	1.2	0	ND	0.62	0	ND	0.59	0	ND	0.29	0	ND	0.024	0	ND	0.022	0	ND	0.012	0	
1-Methylnaphthalene	mg/kg	—	ND	5.9	0	ND	12	0	ND	6.2	0	ND	5.9	0	ND	2.9	0	ND	0.24	0	ND	0.22	0	ND	0.12	0	
2-Methylnaphthalene	mg/kg	—	ND	5.9	0	ND	12	0	ND	6.2	0	ND	5.9	0	ND	2.9	0	ND	0.24	0	ND	0.22	0	ND	0.12	0	
Naphthalene	mg/kg	23	ND	5.9	0	ND	12	0	ND	6.2	0	ND	5.9	0	ND	2.9	0	ND	0.24	0	ND	0.22	0	ND	0.12	0	
Phenanthrene	mg/kg	—	ND	5.9	0	ND	12	0	ND	6.2	0	ND	5.9	0	ND	2.9	0	ND	0.24	0	ND	0.22	0	ND	0.12	0	
Pyrene	mg/kg	1,000	ND	5.9	0	ND	12	0	ND	6.2	0	ND	5.9	0	ND	2.9	0	ND	0.24	0	ND	0.22	0	ND	0.12	0	
Total Petroleum Hydrocarbons																											
TPH-GRO	mg/kg	—	144	6.7		31	7.5		ND	7.3		ND	6.6		ND	6.6		ND	14		ND	6.1		ND	6.3		
TPH-DRO	mg/kg	—	3,270	78		1,740	84		433	16		813	NA		250	15		43	16		39.8	15		ND	15		
TPH	mg/kg	500	3,414			1,771			433			813			250			43			39.8			ND			
Metals in Soil																											
Arsenic	mg/kg	0.39	2.8	0.41		2.5	0.41		2	0.44		1.1	0.46		1.2	0.42		1.7	0.46		0.83	0.41		2	0.36		
Barium	mg/kg	15,000	106	1		130	1		150	1.1		127	1.1		137	1.1		161	1.1		185	1		88.2	0.91		
Cadmium	mg/kg	70	<1.0	1		<1.0	1		<1.1	1.1		<1.1	1.1		<1.1	1.1		<1.1	1.1		<1.0	1		<0.91	0.91		
Chromium (total)	mg/kg	—	6.6	1		9.4	1		9.5	1.1		7.4	1.1		8.1	1.1		10.9	1.1		6.5	1		4.5	0.91		
Chromium (VI)	mg/kg	23	<2.3	2.3		<2.5	2.5		<2.4	2.4		<2.3	2.3		<2.3	2.3		<2.3	2.3		<2.2	2.2		<2.2	2.2		
Chromium (III)	mg/kg	120,000	6.1	3.3		8.7	3.5		8.7	3.5		6.7	3.4		6.9	3.4		9.3	3.4		5.2	3.2		4.5	3.1		
Copper	mg/kg	3,100	7	0.51		9.8	0.51		9	0.56		7.2	0.57		8.1	0.53		10.6	0.57		6.7	0.51		5.9	0.46		
Lead	mg/kg	400	7.9	5.1		40.4	5.1		9.5	5.6		7.4	5.7		8.3	5.3		9.9	5.7		5.9	5.1		<4.6	4.6		
Mercury	mg/kg	23	<0.074	0.074		0.09	0.07		0.1	0.078		<0.077	0.077		<0.070	0.07		<0.078	0.078		<0.073	0.073		<0.085	0.085		
Nickel	mg/kg	1,600	6.1	3.1		8.1	3.1		7	3.3		5.9	3.4		6.6	3.2		9.6	3.4		5.2	3.1		4.4	2.7		
Selenium	mg/kg	390	<5.1	5.1		<5.1	5.1		<5.6	5.6		<5.7	5.7		<5.3	5.3		<5.7	5.7		<5.1	5.1		<4.6	4.6		
Silver	mg/kg	390	<3.1	3.1		<3.1	3.1		<3.3	3.3		<3.4	3.4		<3.2	3.2		<3.4	3.4		<3.1	3.1		<2.7	2.7		
Zinc	mg/kg	23,000	20.3	3.1		27.2	3.1		26.4	3.3		18.6	3.4		21	3.2		30.3	3.4		15.9	3.1		10	2.7		
Inorganic Parameters in Soil																											
Redox Potential	mv	—	288			327			344			353			315			292			369			383			
Solids, Percent	%	—	85.5			79.7			81			86.1			86.1			85.4			90			88.5			
Solids, Percent c	%	—	85.1			81.9			81			84.9			86.3			83.8			89.7			84.2			
Specific Conductivity	umhos/cm	4,000	2,950	1		2,250	1		739	1		375	1		326	1		11,300	1		2,460	1		312	1		
pH	su	6 ≤ pH ≤ 9	8.85			8.71			9.13			9.01			9.35			9.77			9.65			9.31			
SAR Metals																											
Calcium	mg/l	—	190	2		183	2		46.2	2		29.7	2		23.8	2		97.6	2		25.5	2		47.4	2		
Magnesium	mg/l	—	12.8	1		10.3	1		3.31	1		1.45	1		1.71	1		3.58	1		1.39	1		2.37	1		
Sodium	mg/l	—	428	2		326	2		118	2		44.8	2		60.1	2		2,780	2		555	2		44.4	2		
Sodium Adsorption Ratio	ratio	12	8.1			6.34			4.52			2.18			3.2			75.2			29			1.7			

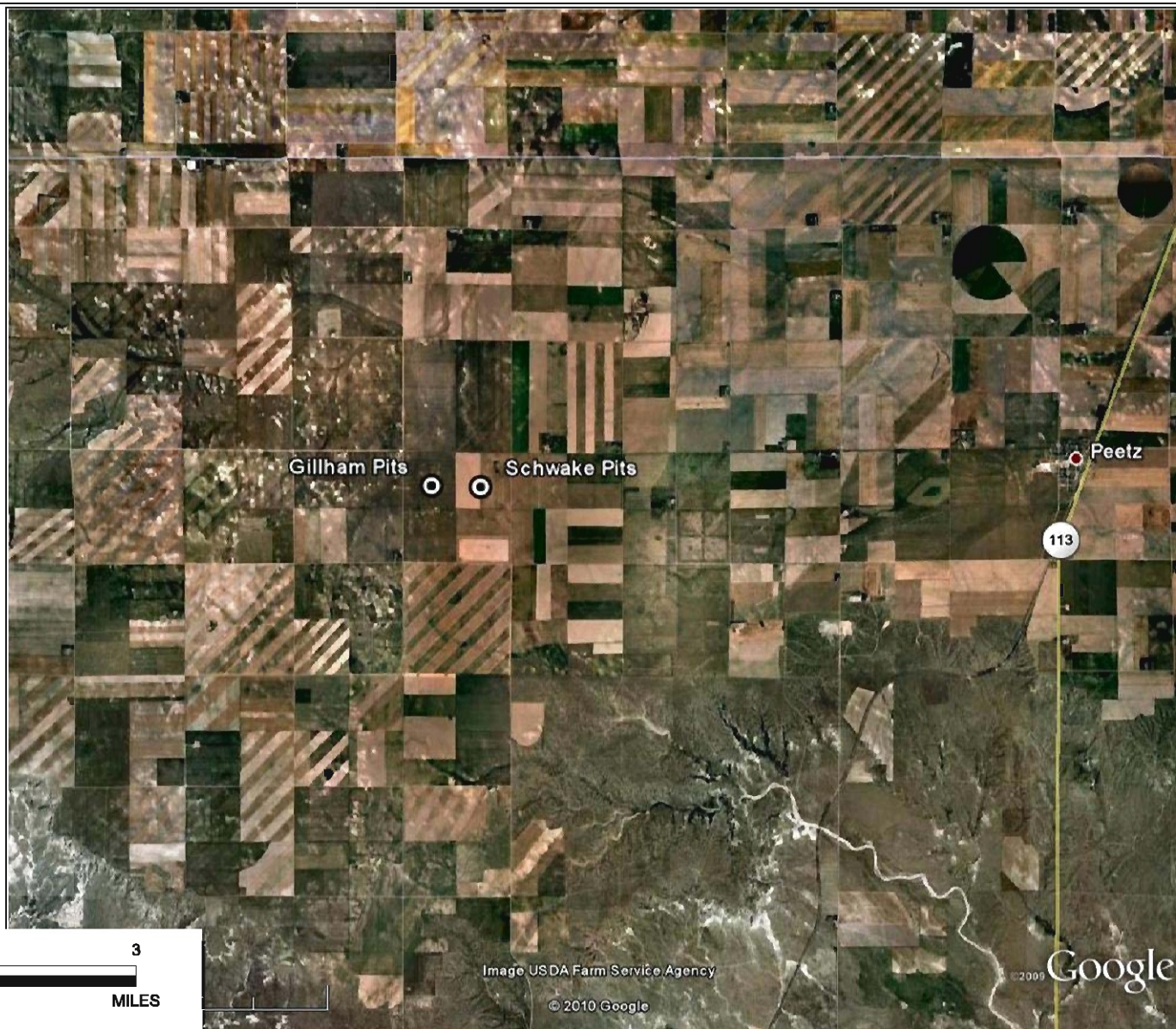
Table 1
Summary of Soil Analytical Results
Gillham Pit #117251
Peetz, Colorado

Analysis		Units	Sample ID: COGCC Limit	B-C-1-2			B-C-1-2(DUP)			B-C-2-2			B-D-1-2			B-D-1-2(DUP)			B-D-2			B-E-2			B-F-2			B-G-2			B-H-2			Summary Statistics				
				Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	Result	RL	Qual.	No. Detections	No. Outside Limits			
Organic Compounds in Soil																																						
Volatile Organic Compounds																																						
Benzene	mg/kg	0.17	ND	0.006	0	ND	0.006	0	ND	0.14	0	ND	0.0059	0	ND	0.0059	0	ND	0.0058	0	0.399	0.035	0	ND	0.0059	0	ND	0.0061	0	ND	0.0057		1	1				
Toluene	mg/kg	85	ND	0.012	0	ND	0.012	0	ND	0.27	0	ND	0.012	0	ND	0.012	0	ND	0.012	0	0.161	0.07	0	ND	0.012	0	ND	0.012	0	ND	0.011	1	0					
Ethylbenzene	mg/kg	100	ND	0.012	0	ND	0.012	0	ND	0.27	0	ND	0.012	0	ND	0.012	0	ND	0.012	0	0.304	0.07	0	ND	0.012	0	ND	0.012	0	ND	0.011	1	0					
Xylenes, m,p	mg/kg	—	ND	0.024	0	ND	0.024	0	ND	0.55	0	ND	0.023	0	ND	0.024	0	ND	0.023	0	0.633	0.14	0	ND	0.024	0	ND	0.024	0	ND	0.023	1	—					
Xylene, o	mg/kg	—	ND	0.012	0	ND	0.012	0	ND	0.27	0	ND	0.012	0	ND	0.012	0	ND	0.012	0	0.504	0.07	0	ND	0.012	0	ND	0.012	0	ND	0.011	1	—					
Xylenes (total)	mg/kg	175	ND			ND			ND			ND			ND			ND			1.137			ND			ND			ND		1	0					
Semivolatile Organic Compounds																																						
Acenaphthene	mg/kg	1,000	ND	1.2	0	ND	3	0	ND	16	0	ND	0.23	0	ND	0.23	0	ND	2.4	0	ND	13	0	ND	0.12	0	ND	0.12	0	ND	0.11		0	0				
Acenaphthylene	mg/kg	-	ND	1.2	0	ND	3	0	ND	16	0	ND	0.23	0	ND	0.23	0	ND	2.4	0	ND	13	0	ND	0.12	0	ND	0.12	0	ND	0.11		0	—				
Anthracene	mg/kg	1,000	ND	1.2	0	ND	3	0	ND	16	0	ND	0.23	0	ND	0.23	0	ND	2.4	0	ND	13	0	ND	0.12	0	ND	0.12	0	ND	0.11		0	0				
Benzo(a)anthracene	mg/kg	0.22	ND	0.12	0	ND	0.3	0	ND	1.6	0	ND	0.023	0	ND	0.023	0	ND	0.24	0	ND	1.3	0	ND	0.012	0	ND	0.012	0	0.0046	0.011	J	2	0				
Benzo(a)pyrene	mg/kg	0.022	ND	0.12	0	ND	0.3	0	0.807	1.6	J	ND	0.023	0	ND	0.023	0	ND	0.24	0	0.459	1.3	J	ND	0.012	0	ND	0.012	0	0.0062	0.011	J	4	3				
Benzo(b)fluoranthene	mg/kg	0.22	ND	0.12	0	ND	0.3	0	1.29	1.6	J	ND	0.023	0	ND	0.023	0	ND	0.24	0	0.732	1.3	J	0.0039	0.012	J	0.0038	0.012	J	0.0078	0.011	J	6	3				
Benzo(g,h,i)perylene	mg/kg	—	0.159	0.12	0	0.366	0.3	0	2.55	1.6	0	0.0132	0.023	J	0.0122	0.023	J	0.281	0.24	0	1.31	1.3	0	ND	0.012	0	ND	0.012	0	0.0111	0.011		14	—				
Benzo(k)fluoranthene	mg/kg	2.2	ND	0.12	0	ND	0.3	0	ND	1.6	0	ND	0.023	0	ND	0.023	0	ND	0.24	0	ND	1.3	0	ND	0.012	0	ND	0.012	0	0.0065	0.011	J	2	0				
Chrysene	mg/kg	22	ND	0.12	0	ND	0.3	0	2.52	1.6	0	ND	0.023	0	ND	0.023	0	ND	0.24	0	1.62	1.3	0	ND	0.012	0	ND	0.012	0	0.0062	0.011	J	4	0				
Dibenzo(a,h)anthracene	mg/kg	0.022	ND	0.12	0	ND	0.3	0	ND	1.6	0	ND	0.023	0	ND	0.023	0	ND	0.24	0	ND	1.3	0	ND	0.012	0	ND	0.012	0	0.0058	0.011	J	1	0				
Fluoranthene	mg/kg	1,000	ND	1.2	0	ND	3	0	ND	16	0	ND	0.23	0	ND	0.23	0	ND	2.4	0	ND	13	0	ND	0.12	0	ND	0.12	0	ND	0.11		0	0				
Fluorene	mg/kg	1,000	ND	1.2	0	ND	3	0	ND	16	0	ND	0.23	0	ND	0.23	0	ND	2.4	0	ND	13	0	ND	0.12	0	ND	0.12	0	ND	0.11		0	0				
Indeno(1,2,3-cd)pyrene	mg/kg	0.22	ND	0.12	0	0.0996	0.3	J	0.667	1.6	J	ND	0.023	0	ND	0.023	0	ND	0.24	0	ND	1.3	0	ND	0.012	0	ND	0.012	0	0.0075	0.011	J	2	1				
1-Methylnaphthalene	mg/kg	—	ND	1.2	0	ND	3	0	ND	16	0	ND	0.23	0	ND	0.23	0	ND	2.4	0	6.98	13	J	ND	0.12	0	ND	0.12	0	ND	0.11		1	—				
2-Methylnaphthalene	mg/kg	—	ND	1.2	0	ND	3	0	ND	16	0	ND	0.23	0	ND	0.23	0	ND	2.4	0	8.49	13	J	ND	0.12	0	ND	0.12	0	ND	0.11		1	—				
Naphthalene	mg/kg	23	ND	1.2	0	ND	3	0	ND	16	0	ND	0.23	0	ND	0.23	0	ND	2.4	0	5.14	13	J	ND	0.12	0	ND	0.12	0	ND	0.11		1	0				
Phenanthrene	mg/kg	—	ND	1.2	0	ND	3	0	ND	16	0	ND	0.23	0	ND	0.23	0	ND	2.4	0	ND	13	0	ND	0.12	0	ND	0.12	0	ND	0.11		0	—				
Pyrene	mg/kg	1,000	ND	1.2	0	ND	3	0	ND	16	0	ND	0.23	0	ND	0.23	0	ND	2.4	0	ND	13	0	ND	0.12	0	ND	0.12	0	ND	0.11		0	0				
Total Petroleum Hydrocarbons																																						
TPH-GRO	mg/kg	—	ND	7		ND	6.8			22.3	7.2		ND	6.7		ND	6.7		ND	6.5		829	9.8		ND	6.8		ND	7.1		ND	6.4		4	—			
TPH-DRO	mg/kg	—	523	80		317	79			14,900	830		37.2	16		47.8	16		205	15		11,800	200		ND	16		ND	16		43	15		13	—			
TPH	mg/kg	500	523			317				14,922			37.2			47.8			205			12,629			ND			ND			43			13	6			
Metals in Soil																																						
Arsenic	mg/kg	0.39	2.3	0.47		2.5	0.45			2.6	0.47		1.4	0.43		1.6	0.44		1.2	0.44		1.9	0.56		2.9	0.45		1.3	0.47		2.6	0.43		16	16			
Barium	mg/kg	15,000	156	1.2		168	1.1			167	1.2		202	1.1		205	1.1		106	1.1		88	1.4		136	1.1		160	1.2		140	1.1		16	0			
Cadmium	mg/kg	70	<1.2	1.2		<1.1	1.1			<1.2	1.2		<1.1	1.1		<1.1	1.1		<1.1	1.1		<1.4	1.4		<1.1	1.1		<1.2	1.2		<1.1	1.1		0	0			
Chromium (total)	mg/kg	—	11	1.2		10.1	1.1			10.8	1.2		8.9	1.1		8.7	1.1		6.1	1.1		9	1.4		9.1	1.1		9.6	1.2		8.2	1.1		16	—			
Chromium (VI)	mg/kg	23	<2.4	2.4		<2.3	2.3			<2.1	2.1		<2.3	2.3		<2.3	2.3		<2.3	2.3		<2.9	2.9		<2.4	2.4		<2.4	2.4		<2.3	2.3		0	0			
Chromium (III)	mg/kg	120,000	11	3.6		9.3	3.4			10	3.3		8.9	3.4		8.7	3.4		6.1	3.4		8.5	4.3		8.5	3.5		9	3.6		7.8	3.4		16	0			
Copper	mg/kg	3,100	9.5	0.58		10.2	0.57			10.4	0.59		8	0.54		8	0.55		5.4	0.54		12.3	0.7		8.2	0.56		8.6	0.59		7.5	0.54		16	0			
Lead	mg/kg	400	9.1	5.8		11.9	5.7			11.5	5.9		8.4	5.4		7.8	5.5		6.3	5.4		65	7		8.9	5.6		9.4	5.9		8.3	5.4		15	0			
Mercury	mg/kg	23	<0.089	0.089		<0.071	0.071			0.12	0.083		<0.077	0.077		<0.070	0.07		<0.072	0.072		0.24	0.085		<0.070	0.07		<0.069	0.069		<0.072	0.072		4	0			
Nickel	mg/kg	1,600	9.1	3.5		8.8	3.4			9	3.5		7.7	3.3		7.3	3.3		4.8	3.3		16.1	4.2		6.9	3.4		6.7	3.5		6.7	3.2		16	0			
Selenium	mg/kg	390	<5.8	5.8		<5.7	5.7			<5.9	5.9		<5.4	5.4		<5.5	5.5		<5.4	5.4		<7.0	7		<5.6	5.6		<5.9	5.9		<5.4	5.4		0	0			
Silver	mg/kg	390	<3.5	3.5		<3.4	3.4			<3.5	3.5		<3.3	3.3		<3.3	3.3		<3.3	3.3		<4.2	4.2		<3.4	3.4		<3.5	3.5		<3.2	3.2		0	0			
Zinc	mg/kg	23,000	28.3	3.5		33.8	3.4			38.9	3.5		24.2	3.3		23.6	3.3		17	3.3		58.8	4.2		26.8	3.4		27.8	3.5		23.8	3.2		16	0			
Inorganic Parameters in Soil																																						

Figures
Gillham Produced Water Pit #116251

August 4, 2010
Project No. 0104362

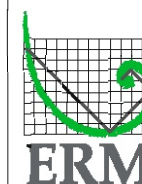
Environmental Resources Management Southwest, Inc.
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000



Environmental Resources Management

DESIGN: JLB	DRAWN: JLB	CHKD.: PAS
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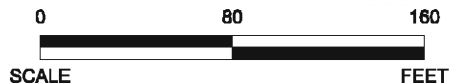
ATTACHMENT 1
 SITE LOCATION MAP
 FACILITY IDS 100305 (SCHWAKE) AND 116251 (GILLHAM)
 PEETZ WEST (68300)
 LOGAN COUNTY, CO





LEGEND

- PIT MARGINS
- TRACK LOADER SAMPLE PITS



Environmental Resources Management

DESIGN: JLB	DRAWN:	CHKD.: PAS
DATE: 7/30/2010	SCALE: AS SHOWN	REV.:
W.O. NO.: E:\DWG\0710\0109135 Attachment 2 Pit Sample Map rev1.dwg, 7/30/2010 3:13:37 PM		

ATTACHMENT 2
PIT SAMPLE LOCATION MAP
FACILITY ID 116251
PEETZ WEST (68300)
LOGAN COUNTY, CO

