

State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)694-2100 Fax: (303)694-2109



Received 7/27/2011

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 69175 4. Contact Name: Adell K. Heneghan
2. Name of Operator: Petroleum Development Corporation
3. Address: 120 N. Railroad Ave., Suite D City: Parachute State: CO Zip: 81635
5. API Number: 05-045-13758 OGCC Facility ID Number: 31B-7D
6. Well/Facility Name: Chevron 7. Well/Facility Number: 31B-7D
8. Location (Qtr/Qtr, Sec, Twp, Rng, Meridian): SENE, Section 7, T6S, R96W, 6 PM
9. County: Garfield 10. Field Name: Grand Valley
11. Federal, Indian or State Lease Number: Fee

General Notice

CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)
CHANGE SPACING UNIT: Formation, Formation Code, Spacing order number, Unit Acreage, Unit configuration
CHANGE OF OPERATOR (prior to drilling): Effective Date, Plugging Bond
CHANGE WELL NAME: From, To, Effective Date
ABANDONED LOCATION: Was location ever built? Is site ready for inspection?
NOTICE OF CONTINUED SHUT IN STATUS: Date well shut in or temporarily abandoned?
SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK: Method used, Cementing tool setting/perf depth, Cement volume, Cement top, Cement bottom, Date
RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.

Technical Engineering/Environmental Notice

Notice of Intent / Report of Work Done
Approximate Start Date: / Date Work Completed: 7/29/2010
Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)
Intent to Recomplete (submit form 2) Request to Vent or Flare E&P Waste Disposal
Change Drilling Plans Repair Well Beneficial Reuse of E&P Waste
Gross Interval Changed? Rule 502 variance requested Status Update/Change of Remediation Plans
Casing/Cementing Program Change Other: Notice of Completion/NFA for Spills and Releases

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

Signed: Adell K. Heneghan Date: July 27, 2011 Email: aheneghan@peld.com
Print Name: Adell K. Heneghan Title: Environmental Director

COGCC Approved: Ann C Eckman Title: W. Env. Super. Date: 6/9/15

CONDITIONS OF APPROVAL, IF ANY: for Alex Fischer



TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

- | | | | |
|--|-----------------------------------|-----------------------|--------------|
| 1. OGCC Operator Number: | 69175 | API Number: | 05-045-13758 |
| 2. Name of Operator: | Petroleum Development Corporation | | |
| OGCC Facility ID # | 31B-7D | | |
| 3. Well/Facility Name: | Chevron | Well/Facility Number: | 31B-7D |
| 4. Location (QtrQtr, Sec, Twp, Rng, Meridian): | SENE, Sec 7, T6S, R96W, 6 PM | | |

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

5. DESCRIBE PROPOSED OR COMPLETED OPERATIONS

Describe initial action taken

A produced water tank overflowed and ran into a ditch to a BMP area. The water did not get into the culvert. The produced water tank was drained and removed. An oil tank was also removed because of safety concerns as it was too close to the excavation. Hydrocarbon impacted soil was excavated and placed in a lined bermed containment.

Contamination migrated along the sales line and toward the separators. Separators were removed and hydrocarbon impacted soil was excavated and placed in a lined bermed containment.

Describe how source is to be removed

The wells were shut in.
The tanks, both produced water and oil, were disconnected from the separator and dump lines.
The tanks were removed from the existing containment.

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.

Excavation of hydrocarbon impacted soil was performed to a depth of approximately 20 feet below the ground surface around the produced water tank. Field screen data indicate that this area of the containment is below COGCC Table 910-1 allowable standards at this depth. Confirmation samples were collected and submitted to an accredited laboratory. Analytical results are attached.

Excavation of hydrocarbon impacted soil was performed to a depth of approximately 12 feet around the sales line and separators. Field screen data indicate that this area of the contamination is below COGCC Table 910-1 allowable standards at this depth. Confirmation samples were collected and submitted to an accredited laboratory. Analytical results are attached.

If groundwater has been impacted, describe proposed monitoring plan

There has been no evidence that groundwater has been impacted.

Describe reclamation plan

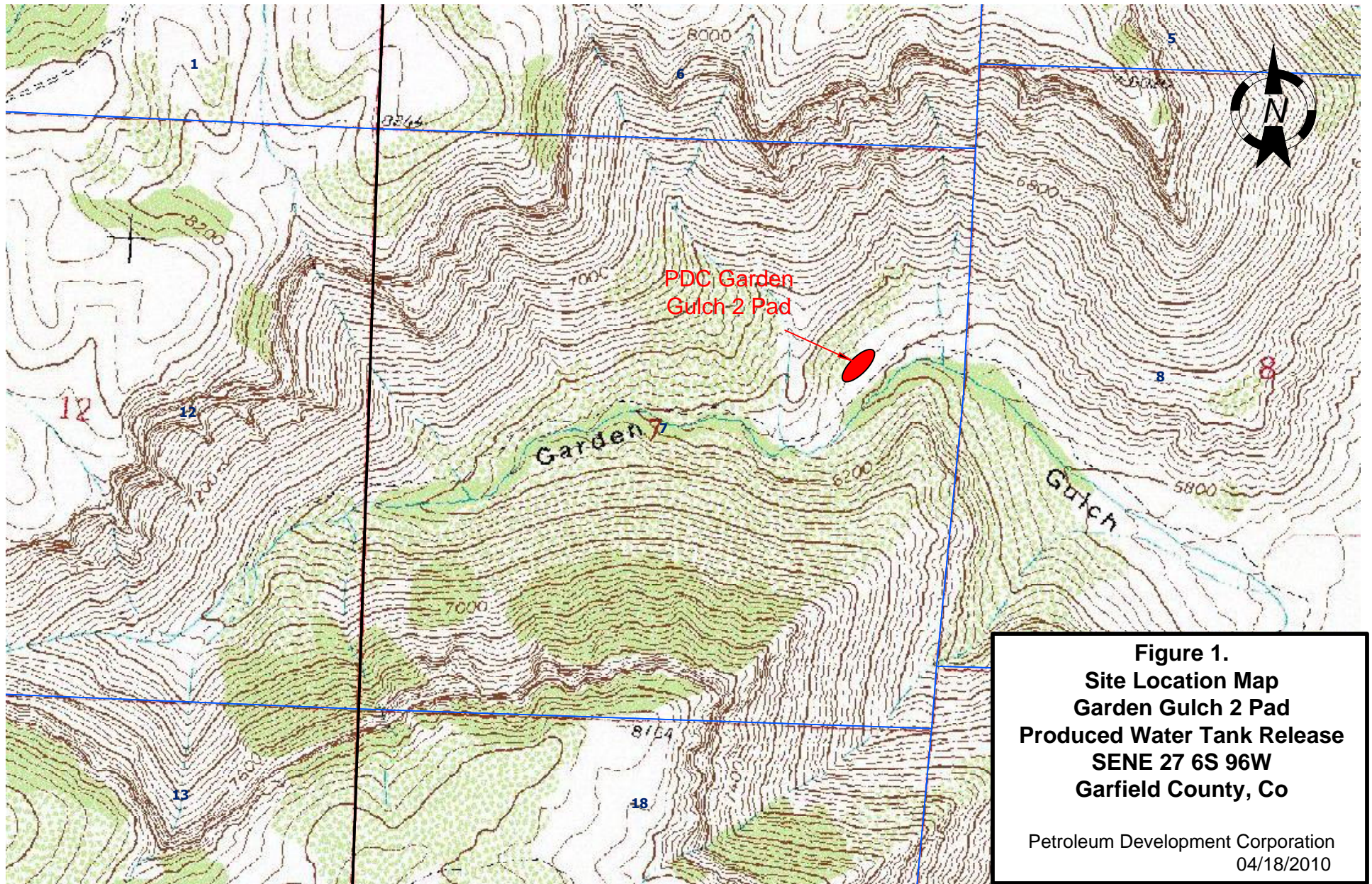
As this is a working well pad, there are currently no plans to perform reclamation on the proposed action described above. PDC constructed a new lined steel containment in the vicinity of the former containment.

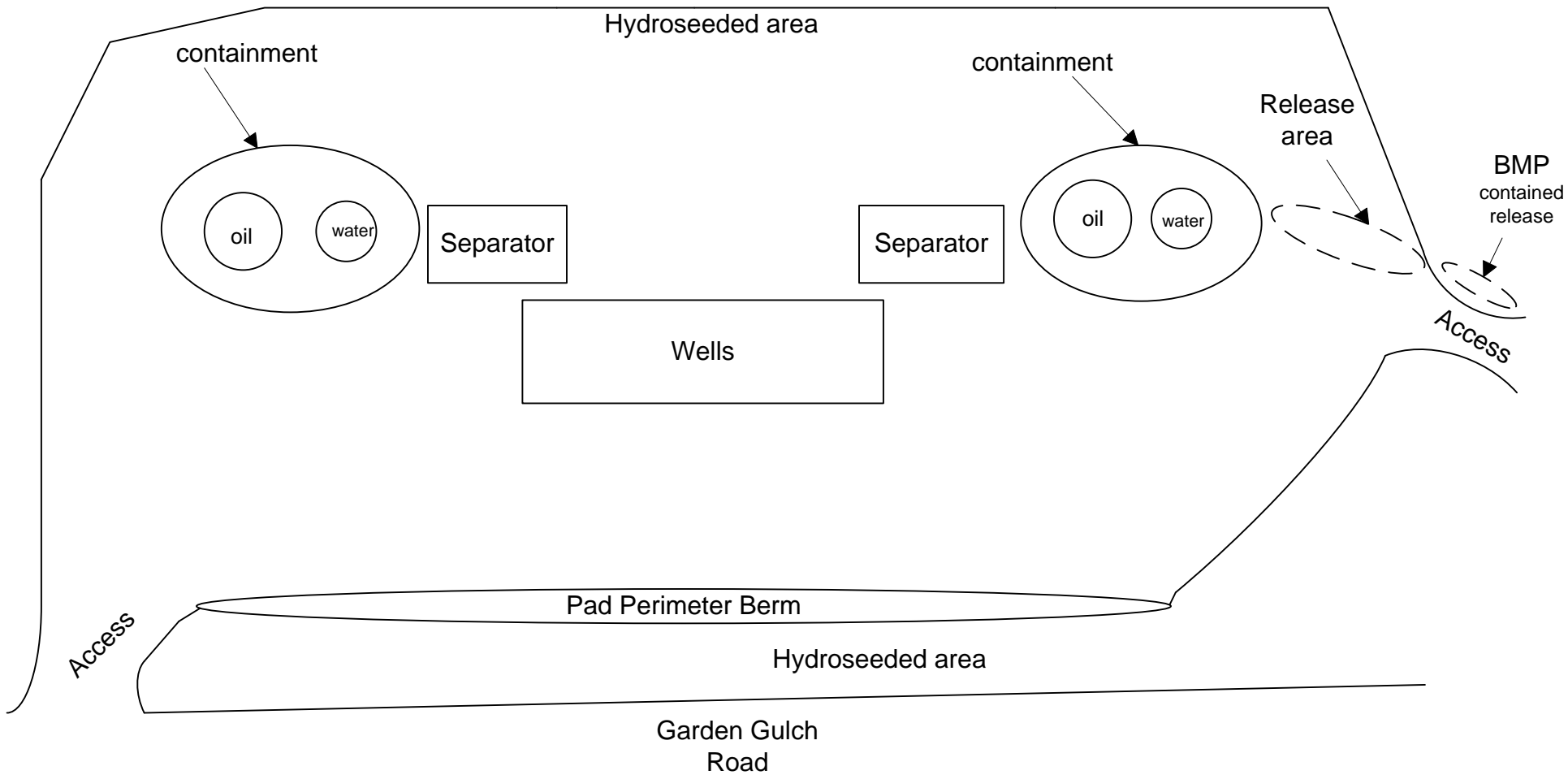
Attach samples and analytical results taken to verify remediation of impacts.

Analytical results confirming remediation of the hydrocarbon impacted area of the former containment and sales line trench are attached.

Final disposition of E&P Waste

Approximately 1050 yd³ of hydrocarbon impacted soil was disposed off site an approved disposal facility.





Waterway:
Garden Gulch ~250 ft S.

Figure 2.
Site Plan
Garden Gulch #2

Petroleum Development Corporation
NTS



Technical Report for

PDC

PDC GG2

Confirmation, Excavation

Accutest Job Number: D15517

Sampling Date: 07/16/10

Report to:

HRL Compliance Solutions Inc.
744 Horizon Court Suite 140
Grand Junction, CO 81506
hlucero@hrlcomp.com

ATTN: Herman Lucero

Total number of pages in report: **73**



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: Shea Greiner 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	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Sample Results	8
3.1: D15517-1: BOTTOM	9
3.2: D15517-1A: BOTTOM	12
3.3: D15517-2: SOUTH WALL	15
3.4: D15517-2A: SOUTH WALL	18
3.5: D15517-3: NORTH WALL	21
3.6: D15517-3A: NORTH WALL	24
Section 4: Misc. Forms	27
4.1: Chain of Custody	28
Section 5: GC/MS Semi-volatiles - QC Data Summaries	29
5.1: Method Blank Summary	30
5.2: Blank Spike Summary	31
5.3: Matrix Spike/Matrix Spike Duplicate Summary	32
Section 6: GC Semi-volatiles - QC Data Summaries	33
6.1: Method Blank Summary	34
6.2: Blank Spike Summary	35
6.3: Matrix Spike/Matrix Spike Duplicate Summary	36
Section 7: Metals Analysis - QC Data Summaries	37
7.1: Prep QC MP2439: Hg	38
7.2: Prep QC MP2443: Ba,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn	42
7.3: Prep QC MP2444: As	52
Section 8: General Chemistry - QC Data Summaries	57
8.1: Method Blank and Spike Results Summary	58
Section 9: Misc. Forms (Accutest Labs of New England, Inc.)	59
9.1: Chain of Custody	60
Section 10: GC Volatiles - QC Data (Accutest Labs of New England, Inc.)	63
10.1: Method Blank Summary	64
10.2: Blank Spike Summary	66
10.3: Blank Spike/Blank Spike Duplicate Summary	67
10.4: Matrix Spike/Matrix Spike Duplicate Summary	68
Section 11: General Chemistry - QC Data (Accutest Labs of New England, Inc.)	70
11.1: Method Blank and Spike Results Summary	71
11.2: Duplicate Results Summary	72
11.3: Matrix Spike Results Summary	73



Sample Summary

PDC

Job No: D15517

PDC GG2

Project No: Confirmation, Excavation

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D15517-1	07/16/10	11:30 CR	07/23/10	SO	Soil	BOTTOM
D15517-1A	07/16/10	11:30 CR	07/23/10	SO	Soil	BOTTOM
D15517-2	07/16/10	11:25 CR	07/23/10	SO	Soil	SOUTH WALL
D15517-2A	07/16/10	11:25 CR	07/23/10	SO	Soil	SOUTH WALL
D15517-3	07/16/10	11:20 CR	07/23/10	SO	Soil	NORTH WALL
D15517-3A	07/16/10	11:20 CR	07/23/10	SO	Soil	NORTH WALL

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: PDC

Job No D15517

Site: PDC GG2

Report Dat 8/2/2010 2:43:11 PM

On 07/23/2010, 3 sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D15517 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.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO	Batch ID: OP2227
------------------	-------------------------

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15516-4MS, D15516-4MSD were used as the QC samples indicated.
- RPD(s) for MSD for Fluoranthene, Pyrene are outside control limits for sample OP2227-MSD. High RPD due to possible sample nonhomogeneity.

Volatiles by GC By Method SW846 8015

Matrix SO	Batch ID: M:GBH744
------------------	---------------------------

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

Volatiles by GC By Method SW846 8021

Matrix SO	Batch ID: M:GAB3244
------------------	----------------------------

- The data for SW846 8021 meets quality control requirements.
- Analysis performed at Accutest Laboratories, Marlborough, MA.

Extractables by GC By Method SW846-8015B

Matrix SO	Batch ID: OP2229
------------------	-------------------------

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15518-1MS, D15518-1MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for TPH-DRO (C10-C28) are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for MSD for TPH-DRO (C10-C28) are outside control limits for sample OP2229-MSD. High RPD due to possible sample nonhomogeneity.

Metals By Method SW846 6010B

Matrix SO	Batch ID: MP2443
------------------	-------------------------

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15425-1MS, D15425-1MSD, D15425-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Cadmium, Selenium, Silver, Chromium, Lead, Nickel, Zinc are outside control limits for sample MP2443-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 6020

Matrix SO	Batch ID: MP2444
------------------	-------------------------

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15425-1MS, D15425-1MSD, D15425-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic are outside control limits for sample MP2444-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7471A

Matrix SO	Batch ID: MP2439
------------------	-------------------------

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15517-1MSD, D15517-1MS 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:GN32460
------------------	----------------------------

- The data for ASTM E1498-76M meets quality control requirements.
- The following samples were run outside of holding time for method ASTM E1498-76M: D15517-1, D15517-2, D15517-3.
- Redox Potential Vs H2: Analysis performed at Accutest Laboratories, Marlborough, MA.

Wet Chemistry By Method SM19 2540B M

Matrix SO	Batch ID: GN5516
------------------	-------------------------

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

Wet Chemistry By Method SW846 3060/7196A M

Matrix SO	Batch ID: R3526
------------------	------------------------

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

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO	Batch ID: M:GP11831
------------------	----------------------------

- 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: GN5523

- The following samples were run outside of holding time for method SW846 9045C: D15517-1, D15517-2, D15517-3.

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 D15517

Site: PDCCOP: PDC GG2

Report Date 7/29/2010 4:40:46 PM

3 Sample(s) were collected on 07/16/2010 and were received at Accutest on 07/23/2010 properly preserved, at 1.8, 2.2 Deg. C and intact. These Samples received an Accutest job number of D15517. 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: GBH744
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15314-2MS, D15314-2MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8021

Matrix SO	Batch ID: GAB3244
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D15314-1MS, D15314-1MSD were used as the QC samples indicated.

Wet Chemistry By Method ASTM E1498-76M

Matrix SO	Batch ID: GN32460
------------------	--------------------------

- Sample(s) D15516-2DUP were used as the QC samples for Redox Potential Vs H2.

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO	Batch ID: GP11831
------------------	--------------------------

- 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) D15445-1DUP, D15445-1MS were used as the QC samples for Chromium, Hexavalent.

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(D15517).



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: BOTTOM		
Lab Sample ID: D15517-1		Date Sampled: 07/16/10
Matrix: SO - Soil		Date Received: 07/23/10
Method: SW846 8270C BY SIM SW846 3540C		Percent Solids: 84.1
Project: PDC GG2		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G01600.D	2	07/28/10	TMB	07/26/10	OP2227	E3G43
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	16	15	ug/kg	
208-96-8	Acenaphthylene	ND	79	16	ug/kg	
120-12-7	Anthracene	ND	16	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	16	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	16	11	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	16	9.9	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	16	10	ug/kg	
218-01-9	Chrysene	ND	16	7.9	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	16	12	ug/kg	
206-44-0	Fluoranthene	ND	16	9.7	ug/kg	
86-73-7	Fluorene	ND	16	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	16	10	ug/kg	
90-12-0	1-Methylnaphthalene	14.5	16	14	ug/kg	J
91-57-6	2-Methylnaphthalene	32.4	79	24	ug/kg	J
91-20-3	Naphthalene	ND	79	17	ug/kg	
85-01-8	Phenanthrene	ND	16	13	ug/kg	
129-00-0	Pyrene	ND	16	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	44%		10-193%
321-60-8	2-Fluorobiphenyl	57%		20-138%
1718-51-0	Terphenyl-d14	83%		17-174%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

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: BOTTOM	Date Sampled: 07/16/10
Lab Sample ID: D15517-1	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 84.1
Project: PDC GG2	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	11.1	0.44	mg/kg	5	07/29/10	07/29/10 GJ	SW846 6020 ³	SW846 3050B ⁶
Barium	368	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Chromium	9.1	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Copper	18.8	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Lead	9.9	5.5	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Mercury	< 0.088	0.088	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ¹	SW846 3050B ⁴
Nickel	15.7	3.3	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Selenium	< 5.5	5.5	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Silver	< 3.3	3.3	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Zinc	57.9	3.3	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵

- (1) Instrument QC Batch: MA855
- (2) Instrument QC Batch: MA858
- (3) Instrument QC Batch: MA860
- (4) Prep QC Batch: MP2439
- (5) Prep QC Batch: MP2443
- (6) Prep QC Batch: MP2444

RL = Reporting Limit

Report of Analysis

Client Sample ID: BOTTOM	Date Sampled: 07/16/10
Lab Sample ID: D15517-1	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 84.1
Project: PDC GG2	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	07/27/10 12:55	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	9.1	3.4	mg/kg	1	07/29/10 18:14	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	314		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	84.1		%	1	07/23/10	SWT	SM19 2540B M
pH	9.00		su	1	07/23/10 13:55	JD	SW846 9045C

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

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

RL = Reporting Limit

Report of Analysis

32
3

Client Sample ID: BOTTOM	Date Sampled: 07/16/10
Lab Sample ID: D15517-1A	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 84.1
Method: SW846 8015	
Project: PDC GG2	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	BH14481.D	1	07/29/10	AMA	n/a	n/a	M:GBH744
Run #2							

Run #	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)	ND	6.7	4.9	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	99%		36-148%		

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

ND = Not detected	MDL - Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

Report of Analysis

32
3

Client Sample ID: BOTTOM		
Lab Sample ID: D15517-1A		Date Sampled: 07/16/10
Matrix: SO - Soil		Date Received: 07/23/10
Method: SW846 8021		Percent Solids: 84.1
Project: PDC GG2		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AB58923.D	1	07/28/10	AMA	n/a	n/a	M:GAB3244
Run #2							

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

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	67	9.3	ug/kg	
108-88-3	Toluene	27.5	67	10	ug/kg	J
100-41-4	Ethylbenzene	23.9	67	12	ug/kg	J
1330-20-7	Xylenes (total)	222	67	13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	91%		70-130%
	2,3,4-Trifluorotoluene	102%		70-130%

(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

32
3

Client Sample ID: BOTTOM	
Lab Sample ID: D15517-1A	Date Sampled: 07/16/10
Matrix: SO - Soil	Date Received: 07/23/10
Method: SW846-8015B SW846 3550B	Percent Solids: 84.1
Project: PDC GG2	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD3115.D	1	08/01/10	CP	07/27/10	OP2229	GFD147
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	53.1	16	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	103%		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

33
3

Client Sample ID:	SOUTH WALL		Date Sampled:	07/16/10
Lab Sample ID:	D15517-2		Date Received:	07/23/10
Matrix:	SO - Soil		Percent Solids:	83.7
Method:	SW846 8270C BY SIM SW846 3540C			
Project:	PDC GG2			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G01601.D	2	07/28/10	TMB	07/26/10	OP2227	E3G43
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	16	15	ug/kg	
208-96-8	Acenaphthylene	ND	80	16	ug/kg	
120-12-7	Anthracene	ND	16	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	16	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	16	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	16	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	16	10	ug/kg	
218-01-9	Chrysene	ND	16	8.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	16	12	ug/kg	
206-44-0	Fluoranthene	ND	16	9.8	ug/kg	
86-73-7	Fluorene	ND	16	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	16	10	ug/kg	
90-12-0	1-Methylnaphthalene	ND	16	14	ug/kg	
91-57-6	2-Methylnaphthalene	ND	80	24	ug/kg	
91-20-3	Naphthalene	ND	80	18	ug/kg	
85-01-8	Phenanthrene	ND	16	13	ug/kg	
129-00-0	Pyrene	ND	16	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	50%		10-193%
321-60-8	2-Fluorobiphenyl	51%		20-138%
1718-51-0	Terphenyl-d14	60%		17-174%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

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: SOUTH WALL Lab Sample ID: D15517-2 Matrix: SO - Soil Project: PDC GG2	Date Sampled: 07/16/10 Date Received: 07/23/10 Percent Solids: 83.7
--	--

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	10.5	0.45	mg/kg	5	07/29/10	07/29/10 GJ	SW846 6020 ³	SW846 3050B ⁶
Barium	443	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Chromium	8.4	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Copper	18.9	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Lead	10.3	5.6	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Mercury	< 0.082	0.082	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ¹	SW846 3050B ⁴
Nickel	16.0	3.4	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Selenium	< 5.6	5.6	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Silver	< 3.4	3.4	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Zinc	58.8	3.4	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵

- (1) Instrument QC Batch: MA855
- (2) Instrument QC Batch: MA858
- (3) Instrument QC Batch: MA860
- (4) Prep QC Batch: MP2439
- (5) Prep QC Batch: MP2443
- (6) Prep QC Batch: MP2444

RL = Reporting Limit

Report of Analysis

Client Sample ID: SOUTH WALL	
Lab Sample ID: D15517-2	Date Sampled: 07/16/10
Matrix: SO - Soil	Date Received: 07/23/10
	Percent Solids: 83.7
Project: PDC GG2	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.4	2.4	mg/kg	1	07/27/10 12:55	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.4	3.5	mg/kg	1	07/29/10 18:24	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	301		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	83.7		%	1	07/23/10	SWT	SM19 2540B M
pH	9.43		su	1	07/23/10 13:55	JD	SW846 9045C

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

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

RL = Reporting Limit

Report of Analysis

3.4
3

Client Sample ID: SOUTH WALL	
Lab Sample ID: D15517-2A	Date Sampled: 07/16/10
Matrix: SO - Soil	Date Received: 07/23/10
Method: SW846 8015	Percent Solids: 83.7
Project: PDC GG2	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	BH14482.D	1	07/29/10	AMA	n/a	n/a	M:GBH744
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	6.9	5.0	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	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

Report of Analysis

34
3

Client Sample ID: SOUTH WALL	
Lab Sample ID: D15517-2A	Date Sampled: 07/16/10
Matrix: SO - Soil	Date Received: 07/23/10
Method: SW846 8021	Percent Solids: 83.7
Project: PDC GG2	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AB58924.D	1	07/28/10	AMA	n/a	n/a	M:GAB3244
Run #2							

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

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	69	9.6	ug/kg	
108-88-3	Toluene	23.3	69	11	ug/kg	J
100-41-4	Ethylbenzene	ND	69	12	ug/kg	
1330-20-7	Xylenes (total)	115	69	13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	90%		70-130%
	2,3,4-Trifluorotoluene	103%		70-130%

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

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

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

Report of Analysis

3.4
3

Client Sample ID: SOUTH WALL	
Lab Sample ID: D15517-2A	Date Sampled: 07/16/10
Matrix: SO - Soil	Date Received: 07/23/10
Method: SW846-8015B SW846 3550B	Percent Solids: 83.7
Project: PDC GG2	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD3035.D	1	07/28/10	CP	07/27/10	OP2229	GFD144
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)	ND	16	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:	NORTH WALL		Date Sampled:	07/16/10
Lab Sample ID:	D15517-3		Date Received:	07/23/10
Matrix:	SO - Soil		Percent Solids:	84.5
Method:	SW846 8270C BY SIM SW846 3540C			
Project:	PDC GG2			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G01602.D	2	07/28/10	TMB	07/26/10	OP2227	E3G43
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	16	15	ug/kg	
208-96-8	Acenaphthylene	ND	79	16	ug/kg	
120-12-7	Anthracene	ND	16	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	15	ug/kg	
50-32-8	Benzo(a)pyrene	ND	16	9.9	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	16	11	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	16	9.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	16	9.9	ug/kg	
218-01-9	Chrysene	ND	16	7.9	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	16	12	ug/kg	
206-44-0	Fluoranthene	ND	16	9.7	ug/kg	
86-73-7	Fluorene	ND	16	15	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	16	10	ug/kg	
90-12-0	1-Methylnaphthalene	26.8	16	14	ug/kg	
91-57-6	2-Methylnaphthalene	67.5	79	24	ug/kg	J
91-20-3	Naphthalene	31.6	79	17	ug/kg	J
85-01-8	Phenanthrene	ND	16	13	ug/kg	
129-00-0	Pyrene	ND	16	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		10-193%
321-60-8	2-Fluorobiphenyl	66%		20-138%
1718-51-0	Terphenyl-d14	75%		17-174%

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: NORTH WALL	Date Sampled: 07/16/10
Lab Sample ID: D15517-3	Date Received: 07/23/10
Matrix: SO - Soil	Percent Solids: 84.5
Project: PDC GG2	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.7	0.44	mg/kg	5	07/29/10	07/29/10 GJ	SW846 6020 ³	SW846 3050B ⁶
Barium	279	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Cadmium	< 1.1	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Chromium	8.1	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Copper	16.6	1.1	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Lead	8.6	5.5	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Mercury	< 0.066	0.066	mg/kg	1	07/28/10	07/28/10 RN	SW846 7471A ¹	SW846 3050B ⁴
Nickel	14.6	3.3	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Selenium	< 5.5	5.5	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Silver	< 3.3	3.3	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵
Zinc	51.2	3.3	mg/kg	1	07/29/10	07/29/10 JM	SW846 6010B ²	SW846 3050B ⁵

- (1) Instrument QC Batch: MA855
- (2) Instrument QC Batch: MA858
- (3) Instrument QC Batch: MA860
- (4) Prep QC Batch: MP2439
- (5) Prep QC Batch: MP2443
- (6) Prep QC Batch: MP2444

RL = Reporting Limit

Report of Analysis

Client Sample ID: NORTH WALL	
Lab Sample ID: D15517-3	Date Sampled: 07/16/10
Matrix: SO - Soil	Date Received: 07/23/10
	Percent Solids: 84.5
Project: PDC GG2	

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	8.1	3.4	mg/kg	1	07/29/10 18:33	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	350		mv	1	07/28/10	AMA	ASTM E1498-76M
Solids, Percent	84.5		%	1	07/23/10	SWT	SM19 2540B M
pH	8.97		su	1	07/23/10 13:55	JD	SW846 9045C

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

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

RL = Reporting Limit

Report of Analysis

3.6
3

Client Sample ID: NORTH WALL	
Lab Sample ID: D15517-3A	Date Sampled: 07/16/10
Matrix: SO - Soil	Date Received: 07/23/10
Method: SW846 8015	Percent Solids: 84.5
Project: PDC GG2	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	BH14483.D	1	07/29/10	AMA	n/a	n/a	M:GBH744
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)	4.99	6.7	4.8	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	102%		36-148%		

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

ND = Not detected	MDL - Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: NORTH WALL	
Lab Sample ID: D15517-3A	Date Sampled: 07/16/10
Matrix: SO - Soil	Date Received: 07/23/10
Method: SW846 8021	Percent Solids: 84.5
Project: PDC GG2	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AB58925.D	1	07/28/10	AMA	n/a	n/a	M:GAB3244
Run #2							

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

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	67	9.2	ug/kg	
108-88-3	Toluene	ND	67	10	ug/kg	
100-41-4	Ethylbenzene	30.2	67	12	ug/kg	J
1330-20-7	Xylenes (total)	191	67	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	91%		70-130%
	2,3,4-Trifluorotoluene	101%		70-130%

(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: NORTH WALL	
Lab Sample ID: D15517-3A	Date Sampled: 07/16/10
Matrix: SO - Soil	Date Received: 07/23/10
Method: SW846-8015B SW846 3550B	Percent Solids: 84.5
Project: PDC GG2	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD3036.D	1	07/28/10	CP	07/27/10	OP2229	GFD144
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)	22.1	16	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	91%		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



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 HRL COMPLIANCE SOLUTIONS		Project Name POC GG 2 CONFIRMATION, EXCAVATION		DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIO - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank								LAB USE ONLY 61 02 43					
Street Address 7144 HORIZON CT SUITE 140		Street 															
City State Zip GRAND JCT CO 81506		City State Zip 															
Project Contact HERMAN WICKERO hickero@hrlcomp.com		Project # 															
Phone # Fax # 910-243-3271		Client Purchase Order # 															
Sampler(s) Name(s) CASEY RICHARDSON		Project Manager ADRELL MENEZES		Billing Information (if different from Report to) Company Name POC Street Address 130 RAILROAD AVE SUITE 0 City State Zip DENVER CO 80135 Attention: ADRELL MENEZES													
Accutest Sample #	Field ID / Point of Collection	MEOH/CI Vial #	Collection				Number of preserved bottles										
			Date	Time	Sampled by	Matrix	# of bottles	HCl	NH4Cl	HNO3	H2SO4	NONE	D Water	MEDI	ENCORE		
			7-16-10	1130	CR	SOL	2										
			1	1125	1	1	2										
	NORTH WALL																

Handwritten notes: 42, BTX, TEPH, TUPH, TOTAL METALS (TABLE 910.104), SEMI-VOLS - PAH

Turnaround Time (Business days)		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	Approved By (Accutest PM) / Date: _____ _____	<input 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	RUN TOTAL BARIUM AND NO BORON	

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: 1 CASEY RICHARDSON	Date Time: 7:20:10 (700)	Received By: 1	Relinquished By: 2	Date Time: 7/23/10	Received By: 2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	<input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not intact	Preserved where applicable <input type="checkbox"/> On Ice <input checked="" type="checkbox"/> Cooler Temp 40



GC/MS Semi-volatiles

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D15517
Account: PDCCOP PDC
Project: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2227-MB	3G01584.D	1	07/27/10	TMB	07/26/10	OP2227	E3G43

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D15517-1, D15517-2, D15517-3

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	6.7	6.2	ug/kg	
208-96-8	Acenaphthylene	ND	33	6.9	ug/kg	
120-12-7	Anthracene	ND	6.7	4.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	6.7	6.5	ug/kg	
50-32-8	Benzo(a)pyrene	ND	6.7	4.2	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	6.7	4.8	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	6.7	4.2	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	6.7	4.2	ug/kg	
218-01-9	Chrysene	ND	6.7	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	6.7	4.9	ug/kg	
206-44-0	Fluoranthene	ND	6.7	4.1	ug/kg	
86-73-7	Fluorene	ND	6.7	6.5	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	6.7	4.4	ug/kg	
90-12-0	1-Methylnaphthalene	ND	6.7	5.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	10	ug/kg	
91-20-3	Naphthalene	ND	33	7.4	ug/kg	
85-01-8	Phenanthrene	ND	6.7	5.3	ug/kg	
129-00-0	Pyrene	ND	6.7	4.5	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
4165-60-0	Nitrobenzene-d5	72%	10-193%
321-60-8	2-Fluorobiphenyl	69%	20-138%
1718-51-0	Terphenyl-d14	103%	17-174%

Blank Spike Summary

Job Number: D15517
Account: PDCCOP PDC
Project: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2227-BS	3G01585.D	1	07/27/10	TMB	07/26/10	OP2227	E3G43

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D15517-1, D15517-2, D15517-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	55.2	66	40-136
208-96-8	Acenaphthylene	83.3	54.3	65	42-139
120-12-7	Anthracene	83.3	60.9	73	40-141
56-55-3	Benzo(a)anthracene	83.3	67.0	80	38-143
50-32-8	Benzo(a)pyrene	83.3	67.6	81	39-145
205-99-2	Benzo(b)fluoranthene	83.3	63.0	76	38-151
191-24-2	Benzo(g,h,i)perylene	83.3	63.4	76	35-136
207-08-9	Benzo(k)fluoranthene	83.3	79.9	96	38-147
218-01-9	Chrysene	83.3	66.1	79	39-137
53-70-3	Dibenzo(a,h)anthracene	83.3	64.1	77	35-139
206-44-0	Fluoranthene	83.3	67.7	81	34-132
86-73-7	Fluorene	83.3	57.3	69	41-136
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	68.7	82	31-144
90-12-0	1-Methylnaphthalene	83.3	51.6	62	36-130
91-57-6	2-Methylnaphthalene	83.3	53.3	64	40-131
91-20-3	Naphthalene	83.3	55.2	66	36-130
85-01-8	Phenanthrene	83.3	60.3	72	40-135
129-00-0	Pyrene	83.3	64.5	77	29-157

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	70%	10-193%
321-60-8	2-Fluorobiphenyl	64%	20-138%
1718-51-0	Terphenyl-d14	82%	17-174%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D15517
Account: PDCCOP PDC
Project: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2227-MS	3G01593.D	2	07/27/10	TMB	07/26/10	OP2227	E3G43
OP2227-MSD	3G01598.D	2	07/28/10	TMB	07/26/10	OP2227	E3G43
D15516-4	3G01611.D	2	07/28/10	TMB	07/26/10	OP2227	E3G43

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D15517-1, D15517-2, D15517-3

CAS No.	Compound	D15516-4 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		96.1	84.8	88	70.2	73	19	20-151/30
208-96-8	Acenaphthylene	ND		96.1	82.5	86	71.7	75	14	23-156/30
120-12-7	Anthracene	ND		96.1	87.5	91	72.1	75	19	25-149/30
56-55-3	Benzo(a)anthracene	ND		96.1	91.4	95	77.6	81	16	22-157/30
50-32-8	Benzo(a)pyrene	15.0		96.1	82.6	86	72.4	75	13	23-153/30
205-99-2	Benzo(b)fluoranthene	ND		96.1	76.4	79	64.2	67	17	22-161/30
191-24-2	Benzo(g,h,i)perylene	ND		96.1	83.2	87	70.3	73	17	20-158/30
207-08-9	Benzo(k)fluoranthene	ND		96.1	82.2	86	70.3	73	16	17-161/30
218-01-9	Chrysene	8.0	J	96.1	83.5	87	75.7	79	10	16-159/30
53-70-3	Dibenzo(a,h)anthracene	ND		96.1	82.6	86	66.7	69	21	21-154/30
206-44-0	Fluoranthene	ND		96.1	103	107	70.5	73	37* a	16-140/30
86-73-7	Fluorene	29.0		96.1	109	83	104	77	5	15-153/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		96.1	109	113	82.3	86	28	21-159/30
90-12-0	1-Methylnaphthalene	27.7		96.1	103	79	129	106	22	10-148/30
91-57-6	2-Methylnaphthalene	51.5	J	96.1	128	75	128	75	0	10-181/30
91-20-3	Naphthalene	ND		96.1	87.7	91	71.3	74	21	10-176/30
85-01-8	Phenanthrene	28.2		96.1	110	85	103	78	7	22-152/30
129-00-0	Pyrene	ND		96.1	99.1	103	71.5	74	32* a	10-200/30

CAS No.	Surrogate Recoveries	MS	MSD	D15516-4	Limits
4165-60-0	Nitrobenzene-d5	81%	63%	63%	10-193%
321-60-8	2-Fluorobiphenyl	84%	74%	72%	20-138%
1718-51-0	Terphenyl-d14	112%	77%	82%	17-174%

(a) High RPD due to possible sample nonhomogeneity.

5.3.1
5



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

Job Number: D15517
Account: PDCCOP PDC
Project: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2229-MB	FD3024.D	1	07/27/10	CP	07/27/10	OP2229	GFD144

The QC reported here applies to the following samples:

Method: SW846-8015B

D15517-1A, D15517-2A, D15517-3A

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	97% 63-130%

6.1.1
6

Blank Spike Summary

Job Number: D15517
Account: PDCCOP PDC
Project: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2229-BS	FD3026.D	1	07/28/10	CP	07/27/10	OP2229	GFD144

The QC reported here applies to the following samples:

Method: SW846-8015B

D15517-1A, D15517-2A, D15517-3A

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	646	97	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	88%	63-130%

6.2.1
6

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D15517
Account: PDCCOP PDC
Project: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2229-MS	FD3060.D	1	07/29/10	CP	07/27/10	OP2229	GFD145
OP2229-MSD	FD3029.D	1	07/28/10	CP	07/27/10	OP2229	GFD144
D15518-1	FD3030.D	1	07/28/10	CP	07/27/10	OP2229	GFD144

The QC reported here applies to the following samples:

Method: SW846-8015B

D15517-1A, D15517-2A, D15517-3A

CAS No.	Compound	D15518-1 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	147	775	1230	140 ^a	860	92	35 ^b	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D15518-1	Limits
84-15-1	o-Terphenyl	129%	90%	104%	63-130%

- (a) Outside control limits due to matrix interference.
- (b) High RPD due to possible sample nonhomogeneity.

6.3.1
6



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: D15517
Account: PDCCOP - PDC
Project: PDC GG2

QC Batch ID: MP2439
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	-0.0036	<0.080

Associated samples MP2439: D15517-1, D15517-2, D15517-3

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

7.1.1
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15517
 Account: PDCCOP - PDC
 Project: PDC GG2

QC Batch ID: MP2439
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 07/28/10

Metal	D15517-1 Original MS	Spike HGWSR1	lot % Rec	QC Limits
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Mercury 0.013 0.32 0.403 76.2N(a) 85-115

Associated samples MP2439: D15517-1, D15517-2, D15517-3

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: D15517
 Account: PDCCOP - PDC
 Project: PDC GG2

QC Batch ID: MP2439
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 07/28/10

Metal	D15517-1 Original MSD	Spike HGWSR1	lot % Rec	MSD RPD	QC Limit
Mercury	0.013	0.32	0.41	74.9N(a) 0.0	20

Associated samples MP2439: D15517-1, D15517-2, D15517-3

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: D15517
 Account: PDCCOP - PDC
 Project: PDC GG2

QC Batch ID: MP2439
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 07/28/10

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.31	0.4	80.0	80-120

Associated samples MP2439: D15517-1, D15517-2, D15517-3

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

7.1.3
7

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15517
Account: PDCCOP - PDC
Project: PDC GG2

QC Batch ID: MP2443
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 07/29/10

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	0.060	<1.0
Beryllium	1.0	.14	.21		
Boron	5.0	.35	.91		
Cadmium	1.0	.022	.12	0.070	<1.0
Calcium	40	1.7	2.7		
Chromium	1.0	.027	.18	0.10	<1.0
Cobalt	0.50	.048	.058		
Copper	1.0	.16	.38	0.77	<1.0
Iron	7.0	.77	.91		
Lead	5.0	.13	.24	0.30	<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	-0.030	<3.0
Phosphorus	10	1.5	3.5		
Potassium	200	38	130		
Selenium	5.0	.28	.54	0.12	<5.0
Silicon	5.0	1.2	.68		
Silver	3.0	.098	.068	0.0	<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	0.30	<3.0

Associated samples MP2443: D15517-1, D15517-2, D15517-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15517
Account: PDCCOP - PDC
Project: PDC GG2

QC Batch ID: MP2443
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15517
 Account: PDCCOP - PDC
 Project: PDC GG2

QC Batch ID: MP2443
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 07/29/10

Metal	D15425-1 Original MS		SpikeLot MPICPALL	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium	176	337	181	88.7	75-125
Beryllium					
Boron	anr				
Cadmium	0.32	39.4	45.4	86.1	75-125
Calcium					
Chromium	15.4	57.0	45.4	91.7	75-125
Cobalt					
Copper	25.4	67.1	45.4	91.9	75-125
Iron					
Lead	10.9	88.5	90.7	85.5	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	13.0	51.9	45.4	85.7	75-125
Phosphorus					
Potassium					
Selenium	2.3	77.4	90.7	82.8	75-125
Silicon					
Silver	0.27	16.2	18.1	87.8	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	57.7	93.9	45.4	79.8	75-125

Associated samples MP2443: D15517-1, D15517-2, D15517-3

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

7.2.2
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15517
Account: PDCCOP - PDC
Project: PDC GG2

QC Batch ID: MP2443
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15517
 Account: PDCCOP - PDC
 Project: PDC GG2

QC Batch ID: MP2443
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 07/29/10

Metal	D15425-1 Original MSD		SpikeLot MPICPAL % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium	176	348	178	96.4	3.2	20
Beryllium						
Boron	anr					
Cadmium	0.32	39.9	44.6	88.7	1.3	20
Calcium						
Chromium	15.4	58.2	44.6	96.0	2.1	20
Cobalt						
Copper	25.4	69.5	44.6	98.9	3.5	20
Iron						
Lead	10.9	90.3	89.2	89.0	2.0	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	13.0	53.1	44.6	89.9	2.3	20
Phosphorus						
Potassium						
Selenium	2.3	77.7	89.2	84.5	0.4	20
Silicon						
Silver	0.27	16.5	17.8	91.0	1.8	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	57.7	97.9	44.6	90.1	4.2	20

Associated samples MP2443: D15517-1, D15517-2, D15517-3

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

7.2.2
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15517
Account: PDCCOP - PDC
Project: PDC GG2

QC Batch ID: MP2443
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15517
 Account: PDCCOP - PDC
 Project: PDC GG2

QC Batch ID: MP2443
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 07/29/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	195	200	97.5	80-120
Beryllium				
Boron	anr			
Cadmium	48.2	50	96.4	80-120
Calcium				
Chromium	51.1	50	102.2	80-120
Cobalt				
Copper	51.2	50	102.4	80-120
Iron				
Lead	98.5	100	98.5	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	48.6	50	97.2	80-120
Phosphorus				
Potassium				
Selenium	92.9	100	92.9	80-120
Silicon				
Silver	19.9	20	99.5	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	47.9	50	95.8	80-120

Associated samples MP2443: D15517-1, D15517-2, D15517-3

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

7.2.3
7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15517
Account: PDCCOP - PDC
Project: PDC GG2

QC Batch ID: MP2443
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D15517
 Account: PDCCOP - PDC
 Project: PDC GG2

QC Batch ID: MP2443
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 07/29/10

Metal	D15425-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	1920	2100	9.6	0-10
Beryllium				
Boron	anr			
Cadmium	3.50	4.50	28.6 (a)	0-10
Calcium				
Chromium	168	186	10.5*(b)	0-10
Cobalt				
Copper	278	289	3.9	0-10
Iron				
Lead	119	137	14.6*(b)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	142	163	14.8*(b)	0-10
Phosphorus				
Potassium				
Selenium	24.7	30.5	23.5 (a)	0-10
Silicon				
Silver	3.00	5.00	66.7 (a)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	631	740	17.3*(b)	0-10

Associated samples MP2443: D15517-1, D15517-2, D15517-3

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

7.2.4
7

SERIAL DILUTION RESULTS SUMMARY

Login Number: D15517
Account: PDCCOP - PDC
Project: PDC GG2

QC Batch ID: MP2443
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

- (anr) Analyte not requested
- (a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- (b) Serial dilution indicates possible matrix interference.

7.2.4

7

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D15517
Account: PDCCOP - PDC
Project: PDC GG2

QC Batch ID: MP2444
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 07/29/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.14	.89		
Antimony	0.20	.001	.045		
Arsenic	0.40	.049	.26	0.0098	<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 MP2444: D15517-1, D15517-2, D15517-3

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

7.3.1
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15517
 Account: PDCCOP - PDC
 Project: PDC GG2

QC Batch ID: MP2444
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 07/29/10

Metal	D15425-1 Original MS		SpikeLot MPICPAL % Rec	QC Limits
Aluminum				
Antimony				
Arsenic	1.7	84.6	90.7	91.4 60-119
Barium				
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium				
Cobalt				
Copper	anr			
Iron				
Lead	anr			
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium				
Selenium	anr			
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium	anr			
Vanadium				
Zinc	anr			

Associated samples MP2444: D15517-1, D15517-2, D15517-3

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

7.3.2
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D15517
 Account: PDCCOP - PDC
 Project: PDC GG2

QC Batch ID: MP2444
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 07/29/10

Metal	D15425-1 Original MSD		SpikeLot MPICPALL % Rec	MSD RPD	QC Limit	
Aluminum						
Antimony						
Arsenic	1.7	80.9	89.2	88.8	4.5	20
Barium						
Beryllium						
Boron						
Cadmium	anr					
Calcium						
Chromium						
Cobalt						
Copper	anr					
Iron						
Lead	anr					
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium						
Selenium	anr					
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium	anr					
Vanadium						
Zinc	anr					

Associated samples MP2444: D15517-1, D15517-2, D15517-3

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

7.3.2
7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D15517
 Account: PDCCOP - PDC
 Project: PDC GG2

QC Batch ID: MP2444
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 07/29/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	95.5	100	95.5	80-120
Barium				
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium				
Cobalt				
Copper	anr			
Iron				
Lead	anr			
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium				
Selenium	anr			
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium	anr			
Vanadium				
Zinc	anr			

Associated samples MP2444: D15517-1, D15517-2, D15517-3

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

7.3.3
7

SERIAL DILUTION RESULTS SUMMARY

Login Number: D15517
 Account: PDCCOP - PDC
 Project: PDC GG2

QC Batch ID: MP2444
 Matrix Type: SOLID

Methods: SW846 6020
 Units: ug/l

Prep Date: 07/29/10

Metal	D15425-1	QC	QC
	Original	SDL 5:25	%DIF Limits
Aluminum			
Antimony			
Arsenic	19.0	21.0	10.6 (a) 0-10
Barium			
Beryllium			
Boron			
Cadmium	anr		
Calcium			
Chromium			
Cobalt			
Copper	anr		
Iron			
Lead	anr		
Magnesium			
Manganese			
Molybdenum	anr		
Nickel	anr		
Phosphorus			
Potassium			
Selenium	anr		
Silver			
Sodium			
Strontium			
Thallium			
Tin			
Titanium			
Uranium	anr		
Vanadium			
Zinc	anr		

Associated samples MP2444: D15517-1, D15517-2, D15517-3

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).

7.3.4
7



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: D15517
Account: PDCCOP - PDC
Project: PDC GG2

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
pH	GN5523			su	8.00	8.00	100.0	99.3-100.7%

Associated Samples:

Batch GN5523: D15517-1, D15517-2, D15517-3

(*) Outside of QC limits

8.1

8



Misc. Forms

Custody Documents and Other Forms

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #:	D15517
Accutest Quote #:	
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information							Analytical Information						
Name Accutest Mountain States (AMS)			Name Accutest - New England							<div style="font-size: 2em; font-weight: bold;">EH</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			Phone: (508) 481-6200													
Field ID / Point of Collection	Collection		Matrix	# of bottles	Preservation					Xcra	EH			Comments		
	Date	Time			HCL	NaOH	HNO3	H2SO4	None							
D15517 -1	7/16/10	11:30 AM	Soil	1						X	X					
-2		11:25 AM	Soil	1						X	X					
-3		11:20 AM	Soil	1						X	X					
-																
-																
-																
-																
-																
-																
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. <div style="font-size: 1.5em; font-weight: bold;">3B</div>					
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	7/12/10	1 FedEx	1		Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>											
2	7/24/10 10:45	2 [Signature]	2 7/24/10 10:45		Preserved where applicable: <input type="checkbox"/>											
3		3	3		Temperature °C 22		On Ice <input type="checkbox"/>									

9.1 9



CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #:	D15517
Accutest Quote #:	
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information							Analytical Information					Comments		
Name			Name														
Accutest Mountain States (AMS)			Accutest - New England														
Address			Address														
4036 Youngfield St.			495 Technology Center West, BLDG O														
City	State	Zip	City	State	Zip												
Wheat Ridge,	CO	80033	Marlborough	MA	01752												
Send Report to:			Contact:														
Tiffany Pham			Sample Management														
Any questions contact:			Phone:														
Amanda Kissell			(508) 481-6200														
Phone/Fax #:			Phone:														
(303) 425-6021; (303) 425-6854			(508) 481-6200														
Field ID / Point of Collection	Collection		Matrix	# of bottles	Preservation						XBTXGRO						Comments
	Date	Time			HCL	NaOH	HNO3	H2SO4	None								
D15517 -1	7/16/10	11:30 AM	Soil								X						
-2		11:25 AM	Soil								X						
-3		11:20 AM	Soil								X						
Turnaround Information			Data Deliverable Information							Comments / Remarks							
<input type="checkbox"/> Approved By: _____ <input checked="" 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) _____							Please use Colorado regulations and RLs. <i>GF5</i>							
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 <i>TJP</i>	<i>7/16/10</i>	1 <i>FedEx</i>	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 <i>FedEx</i>	<i>7/16/10 10:20</i>	2 <i>[Signature]</i>	2 <i>7/28/10 10:20</i>	<input type="checkbox"/>													
Relinquished by:	Date & Time:	Received By:	Date & Time:	Temperature °C					On Ice								
3		3	3	1.8°					<input checked="" type="checkbox"/>								

9.1
9



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D15517

Client:

Immediate Client Services Action Required: No

Date / Time Received: 7/24/2010

No. Coolers:

Client Service Action Required at Login: No

Project:

Airbill #'s:

<u>Cooler Security</u>	<u>Y or N</u>			<u>Y or N</u>	
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"/>

<u>Cooler Temperature</u>	<u>Y or N</u>	
1. Temp criteria achieved:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Cooler temp verification:	Infrared gun	
3. Cooler media:	Ice (bag)	

<u>Quality Control Preservation</u>	<u>Y or N</u>		<u>N/A</u>
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 property:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y or N</u>	
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"/>

<u>Sample Integrity - Condition</u>	<u>Y or N</u>	
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	

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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

9.1
9



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: D15517
Account: ALMS Accutest Mountain States
Project: PDCCOP: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBH744-MB	BH14468.D	1	07/28/10	AP	n/a	n/a	GBH744

The QC reported here applies to the following samples:

Method: SW846 8015

D15517-1A, D15517-2A, D15517-3A

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	90% 36-148%

10.1.1
10

Method Blank Summary

Job Number: D15517
Account: ALMS Accutest Mountain States
Project: PDCCOP: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GAB3244-MB	AB58912A.D1		07/28/10	AP	n/a	n/a	GAB3244

The QC reported here applies to the following samples:

Method: SW846 8021

D15517-1A, D15517-2A, D15517-3A

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	6.9	ug/kg	
100-41-4	Ethylbenzene	ND	50	8.7	ug/kg	
108-88-3	Toluene	ND	50	7.7	ug/kg	
1330-20-7	Xylenes (total)	ND	50	9.3	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
615-59-8	2,5-Dibromotoluene	82%	70-130%
	2,3,4-Trifluorotoluene	104%	70-130%

10.1.2
10

Blank Spike Summary

Job Number: D15517
Account: ALMS Accutest Mountain States
Project: PDCCOP: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBH744-BSP	BH14469.D	1	07/28/10	AP	n/a	n/a	GBH744

The QC reported here applies to the following samples:

Method: SW846 8015

D15517-1A, D15517-2A, D15517-3A

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (VOA)	20	21.8	109	67-133

CAS No.	Surrogate Recoveries	BSP	Limits
615-59-8	2,5-Dibromotoluene	99%	36-148%

10.2.1
10

Blank Spike/Blank Spike Duplicate Summary

Job Number: D15517
Account: ALMS Accutest Mountain States
Project: PDCCOP: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GAB3244-BSP	AB58913A.D1		07/28/10	AP	n/a	n/a	GAB3244
GAB3244-BSD	AB58914A.D1		07/28/10	AP	n/a	n/a	GAB3244

The QC reported here applies to the following samples: **Method:** SW846 8021

D15517-1A, D15517-2A, D15517-3A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2500	2480	99	2460	98	1	70-130/25
100-41-4	Ethylbenzene	2500	2520	101	2500	100	1	70-130/25
108-88-3	Toluene	2500	2510	100	2490	100	1	70-130/25
1330-20-7	Xylenes (total)	7500	7570	101	7510	100	1	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
615-59-8	2,5-Dibromotoluene	87%	88%	70-130%
	2,3,4-Trifluorotoluene	109%	108%	70-130%

10.3.1
10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D15517
Account: ALMS Accutest Mountain States
Project: PDCCOP: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D15314-2MS	BH14477.D	1	07/28/10	AP	n/a	n/a	GBH744
D15314-2MSD	BH14478.D	1	07/28/10	AP	n/a	n/a	GBH744
D15314-2	BH14476.D	1	07/28/10	AP	n/a	n/a	GBH744

The QC reported here applies to the following samples:

Method: SW846 8015

D15517-1A, D15517-2A, D15517-3A

CAS No.	Compound	D15314-2 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	ND	23.2	20.1	87	20.3	88	1	40-154/20

CAS No.	Surrogate Recoveries	MS	MSD	D15314-2	Limits
615-59-8	2,5-Dibromotoluene	106%	106%	106%	36-148%

10.4.1
10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D15517
Account: ALMS Accutest Mountain States
Project: PDCCOP: PDC GG2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D15314-1MS	AB58931.D	1	07/28/10	AP	n/a	n/a	GAB3244
D15314-1MSD	AB58932.D	1	07/28/10	AP	n/a	n/a	GAB3244
D15314-1	AB58930.D	1	07/28/10	AP	n/a	n/a	GAB3244

The QC reported here applies to the following samples: **Method:** SW846 8021

D15517-1A, D15517-2A, D15517-3A

CAS No.	Compound	D15314-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	2910	2820	97	2840	97	1	70-130/30
100-41-4	Ethylbenzene	ND	2910	2870	98	2890	99	1	70-130/30
108-88-3	Toluene	ND	2910	2870	98	2880	99	0	70-130/30
1330-20-7	Xylenes (total)	ND	8740	8600	98	8650	99	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D15314-1	Limits
615-59-8	2,5-Dibromotoluene	92%	94%	96%	70-130%
	2,3,4-Trifluorotoluene	105%	106%	102%	70-130%

10.4.2
10



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: D15517
Account: ALMS - Accutest Mountain States
Project: PDCCOP: PDC GG2

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP11831/GN32443	2.0	0.0	mg/kg	40	40.8	102.0	80-120%
Chromium, Hexavalent	GP11831/GN32443			mg/kg	1010	1090	107.9	80-120%
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 GP11831: D15517-1, D15517-2

Batch GP11832: D15517-3

(*) Outside of QC limits

11.1
11

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D15517
Account: ALMS - Accutest Mountain States
Project: PDCCOP: PDC GG2

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP11831/GN32443	D15445-1	mg/kg	0.0	0.0	0.0	0-20%
Chromium, Hexavalent	GP11832/GN32444	D15445-3	mg/kg	0.0	0.0	0.0	0-20%
Redox Potential Vs H2	GN32460	D15516-2	mv	352	353	0.3	0-20%

Associated Samples:

Batch GN32460: D15517-1, D15517-2, D15517-3

Batch GP11831: D15517-1, D15517-2

Batch GP11832: D15517-3

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D15517
Account: ALMS - Accutest Mountain States
Project: PDCCOP: PDC GG2

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP11831/GN32443	D15445-1	mg/kg	0.0	41.9	37.7	90.1	75-125%
Chromium, Hexavalent	GP11831/GN32443	D15445-1	mg/kg	0.0	941	985	104.7	75-125%
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 GP11831: D15517-1, D15517-2

Batch GP11832: D15517-3

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



Technical Report for

PDC

PDC GG2 EXC 2, Sales Line

EXC2, Sales Line

Accutest Job Number: D14325

Sampling Date: 06/16/10

Report to:

HRL Compliance Solutions Inc.
744 Horizon Court Suite 140
Grand Junction, CO 81506
hlucero@hrlcomp.com

ATTN: Herman Lucero

Total number of pages in report: **66**



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: Shea Greiner 303-425-6021

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

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Test results relate only to samples analyzed.



Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Sample Results	7
3.1: D14325-1: BOTTOM-CONFIRMATION	8
3.2: D14325-2: WALLS-CONFIRMATION	14
Section 4: Misc. Forms	20
4.1: Chain of Custody	21
Section 5: GC Volatiles - QC Data Summaries	23
5.1: Method Blank Summary	24
5.2: Blank Spike Summary	26
5.3: Matrix Spike/Matrix Spike Duplicate Summary	28
Section 6: GC Semi-volatiles - QC Data Summaries	30
6.1: Method Blank Summary	31
6.2: Blank Spike Summary	32
6.3: Matrix Spike/Matrix Spike Duplicate Summary	33
Section 7: Metals Analysis - QC Data Summaries	34
7.1: Prep QC MP2108: Ba,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn	35
7.2: Prep QC MP2109: As	45
7.3: Prep QC MP2187: Hg	50
Section 8: General Chemistry - QC Data Summaries	54
8.1: Method Blank and Spike Results Summary	55
Section 9: Misc. Forms (Accutest Labs of New England, Inc.)	56
9.1: Chain of Custody	57
Section 10: GC/MS Semi-volatiles - QC Data (Accutest Labs of New England, Inc.)	59
10.1: Method Blank Summary	60
10.2: Blank Spike Summary	61
10.3: Matrix Spike/Matrix Spike Duplicate Summary	62
Section 11: General Chemistry - QC Data (Accutest Labs of New England, Inc.)	63
11.1: Method Blank and Spike Results Summary	64
11.2: Duplicate Results Summary	65
11.3: Matrix Spike Results Summary	66

1

2

3

4

5

6

7

8

9

10

11



Sample Summary

PDC

Job No: D14325

PDC GG2 EXC 2, Sales Line
Project No: EXC2, Sales Line

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D14325-1	06/16/10	13:45 CR	06/17/10	SO	Soil	BOTTOM-CONFIRMATION
D14325-2	06/16/10	13:50 CR	06/17/10	SO	Soil	WALLS-CONFIRMATION

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: PDC

Job No D14325

Site: PDC GG2 EXC 2, Sales Line

Report Dat 7/6/2010 3:59:11 PM

On 06/17/2010, 2 sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D14325 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.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO	Batch ID: M:OP21825
------------------	----------------------------

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

Volatiles by GC By Method SW846 8015B

Matrix SO	Batch ID: GGB290
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D14325-1MS, D14325-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8021B

Matrix SO	Batch ID: GTB290
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) D14325-1MS, D14325-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846-8015B

Matrix SO	Batch ID: OP2051
------------------	-------------------------

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) D14325-1MS, D14325-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010B

Matrix SO	Batch ID: MP2108
------------------	-------------------------

- All samples were digested 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) D14325-1MS, D14325-1MSD, D14325-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Cadmium, Selenium, Barium, Chromium, Copper, Lead, Nickel, Zinc are outside control limits for sample MP2108-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 6020

Matrix SO	Batch ID: MP2109
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- All samples were digested 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) D14325-1MS, D14325-1MSD, D14325-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic are outside control limits for sample MP2109-SD1. Probable cause due to sample homogeneity.

Metals By Method SW846 7471A

Matrix SO	Batch ID: MP2187
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- All samples were digested 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) D14375-1MS, D14375-1MSD were used as the QC samples for metals.

Wet Chemistry By Method ASTM E1498-76M

Matrix SO	Batch ID: M:GN32194
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- The data for ASTM E1498-76M meets quality control requirements.
- The following samples were run outside of holding time for method ASTM E1498-76M: D14325-1, D14325-2.
- Redox Potential Vs H2: Analysis performed at Accutest Laboratories, Marlborough, MA.

Wet Chemistry By Method SM19 2540B M

Matrix SO	Batch ID: GN4921
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- The data for SM19 2540B M meets quality control requirements.

Wet Chemistry By Method SW846 3060/7196A M

Matrix SO	Batch ID: R3093
------------------	------------------------

- The data for SW 846 3060/7196A M meets quality control requirements.
- Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO	Batch ID: M:GP11738
------------------	----------------------------

- The data for SW 846 3060A/7196A meets quality control requirements.
- Chromium, Hexavalent: Analysis performed at Accutest Laboratories, Marlborough, MA.

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 D14325

Site: PDCCOP: PDC-PC5 & GG2 Profile Sampling

Report Date 7/6/2010 5:29:45 PM

2 Sample(s) were collected on 06/16/2010 and were received at Accutest on 06/17/2010 properly preserved, at 1.6 Deg. C and intact. These Samples received an Accutest job number of D14325. 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: OP21825
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- All samples were extracted 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) M92336-1MS, M92336-1MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Acenaphthylene, Naphthalene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.

Wet Chemistry By Method ASTM E1498-76M

Matrix SO	Batch ID: GN32194
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- Sample(s) D14177-1DUP were used as the QC samples for Redox Potential Vs H2.

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO	Batch ID: GP11738
------------------	--------------------------

- 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) D14038-4DUP, D14038-4MS 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 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(D14325).



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	BOTTOM-CONFIRMATION		
Lab Sample ID:	D14325-1	Date Sampled:	06/16/10
Matrix:	SO - Soil	Date Received:	06/17/10
Method:	SW846 8270C BY SIM SW846 3545	Percent Solids:	85.5
Project:	PDC GG2 EXC 2, Sales Line		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	F47750.D	1	07/05/10	AMA	06/30/10	M:OP21825	M:MSF2255
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	29	0.68	ug/kg	
208-96-8	Acenaphthylene	ND	29	1.1	ug/kg	
120-12-7	Anthracene	1.2	29	0.94	ug/kg	J
56-55-3	Benzo(a)anthracene	2.1	29	0.72	ug/kg	J
50-32-8	Benzo(a)pyrene	ND	29	0.84	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	29	0.71	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	29	2.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	29	1.1	ug/kg	
218-01-9	Chrysene	1.7	29	0.90	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	29	1.7	ug/kg	
206-44-0	Fluoranthene	1.8	29	0.93	ug/kg	J
86-73-7	Fluorene	ND	29	0.51	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	29	1.5	ug/kg	
91-57-6	2-Methylnaphthalene	5.2	29	1.3	ug/kg	J
91-20-3	Naphthalene	3.7	29	1.3	ug/kg	J
85-01-8	Phenanthrene	2.2	29	1.1	ug/kg	J
129-00-0	Pyrene	ND	29	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	30%		30-130%
321-60-8	2-Fluorobiphenyl	30%		30-130%
1718-51-0	Terphenyl-d14	37%		30-130%

(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

3.1
3

Client Sample ID: BOTTOM-CONFIRMATION	
Lab Sample ID: D14325-1	Date Sampled: 06/16/10
Matrix: SO - Soil	Date Received: 06/17/10
Method: SW846 8015B	Percent Solids: 85.5
Project: PDC GG2 EXC 2, Sales Line	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB5324.D	1	06/22/10	DG	n/a	n/a	GGB290
Run #2							

	Initial Weight
Run #1	1.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	1.2	1.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	107%		60-140%		

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

3.1
3

Client Sample ID: BOTTOM-CONFIRMATION	
Lab Sample ID: D14325-1	Date Sampled: 06/16/10
Matrix: SO - Soil	Date Received: 06/17/10
Method: SW846 8021B	Percent Solids: 85.5
Project: PDC GG2 EXC 2, Sales Line	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5324.D	1	06/22/10	DG	n/a	n/a	GTB290
Run #2							

Run #	Initial Weight
Run #1	1.0 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.8	5.8	ug/kg	
108-88-3	Toluene	17.5	12	12	ug/kg	
100-41-4	Ethylbenzene	ND	12	12	ug/kg	
	m,p-Xylene	13.3	12	12	ug/kg	
95-47-6	o-Xylene	ND	12	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	107%		60-140%

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

3.1
3

Client Sample ID: BOTTOM-CONFIRMATION	
Lab Sample ID: D14325-1	Date Sampled: 06/16/10
Matrix: SO - Soil	Date Received: 06/17/10
Method: SW846-8015B SW846 3550B	Percent Solids: 85.5
Project: PDC GG2 EXC 2, Sales Line	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2213.D	1	06/23/10	CP	06/21/10	OP2051	GFD126
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)	ND	16	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	97%		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

31
3

Client Sample ID: BOTTOM-CONFIRMATION	Date Sampled: 06/16/10
Lab Sample ID: D14325-1	Date Received: 06/17/10
Matrix: SO - Soil	Percent Solids: 85.5
Project: PDC GG2 EXC 2, Sales Line	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	8.2	0.35	mg/kg	5	06/18/10	06/21/10 JM	SW846 6020 ³	SW846 3050B ⁶
Barium	257	0.87	mg/kg	1	06/18/10	06/19/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 0.87	0.87	mg/kg	1	06/18/10	06/19/10 JM	SW846 6010B ²	SW846 3050B ⁵
Chromium	7.1	0.87	mg/kg	1	06/18/10	06/21/10 JM	SW846 6010B ²	SW846 3050B ⁵
Copper	14.8	0.43	mg/kg	1	06/18/10	06/19/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Lead	8.3	4.3	mg/kg	1	06/18/10	06/21/10 JM	SW846 6010B ²	SW846 3050B ⁵
Mercury	< 0.12	0.12	mg/kg	1	06/28/10	06/28/10 RN	SW846 7471A ⁴	SW846 7471A ⁷
Nickel	13.8	2.6	mg/kg	1	06/18/10	06/21/10 JM	SW846 6010B ²	SW846 3050B ⁵
Selenium	< 4.3	4.3	mg/kg	1	06/18/10	06/21/10 JM	SW846 6010B ²	SW846 3050B ⁵
Silver	< 2.6	2.6	mg/kg	1	06/18/10	06/19/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	52.4	2.6	mg/kg	1	06/18/10	06/21/10 JM	SW846 6010B ²	SW846 3050B ⁵

- (1) Instrument QC Batch: MA762
- (2) Instrument QC Batch: MA764
- (3) Instrument QC Batch: MA765
- (4) Instrument QC Batch: MA781
- (5) Prep QC Batch: MP2108
- (6) Prep QC Batch: MP2109
- (7) Prep QC Batch: MP2187

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BOTTOM-CONFIRMATION	
Lab Sample ID:	D14325-1	Date Sampled: 06/16/10
Matrix:	SO - Soil	Date Received: 06/17/10
Project:	PDC GG2 EXC 2, Sales Line	Percent Solids: 85.5

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	06/22/10 12:55	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	7.1	3.2	mg/kg	1	06/22/10 12:55	AMA	SW846 3060/7196A M
Redox Potential Vs H2 ^a	329		mv	1	06/21/10	AMA	ASTM E1498-76M
Solids, Percent	85.5		%	1	06/18/10	SWT	SM19 2540B M
pH	9.84		su	1	06/17/10 13:40	CJ	SW846 9045C

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

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

RL = Reporting Limit

Report of Analysis

32
3

Client Sample ID:	WALLS-CONFIRMATION		
Lab Sample ID:	D14325-2	Date Sampled:	06/16/10
Matrix:	SO - Soil	Date Received:	06/17/10
Method:	SW846 8270C BY SIM SW846 3545	Percent Solids:	86.9
Project:	PDC GG2 EXC 2, Sales Line		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	F47751.D	1	07/05/10	AMA	06/30/10	M:OP21825	M:MSF2255
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	29	0.67	ug/kg	
208-96-8	Acenaphthylene	ND	29	1.1	ug/kg	
120-12-7	Anthracene	ND	29	0.93	ug/kg	
56-55-3	Benzo(a)anthracene	ND	29	0.71	ug/kg	
50-32-8	Benzo(a)pyrene	ND	29	0.83	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	29	0.70	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	29	2.2	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	29	1.1	ug/kg	
218-01-9	Chrysene	ND	29	0.88	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	29	1.7	ug/kg	
206-44-0	Fluoranthene	ND	29	0.91	ug/kg	
86-73-7	Fluorene	ND	29	0.50	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	29	1.5	ug/kg	
91-57-6	2-Methylnaphthalene	540	29	1.2	ug/kg	
91-20-3	Naphthalene	149	29	1.3	ug/kg	
85-01-8	Phenanthrene	13.2	29	1.1	ug/kg	J
129-00-0	Pyrene	ND	29	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	38%		30-130%
321-60-8	2-Fluorobiphenyl	36%		30-130%
1718-51-0	Terphenyl-d14	45%		30-130%

(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

32
3

Client Sample ID: WALLS-CONFIRMATION	
Lab Sample ID: D14325-2	Date Sampled: 06/16/10
Matrix: SO - Soil	Date Received: 06/17/10
Method: SW846 8015B	Percent Solids: 86.9
Project: PDC GG2 EXC 2, Sales Line	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB5327.D	1	06/22/10	DG	n/a	n/a	GGB290
Run #2							

	Initial Weight
Run #1	1.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	15.1	1.2	1.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	138%		60-140%		

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

32
3

Client Sample ID: WALLS-CONFIRMATION	
Lab Sample ID: D14325-2	Date Sampled: 06/16/10
Matrix: SO - Soil	Date Received: 06/17/10
Method: SW846 8021B	Percent Solids: 86.9
Project: PDC GG2 EXC 2, Sales Line	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5327.D	1	06/22/10	DG	n/a	n/a	GTB290
Run #2							

Run #	Initial Weight
Run #1	1.0 g
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.8	5.8	ug/kg	
108-88-3	Toluene	88.4	12	12	ug/kg	
100-41-4	Ethylbenzene	20.7	12	12	ug/kg	
	m,p-Xylene	918	12	12	ug/kg	
95-47-6	o-Xylene	510	12	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	118%		60-140%

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

32
3

Client Sample ID: WALLS-CONFIRMATION	
Lab Sample ID: D14325-2	Date Sampled: 06/16/10
Matrix: SO - Soil	Date Received: 06/17/10
Method: SW846-8015B SW846 3550B	Percent Solids: 86.9
Project: PDC GG2 EXC 2, Sales Line	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD2225.D	1	06/23/10	CP	06/21/10	OP2051	GFD126
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)	187	15	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	85%		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

32
3

Client Sample ID: WALLS-CONFIRMATION	Date Sampled: 06/16/10
Lab Sample ID: D14325-2	Date Received: 06/17/10
Matrix: SO - Soil	Percent Solids: 86.9
Project: PDC GG2 EXC 2, Sales Line	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.5	0.35	mg/kg	5	06/18/10	06/21/10 JM	SW846 6020 ³	SW846 3050B ⁶
Barium	241	0.87	mg/kg	1	06/18/10	06/19/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Cadmium	< 0.87	0.87	mg/kg	1	06/18/10	06/19/10 JM	SW846 6010B ²	SW846 3050B ⁵
Chromium	7.9	0.87	mg/kg	1	06/18/10	06/21/10 JM	SW846 6010B ²	SW846 3050B ⁵
Copper	15.7	0.44	mg/kg	1	06/18/10	06/19/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Lead	9.1	4.4	mg/kg	1	06/18/10	06/21/10 JM	SW846 6010B ²	SW846 3050B ⁵
Mercury	< 0.11	0.11	mg/kg	1	06/28/10	06/28/10 RN	SW846 7471A ⁴	SW846 7471A ⁷
Nickel	14.8	2.6	mg/kg	1	06/18/10	06/21/10 JM	SW846 6010B ²	SW846 3050B ⁵
Selenium	< 4.4	4.4	mg/kg	1	06/18/10	06/21/10 JM	SW846 6010B ²	SW846 3050B ⁵
Silver	< 2.6	2.6	mg/kg	1	06/18/10	06/19/10 JM	SW846 6010B ¹	SW846 3050B ⁵
Zinc	56.6	2.6	mg/kg	1	06/18/10	06/21/10 JM	SW846 6010B ²	SW846 3050B ⁵

- (1) Instrument QC Batch: MA762
- (2) Instrument QC Batch: MA764
- (3) Instrument QC Batch: MA765
- (4) Instrument QC Batch: MA781
- (5) Prep QC Batch: MP2108
- (6) Prep QC Batch: MP2109
- (7) Prep QC Batch: MP2187

RL = Reporting Limit

Report of Analysis

32
3

Client Sample ID: WALLS-CONFIRMATION	Date Sampled: 06/16/10
Lab Sample ID: D14325-2	Date Received: 06/17/10
Matrix: SO - Soil	Percent Solids: 86.9
Project: PDC GG2 EXC 2, Sales Line	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.2	2.2	mg/kg	1	06/22/10 12:55	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	7.6	3.1	mg/kg	1	06/22/10 12:55	AMA	SW846 3060/7196A M
Redox Potential Vs H2 ^a	358		mv	1	06/21/10	AMA	ASTM E1498-76M
Solids, Percent	86.9		%	1	06/18/10	SWT	SM19 2540B M
pH	9.84		su	1	06/17/10 13:40	CJ	SW846 9045C

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

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

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D14325

Client: HRL

Immediate Client Services Action Required: No

Date / Time Received: 6/17/2010 9:15:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project: EXC 2

Airbill #'s: fedex

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:			Infrared gun
3. Cooler media:			Ice (bag)

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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 property:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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

Empty box for comments.

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4.1
4



GC Volatiles

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D14325
Account: PDCCOP PDC
Project: PDC GG2 EXC 2, Sales Line

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB290-MB	GB5322.D	1	06/22/10	DG	n/a	n/a	GGB290

The QC reported here applies to the following samples:

Method: SW846 8015B

D14325-1, D14325-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	1.0	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	96% 60-140%

Method Blank Summary

Job Number: D14325
Account: PDCCOP PDC
Project: PDC GG2 EXC 2, Sales Line

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB290-MB	TB5322.D	1	06/22/10	DG	n/a	n/a	GTB290

The QC reported here applies to the following samples:

Method: SW846 8021B

D14325-1, D14325-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	5.0	ug/kg	
100-41-4	Ethylbenzene	ND	10	10	ug/kg	
108-88-3	Toluene	ND	10	10	ug/kg	
95-47-6	o-Xylene	ND	10	10	ug/kg	
	m,p-Xylene	ND	10	10	ug/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	93% 60-140%

5.1.2
5

Blank Spike Summary

Job Number: D14325
Account: PDCCOP PDC
Project: PDC GG2 EXC 2, Sales Line

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB290-BS	GB5323.D	1	06/22/10	DG	n/a	n/a	GGB290

The QC reported here applies to the following samples:

Method: SW846 8015B

D14325-1, D14325-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	11	9.85	90	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	121%	60-140%

5.2.1
5

Blank Spike Summary

Job Number: D14325
Account: PDCCOP PDC
Project: PDC GG2 EXC 2, Sales Line

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB290-BS	TB5323.D	1	06/22/10	DG	n/a	n/a	GTB290

The QC reported here applies to the following samples:

Method: SW846 8021B

D14325-1, D14325-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	136	126	93	70-130
100-41-4	Ethylbenzene	228	213	93	70-130
108-88-3	Toluene	1060	1090	103	70-130
95-47-6	o-Xylene	330	325	99	70-130
	m,p-Xylene	750	776	103	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	128%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D14325
Account: PDCCOP PDC
Project: PDC GG2 EXC 2, Sales Line

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D14325-1MS	GB5325.D	1	06/22/10	DG	n/a	n/a	GGB290
D14325-1MSD	GB5326.D	1	06/22/10	DG	n/a	n/a	GGB290
D14325-1	GB5324.D	1	06/22/10	DG	n/a	n/a	GGB290

The QC reported here applies to the following samples:

Method: SW846 8015B

D14325-1, D14325-2

CAS No.	Compound	D14325-1 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	12.9	8.81	68	9.07	70	3	62-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D14325-1	Limits
120-82-1	1,2,4-Trichlorobenzene	123%	123%	107%	60-140%

5.3.1
5

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D14325
Account: PDCCOP PDC
Project: PDC GG2 EXC 2, Sales Line

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D14325-1MS	TB5325.D	1	06/22/10	DG	n/a	n/a	GTB290
D14325-1MSD	TB5326.D	1	06/22/10	DG	n/a	n/a	GTB290
D14325-1	TB5324.D	1	06/22/10	DG	n/a	n/a	GTB290

The QC reported here applies to the following samples:

Method: SW846 8021B

D14325-1, D14325-2

CAS No.	Compound	D14325-1 ug/kg	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	159	127	80	130	82	2	70-130/30
100-41-4	Ethylbenzene	ND	267	194	73	204	77	5	62-130/30
108-88-3	Toluene	17.5	1240	1010	80	1060	84	5	70-130/30
95-47-6	o-Xylene	ND	385	297	77	315	82	6	65-135/30
	m,p-Xylene	13.3	877	689	77	742	83	7	60-140/30

CAS No.	Surrogate Recoveries	MS	MSD	D14325-1	Limits
120-82-1	1,2,4-Trichlorobenzene	123%	123%		60-140%
120-82-1	1,2,4-Trichlorobenzene			107%	60-140%

5.3.2
5



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

Job Number: D14325
Account: PDCCOP PDC
Project: PDC GG2 EXC 2, Sales Line

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2051-MB	FD2211.D	1	06/23/10	CP	06/21/10	OP2051	GFD126

The QC reported here applies to the following samples:

Method: SW846-8015B

D14325-1, D14325-2

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	100% 63-130%

Blank Spike Summary

Job Number: D14325
Account: PDCCOP PDC
Project: PDC GG2 EXC 2, Sales Line

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2051-BS	FD2212.D	1	06/23/10	CP	06/21/10	OP2051	GFD126

The QC reported here applies to the following samples:

Method: SW846-8015B

D14325-1, D14325-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	593	89	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	90%	63-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D14325
Account: PDCCOP PDC
Project: PDC GG2 EXC 2, Sales Line

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2051-MS	FD2214.D	1	06/23/10	CP	06/21/10	OP2051	GFD126
OP2051-MSD	FD2215.D	1	06/23/10	CP	06/21/10	OP2051	GFD126
D14325-1	FD2213.D	1	06/23/10	CP	06/21/10	OP2051	GFD126

The QC reported here applies to the following samples:

Method: SW846-8015B

D14325-1, D14325-2

CAS No.	Compound	D14325-1 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND	777	842	108	819	105	3	70-130/30	

CAS No.	Surrogate Recoveries	MS	MSD	D14325-1	Limits
84-15-1	o-Terphenyl	105%	106%	97%	63-130%

6.3.1
6



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: D14325
Account: PDCCOP - PDC
Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2108
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 06/18/10

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	0.020	<1.0
Beryllium	1.0	.14	.21		
Boron	5.0	.35	.91		
Cadmium	1.0	.022	.12	0.040	<1.0
Calcium	40	1.7	2.7		
Chromium	1.0	.027	.18	0.040	<1.0
Cobalt	0.50	.048	.058		
Copper	0.50	.16	.38	-0.010	<0.50
Iron	7.0	.77	.91		
Lead	5.0	.13	.24	-0.010	<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	0.010	<3.0
Phosphorus	10	1.5	3.5		
Potassium	200	38	130		
Selenium	5.0	.28	.54	-0.020	<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	0.30	<3.0

Associated samples MP2108: D14325-1, D14325-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

7.1.1
7

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D14325
Account: PDCCOP - PDC
Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2108
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14325
 Account: PDCCOP - PDC
 Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2108
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 06/18/10

Metal	D14325-1 Original MS		SpikeLot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	257	409	173	87.7	75-125
Beryllium					
Boron					
Cadmium	0.53	39.0	43.3	88.8	75-125
Calcium					
Chromium	7.1	44.7	43.3	86.8	75-125
Cobalt					
Copper	14.8	57.9	43.3	99.5	75-125
Iron					
Lead	8.3	78.3	86.6	80.8	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	13.8	48.7	43.3	80.6	75-125
Phosphorus					
Potassium					
Selenium	1.7	72.6	86.6	81.8	75-125
Silicon					
Silver	0.0	15.9	17.3	91.8	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	52.4	90.2	43.3	87.3	75-125

Associated samples MP2108: D14325-1, D14325-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

7.1.2
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14325
Account: PDCCOP - PDC
Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2108
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14325
 Account: PDCCOP - PDC
 Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2108
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 06/18/10

Metal	D14325-1 Original MSD		SpikeLot MPICPAL % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	257	422	173	95.2	3.1	20
Beryllium						
Boron						
Cadmium	0.53	39.2	43.3	89.3	0.5	20
Calcium						
Chromium	7.1	44.8	43.3	87.0	0.2	20
Cobalt						
Copper	14.8	58.6	43.3	101.1	1.2	20
Iron						
Lead	8.3	77.9	86.6	80.3	0.5	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	13.8	48.3	43.3	79.6	0.8	20
Phosphorus						
Potassium						
Selenium	1.7	72.4	86.6	81.6	0.3	20
Silicon						
Silver	0.0	16.3	17.3	94.1	2.5	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	52.4	87.8	43.3	81.7	2.7	20

Associated samples MP2108: D14325-1, D14325-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

7.1.2
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14325
Account: PDCCOP - PDC
Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2108
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14325
 Account: PDCCOP - PDC
 Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2108
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 06/18/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	201	200	100.5	80-120
Beryllium				
Boron				
Cadmium	49.8	50	99.6	80-120
Calcium				
Chromium	49.9	50	99.8	80-120
Cobalt				
Copper	50.5	50	101.0	80-120
Iron				
Lead	96.2	100	96.2	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	47.6	50	95.2	80-120
Phosphorus				
Potassium				
Selenium	90.1	100	90.1	80-120
Silicon				
Silver	20.5	20	102.5	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	46.9	50	93.8	80-120

Associated samples MP2108: D14325-1, D14325-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

7.1.3
7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14325
Account: PDCCOP - PDC
Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2108
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D14325
 Account: PDCCOP - PDC
 Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2108
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 06/18/10

Metal	D14325-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	2970	3690	24.2*(a)	0-10
Beryllium				
Boron				
Cadmium	6.10	7.50	23.0 (b)	0-10
Calcium				
Chromium	89.6	103	24.7*(a)	0-10
Cobalt				
Copper	171	200	16.7*(a)	0-10
Iron				
Lead	105	116	20.5*(a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	174	209	30.5*(a)	0-10
Phosphorus				
Potassium				
Selenium	28.1	50.0	150.0(b)	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	692	805	33.1*(a)	0-10

Associated samples MP2108: D14325-1, D14325-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

7.1.4
7

SERIAL DILUTION RESULTS SUMMARY

Login Number: D14325
Account: PDCCOP - PDC
Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2108
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference.

(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D14325
Account: PDCCOP - PDC
Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2109
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 06/18/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.14	.89		
Antimony	0.20	.001	.045		
Arsenic	0.40	.049	.26	-0.10	<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 MP2109: D14325-1, D14325-2

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

7.2.1
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14325
 Account: PDCCOP - PDC
 Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2109
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 06/18/10

Metal	D14325-1 Original MS		SpikeLot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic	8.2	85.6	86.6	89.3	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 MP2109: D14325-1, D14325-2

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

7.2.2
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14325
 Account: PDCCOP - PDC
 Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2109
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 06/18/10

Metal	D14325-1 Original MSD		SpikeLot MPICPAL % Rec	MSD RPD	QC Limit	
Aluminum						
Antimony						
Arsenic	8.2	87.2	86.6	91.2	1.9	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 MP2109: D14325-1, D14325-2

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

7.2.2
7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14325
 Account: PDCCOP - PDC
 Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2109
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 06/18/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	102	100	102.0	80-120
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 MP2109: D14325-1, D14325-2

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

7.2.3
7

SERIAL DILUTION RESULTS SUMMARY

Login Number: D14325
 Account: PDCCOP - PDC
 Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2109
 Matrix Type: SOLID

Methods: SW846 6020
 Units: ug/l

Prep Date: 06/18/10

Metal	D14325-1	QC
	Original	Limits

Metal	Original	SDL	5:25 %DIF	QC Limits
Aluminum				
Antimony				
Arsenic	94.1	111	18.1*(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 MP2109: D14325-1, D14325-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested
 (a) Serial dilution indicates possible matrix interference.

7.2.4
7

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D14325
Account: PDCCOP - PDC
Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2187
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/28/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.10	.0011	.0012	-0.0021	<0.10

Associated samples MP2187: D14325-1, D14325-2

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

7.3.1

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14325
 Account: PDCCOP - PDC
 Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2187
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 06/28/10

Metal	D14375-1 Original MS	SpikeLot HGWSR1	% Rec	QC Limits
-------	-------------------------	--------------------	-------	--------------

Mercury	0.024	0.50	0.477	99.8	85-115
---------	-------	------	-------	------	--------

Associated samples MP2187: D14325-1, D14325-2

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

7.3.2
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14325
 Account: PDCCOP - PDC
 Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2187
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 06/28/10

Metal	D14375-1 Original MSD	Spikelot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.024	0.50	0.477	99.8	0.0 20

Associated samples MP2187: D14325-1, D14325-2

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

7.3.2
7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14325
Account: PDCCOP - PDC
Project: PDC GG2 EXC 2, Sales Line

QC Batch ID: MP2187
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/28/10

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.41	0.4	102.5	80-120

Associated samples MP2187: D14325-1, D14325-2

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

7.3.3
7



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: D14325
Account: PDCCOP - PDC
Project: PDC GG2 EXC 2, Sales Line

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
pH	GN4900			su	8.00	7.98	99.8	99.3-100.7%

Associated Samples:

Batch GN4900: D14325-1, D14325-2

(*) Outside of QC limits

8.1

8



Misc. Forms

Custody Documents and Other Forms

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Chain of Custody



ACCUTEST

DEPT. OF CUSTOMERS

CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #:	D14325
Accutest Quote #:	
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information							Analytical Information			
Name Accutest Mountain States (AMS)			Name Accutest - New England							<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">82705M PH4</div> <div style="border: 1px solid black; width: 100px; height: 100px; background-color: #ccc;"></div> </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	Preservation					XCPRA	EH	Comments
Date	Time					HCL	NaOH	HNO3	H2SO4	None			
D14325 -1	6/16/10	1:45 PM		Soil	1						X	X	
-2		1:50 PM		Soil	1						X	X	
-													
-													
-													
-													
-													
-													
-													
-													
-													
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. <div style="text-align: right; font-family: cursive;">WZ HE</div>			
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	6/17/10	1	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	6/18/10 10:30	2	2										
Relinquished by:	Date & Time:	Received By:	Date & Time:	Temperature °C				On Ice					
3		3	3	1.6				<input checked="" type="checkbox"/>					

9.1
9

D14325: Chain of Custody
Page 1 of 2
Accutest Labs of New England, Inc.



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D14325

Client: AMS

Immediate Client Services Action Required: No

Date / Time Received: 6/18/2010 10:30:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project: AMS

Airbill #'s:

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:			Infrared gun
3. Cooler media:			Ice (bag)

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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 property:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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

9.1
9



GC/MS Semi-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: D14325
Account: ALMS Accutest Mountain States
Project: PDCCOP: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21825-MB	F47744.D	1	07/05/10	AA	06/30/10	OP21825	MSF2255

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D14325-1, D14325-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	24	0.56	ug/kg	
208-96-8	Acenaphthylene	ND	24	0.90	ug/kg	
120-12-7	Anthracene	ND	24	0.78	ug/kg	
56-55-3	Benzo(a)anthracene	ND	24	0.60	ug/kg	
50-32-8	Benzo(a)pyrene	ND	24	0.70	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	24	0.59	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	24	1.9	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	24	0.92	ug/kg	
218-01-9	Chrysene	ND	24	0.74	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	24	1.4	ug/kg	
206-44-0	Fluoranthene	ND	24	0.77	ug/kg	
86-73-7	Fluorene	ND	24	0.42	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	24	1.2	ug/kg	
91-57-6	2-Methylnaphthalene	ND	24	1.0	ug/kg	
91-20-3	Naphthalene	ND	24	1.1	ug/kg	
85-01-8	Phenanthrene	ND	24	0.95	ug/kg	
129-00-0	Pyrene	ND	24	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
4165-60-0	Nitrobenzene-d5	65%	30-130%
321-60-8	2-Fluorobiphenyl	62%	30-130%
1718-51-0	Terphenyl-d14	84%	30-130%

10.1.1 10

Blank Spike Summary

Job Number: D14325
Account: ALMS Accutest Mountain States
Project: PDCCOP: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21825-BS	F47745.D	1	07/05/10	AA	06/30/10	OP21825	MSF2255

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D14325-1, D14325-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	2430	1360	56	40-140
208-96-8	Acenaphthylene	2430	1230	51	40-140
120-12-7	Anthracene	2430	1880	77	40-140
56-55-3	Benzo(a)anthracene	2430	2150	88	40-140
50-32-8	Benzo(a)pyrene	2430	1990	82	40-140
205-99-2	Benzo(b)fluoranthene	2430	1890	78	40-140
191-24-2	Benzo(g,h,i)perylene	2430	2510	103	40-140
207-08-9	Benzo(k)fluoranthene	2430	2040	84	40-140
218-01-9	Chrysene	2430	1860	76	40-140
53-70-3	Dibenzo(a,h)anthracene	2430	2400	99	40-140
206-44-0	Fluoranthene	2430	2050	84	40-140
86-73-7	Fluorene	2430	1640	67	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	2430	2180	90	40-140
91-57-6	2-Methylnaphthalene	2430	1360	56	40-140
91-20-3	Naphthalene	2430	1160	48	40-140
85-01-8	Phenanthrene	2430	1620	67	40-140
129-00-0	Pyrene	2430	1990	82	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	53%	30-130%
321-60-8	2-Fluorobiphenyl	57%	30-130%
1718-51-0	Terphenyl-d14	80%	30-130%

10.2.1 10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D14325
Account: ALMS Accutest Mountain States
Project: PDCCOP: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21825-MS	F47746.D	1	07/05/10	AA	06/30/10	OP21825	MSF2255
OP21825-MSD	F47747.D	1	07/05/10	AA	06/30/10	OP21825	MSF2255
M92336-1	F47748.D	1	07/05/10	AA	06/30/10	OP21825	MSF2255

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D14325-1, D14325-2

CAS No.	Compound	M92336-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND	2720	1180	43	1290	47	9	40-140/30
208-96-8	Acenaphthylene	ND	2720	1060	39* a	1160	43	9	40-140/30
120-12-7	Anthracene	2.3	2720	1800	66	1920	71	6	40-140/30
56-55-3	Benzo(a)anthracene	3.8	2720	2070	76	2240	82	8	40-140/30
50-32-8	Benzo(a)pyrene	2.1	2720	1880	69	2020	74	7	40-140/30
205-99-2	Benzo(b)fluoranthene	5.9	2720	1810	66	1940	71	7	40-140/30
191-24-2	Benzo(g,h,i)perylene	ND	2720	2440	90	2580	95	6	40-140/30
207-08-9	Benzo(k)fluoranthene	2.3	2720	1930	71	2040	75	6	40-140/30
218-01-9	Chrysene	2.9	2720	1780	65	1900	70	7	40-140/30
53-70-3	Dibenzo(a,h)anthracene	ND	2720	2270	83	2410	89	6	40-140/30
206-44-0	Fluoranthene	5.5	2720	1990	73	2160	79	8	40-140/30
86-73-7	Fluorene	ND	2720	1470	54	1600	59	8	40-140/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2720	2100	77	2560	94	20	40-140/30
91-57-6	2-Methylnaphthalene	6.1	2720	1140	42	1240	45	8	40-140/30
91-20-3	Naphthalene	5.9	2720	997	36* a	1080	40	8	40-140/30
85-01-8	Phenanthrene	5.7	2720	1530	56	1650	60	8	40-140/30
129-00-0	Pyrene	5.9	2720	1950	71	2070	76	6	40-140/30

CAS No.	Surrogate Recoveries	MS	MSD	M92336-1	Limits
4165-60-0	Nitrobenzene-d5	40%	42%	37%	30-130%
321-60-8	2-Fluorobiphenyl	43%	46%	38%	30-130%
1718-51-0	Terphenyl-d14	71%	74%	52%	30-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

10.3.1 10



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: D14325
Account: ALMS - Accutest Mountain States
Project: PDCCOP: PDC-PC5 & GG2 Profile Sampling

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP11738/GN32192	2.0	0.0	mg/kg	40	39.9	99.8	80-120%
Chromium, Hexavalent	GP11738/GN32192			mg/kg	650	662	101.8	80-120%

Associated Samples:

Batch GP11738: D14325-1, D14325-2

(*) Outside of QC limits

11.1
11

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D14325
Account: ALMS - Accutest Mountain States
Project: PDCCOP: PDC-PC5 & GG2 Profile Sampling

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP11738/GN32192	D14038-4	mg/kg	3.6	3.5	2.8	0-20%
Redox Potential Vs H2	GN32194	D14177-1	mv	286	292	2.1	0-20%

Associated Samples:

Batch GN32194: D14325-1, D14325-2

Batch GP11738: D14325-1, D14325-2

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D14325
Account: ALMS - Accutest Mountain States
Project: PDCCOP: PDC-PC5 & GG2 Profile Sampling

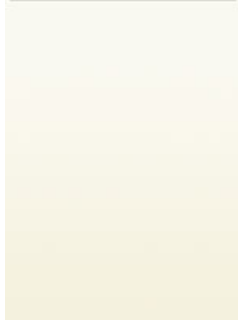
Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP11738/GN32192	D14038-4	mg/kg	3.6	87.6	78.5	85.5	75-125%
Chromium, Hexavalent	GP11738/GN32192	D14038-4	mg/kg	3.6	2190	2030	92.6	75-125%

Associated Samples:

Batch GP11738: D14325-1, D14325-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



Technical Report for

PDC

PDC-PC5 & GG2 Profile Sampling

GG-2

Accutest Job Number: D13745

Sampling Date: 05/27/10

Report to:

HRL Compliance Solutions Inc.
744 Horizon Court Suite 140
Grand Junction, CO 81506
hlucero@hrlcomp.com

ATTN: Herman Lucero

Total number of pages in report: **74**



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: Shea Greiner 303-425-6021

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

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Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Sample Results	8
3.1: D13745-1: S. WALL EAST HALF	9
3.2: D13745-2: E. WALL EAST HALF	15
3.3: D13745-3: BACKGROUND 1	21
3.4: D13745-4: BACKGROUND 2	22
3.5: D13745-5: BACKGROUND 3	23
Section 4: Misc. Forms	24
4.1: Chain of Custody	25
Section 5: GC/MS Volatiles - QC Data Summaries	27
5.1: Method Blank Summary	28
5.2: Blank Spike Summary	30
5.3: Matrix Spike/Matrix Spike Duplicate Summary	32
Section 6: GC/MS Semi-volatiles - QC Data Summaries	34
6.1: Method Blank Summary	35
6.2: Blank Spike Summary	36
6.3: Matrix Spike/Matrix Spike Duplicate Summary	37
Section 7: GC Volatiles - QC Data Summaries	38
7.1: Method Blank Summary	39
7.2: Blank Spike Summary	40
7.3: Matrix Spike/Matrix Spike Duplicate Summary	41
Section 8: GC Semi-volatiles - QC Data Summaries	42
8.1: Method Blank Summary	43
8.2: Blank Spike Summary	44
8.3: Matrix Spike/Matrix Spike Duplicate Summary	45
Section 9: Metals Analysis - QC Data Summaries	46
9.1: Prep QC MP1995: Ba,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn	47
9.2: Prep QC MP1996: As	57
9.3: Prep QC MP2019: Hg	62
Section 10: General Chemistry - QC Data Summaries	66
10.1: Method Blank and Spike Results Summary	67
Section 11: Misc. Forms (Accutest Labs of New England, Inc.)	68
11.1: Chain of Custody	69
Section 12: General Chemistry - QC Data (Accutest Labs of New England, Inc.)	71
12.1: Method Blank and Spike Results Summary	72
12.2: Duplicate Results Summary	73
12.3: Matrix Spike Results Summary	74



Sample Summary

PDC

Job No: D13745

PDC-PC5 & GG2 Profile Sampling
 Project No: GG-2

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D13745-1	05/27/10	13:50 CR	05/28/10	SO	Soil	S. WALL EAST HALF
D13745-2	05/27/10	14:00 CR	05/28/10	SO	Soil	E. WALL EAST HALF
D13745-3	05/27/10	13:30 CR	05/28/10	SO	Soil	BACKGROUND 1
D13745-4	05/27/10	13:35 CR	05/28/10	SO	Soil	BACKGROUND 2
D13745-5	05/27/10	13:40 CR	05/28/10	SO	Soil	BACKGROUND 3

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: PDC

Job No D13745

Site: PDC-PC5 & GG2 Profile Sampling

Report Dat 6/9/2010 5:17:05 PM

On 05/28/2010, 5 sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D13745 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: V5V430
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- All samples were analyzed within the recommended method holding time.
- Sample(s) D13740-4MS, D13740-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix SO	Batch ID: V5V432
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- All samples were analyzed within the recommended method holding time.
- Sample(s) D13740-1MS, D13740-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO	Batch ID: OP1936
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- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) D13642-1MS, D13642-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for MSD for Benzo(k)fluoranthene are outside control limits for sample OP1936-MSD. High RPD due to possible sample nonhomogeneity.
- D13745-1: Dilution required due to matrix interference.

Volatiles by GC By Method SW846 8015B

Matrix SO	Batch ID: GGB268
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- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D13740-1MSD, D13740-1MS, D13740-1MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for TPH-GRO (C6-C10) are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for TPH-GRO (C6-C10) are outside control limits. Probable cause due to matrix interference.
- RPD(s) for MSD for TPH-GRO (C6-C10) are outside control limits for sample D13740-1MSD. High RPD due to possible sample nonhomogeneity.
- D13740-1MS for 1,2,4-Trichlorobenzene: Outside control limits due to matrix interference.
- D13745-2 for 1,2,4 Trichlorobenzene: Outside control limits due to matrix interference.
- D13740-1MSD for 1,2,4-Trichlorobenzene: Outside control limits due to matrix interference.

Extractables by GC By Method SW846-8015B

Matrix SO	Batch ID: OP1959
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- All samples were extracted 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) D13738-IMS, D13738-IMSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for TPH-DRO (C10-C28) are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Metals By Method SW846 6010B

Matrix SO	Batch ID: MP1995
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- All samples were digested 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) D13591-IMS, D13591-IMSD, D13591-ISDL were used as the QC samples for metals.
- Matrix Spike Duplicate Recovery(s) for Barium are outside control limits. Probable cause due to matrix interference.
- RPD(s) for Serial Dilution for Cadmium, Selenium, Copper, Lead are outside control limits for sample MP1995-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 6020

Matrix SO	Batch ID: MP1996
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- All samples were digested 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) D13591-IMS, D13591-IMSD, D13591-ISDL were used as the QC samples for metals.

Metals By Method SW846 7471A

Matrix SO	Batch ID: MP2019
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- All samples were digested 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) D13743-3MSD, D13743-3MS were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference.
- Matrix Spike Duplicate Recovery(s) for Mercury are outside control limits. Probable cause due to matrix interference.

Wet Chemistry By Method ASTM E1498-76M

Matrix SO	Batch ID: M:GN32024
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- The data for ASTM E1498-76M meets quality control requirements.
- The following samples were run outside of holding time for method ASTM E1498-76M: D13745-1, D13745-2
- D13745-1 for Redox Potential Vs H2: Analysis performed at Accutest Laboratories, Marlborough, MA.
- D13745-2 for Redox Potential Vs H2: Analysis performed at Accutest Laboratories, Marlborough, MA.

Wet Chemistry By Method SM19 2540B M

Matrix SO	Batch ID: GN4600
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- The data for SM19 2540B M meets quality control requirements.

Wet Chemistry By Method SW846 3060/7196A M

Matrix SO	Batch ID: R2580
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- The data for SW846 3060/7196A M meets quality control requirements.
- D13745-1 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Matrix SO	Batch ID: R2581
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- The data for SW846 3060/7196A M meets quality control requirements.
- D13745-2 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO	Batch ID: M:GP11670
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- The data for SW846 3060A/7196A meets quality control requirements.
- D13745-2 for Chromium, Hexavalent: Analysis performed at Accutest Laboratories, Marlborough, MA.
- D13745-1 for Chromium, Hexavalent: Analysis performed at Accutest Laboratories, Marlborough, MA.

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 D13745

Site: PDCCOP: PDC-PC5 & GG2 Profile Sampling

Report Date 6/7/2010 10:45:43 AM

2 Sample(s) were collected on 05/27/2010 and were received at Accutest on 05/28/2010 properly preserved, at 2.5 Deg. C and intact. These Samples received an Accutest job number of D13745. 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.

Wet Chemistry By Method ASTM E1498-76M

Matrix SO

Batch ID: GN32024

- Sample(s) D13757-1DUP were used as the QC samples for Redox Potential Vs H2.

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO

Batch ID: GP11670

- 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) D13740-1DUP, D13740-1MS 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(D13745).



Sample Results

Report of Analysis

Report of Analysis

3.1
3

Client Sample ID: S. WALL EAST HALF	
Lab Sample ID: D13745-1	Date Sampled: 05/27/10
Matrix: SO - Soil	Date Received: 05/28/10
Method: SW846 8260B	Percent Solids: 79.9
Project: PDC-PC5 & GG2 Profile Sampling	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V08054.D	1	06/01/10	DC	n/a	n/a	V5V430
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	95%		70-130%
460-00-4	4-Bromofluorobenzene	85%		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

31
3

Client Sample ID:	S. WALL EAST HALF		
Lab Sample ID:	D13745-1	Date Sampled:	05/27/10
Matrix:	SO - Soil	Date Received:	05/28/10
Method:	SW846 8270C BY SIM SW846 3540C	Percent Solids:	79.9
Project:	PDC-PC5 & GG2 Profile Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3G01042.D	2	06/02/10	TMB	06/01/10	OP1936	E3G25
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	17	16	ug/kg	
208-96-8	Acenaphthylene	ND	83	17	ug/kg	
120-12-7	Anthracene	ND	17	11	ug/kg	
56-55-3	Benzo(a)anthracene	ND	17	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	17	11	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	17	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	17	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	17	11	ug/kg	
218-01-9	Chrysene	ND	17	8.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	17	12	ug/kg	
206-44-0	Fluoranthene	ND	17	10	ug/kg	
86-73-7	Fluorene	ND	17	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	17	11	ug/kg	
90-12-0	1-Methylnaphthalene	ND	17	15	ug/kg	
91-57-6	2-Methylnaphthalene	ND	83	25	ug/kg	
91-20-3	Naphthalene	ND	83	18	ug/kg	
85-01-8	Phenanthrene	ND	17	13	ug/kg	
129-00-0	Pyrene	ND	17	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	57%		10-193%
321-60-8	2-Fluorobiphenyl	57%		20-138%
1718-51-0	Terphenyl-d14	69%		17-174%

(a) Dilution required due to matrix interference.

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

3.1
3

Client Sample ID: S. WALL EAST HALF	
Lab Sample ID: D13745-1	Date Sampled: 05/27/10
Matrix: SO - Soil	Date Received: 05/28/10
Method: SW846 8015B	Percent Solids: 79.9
Project: PDC-PC5 & GG2 Profile Sampling	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB4939.D	1	06/06/10	LAC	n/a	n/a	GGB268
Run #2							

	Initial Weight
Run #1	1.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	1.3	1.3	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	90%		60-140%		

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

3.1
3

Client Sample ID: S. WALL EAST HALF	
Lab Sample ID: D13745-1	Date Sampled: 05/27/10
Matrix: SO - Soil	Date Received: 05/28/10
Method: SW846-8015B SW846 3550B	Percent Solids: 79.9
Project: PDC-PC5 & GG2 Profile Sampling	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD1786.D	1	06/05/10	CP	06/03/10	OP1959	GFD111
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	ND	17	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	82%		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: S. WALL EAST HALF	Date Sampled: 05/27/10
Lab Sample ID: D13745-1	Date Received: 05/28/10
Matrix: SO - Soil	Percent Solids: 79.9
Project: PDC-PC5 & GG2 Profile Sampling	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	10.8	0.40	mg/kg	5	06/03/10	06/09/10 JM	SW846 6020 ³	SW846 3050B ⁵
Barium	234	0.99	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	< 0.99	0.99	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Chromium	6.2	0.99	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Copper	15.2	0.50	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Lead	7.9	5.0	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Mercury	< 0.12	0.12	mg/kg	1	06/07/10	06/07/10 RN	SW846 7471A ²	SW846 7471A ⁶
Nickel	13.0	3.0	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Selenium	< 5.0	5.0	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 3.0	3.0	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Zinc	51.3	3.0	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴

- (1) Instrument QC Batch: MA718
- (2) Instrument QC Batch: MA724
- (3) Instrument QC Batch: MA730
- (4) Prep QC Batch: MP1995
- (5) Prep QC Batch: MP1996
- (6) Prep QC Batch: MP2019

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S. WALL EAST HALF	Date Sampled:	05/27/10
Lab Sample ID:	D13745-1	Date Received:	05/28/10
Matrix:	SO - Soil	Percent Solids:	79.9
Project:	PDC-PC5 & GG2 Profile Sampling		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.5	2.5	mg/kg	1	06/04/10 13:13	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	6.2	3.5	mg/kg	1	06/04/10 23:16	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	331		mv	1	06/02/10	AMA	ASTM E1498-76M
Solids, Percent	79.9		%	1	06/01/10	SWT	SM19 2540B M
pH	9.70		su	1	05/28/10 11:00	CJ	SW846 9045C

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

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

RL = Reporting Limit

Report of Analysis

32
3

Client Sample ID:	E. WALL EAST HALF		
Lab Sample ID:	D13745-2	Date Sampled:	05/27/10
Matrix:	SO - Soil	Date Received:	05/28/10
Method:	SW846 8260B	Percent Solids:	83.7
Project:	PDC-PC5 & GG2 Profile Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V08110.D	1	06/03/10	DC	n/a	n/a	V5V432
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	73.9	130	39	ug/kg	J
108-88-3	Toluene	5960	260	130	ug/kg	
100-41-4	Ethylbenzene	2560	260	52	ug/kg	
	m,p-Xylene	37600	520	90	ug/kg	
95-47-6	o-Xylene	6750	260	90	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	117%		70-130%
17060-07-0	1,2-Dichloroethane-D4	94%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

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:	E. WALL EAST HALF		
Lab Sample ID:	D13745-2	Date Sampled:	05/27/10
Matrix:	SO - Soil	Date Received:	05/28/10
Method:	SW846 8270C BY SIM SW846 3540C	Percent Solids:	83.7
Project:	PDC-PC5 & GG2 Profile Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G01053.D	20	06/02/10	TMB	06/01/10	OP1936	E3G25
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	160	150	ug/kg	
208-96-8	Acenaphthylene	ND	800	160	ug/kg	
120-12-7	Anthracene	ND	160	100	ug/kg	
56-55-3	Benzo(a)anthracene	ND	160	160	ug/kg	
50-32-8	Benzo(a)pyrene	ND	160	100	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	160	120	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	160	99	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	160	100	ug/kg	
218-01-9	Chrysene	ND	160	80	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	160	120	ug/kg	
206-44-0	Fluoranthene	ND	160	98	ug/kg	
86-73-7	Fluorene	ND	160	160	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	160	100	ug/kg	
90-12-0	1-Methylnaphthalene	204	160	140	ug/kg	
91-57-6	2-Methylnaphthalene	641	800	240	ug/kg	J
91-20-3	Naphthalene	287	800	180	ug/kg	J
85-01-8	Phenanthrene	ND	160	130	ug/kg	
129-00-0	Pyrene	ND	160	110	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		10-193%
321-60-8	2-Fluorobiphenyl	68%		20-138%
1718-51-0	Terphenyl-d14	66%		17-174%

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

32
3

Client Sample ID: E. WALL EAST HALF	
Lab Sample ID: D13745-2	Date Sampled: 05/27/10
Matrix: SO - Soil	Date Received: 05/28/10
Method: SW846 8015B	Percent Solids: 83.7
Project: PDC-PC5 & GG2 Profile Sampling	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB4941.D	1	06/06/10	LAC	n/a	n/a	GGB268
Run #2							

	Initial Weight
Run #1	1.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	54.5	1.2	1.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	167% ^a		60-140%		

(a) Outside control limits due to matrix interference.

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

32
3

Client Sample ID: E. WALL EAST HALF	
Lab Sample ID: D13745-2	Date Sampled: 05/27/10
Matrix: SO - Soil	Date Received: 05/28/10
Method: SW846-8015B SW846 3550B	Percent Solids: 83.7
Project: PDC-PC5 & GG2 Profile Sampling	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD1801.D	1	06/05/10	CP	06/03/10	OP1959	GFD112
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	314	16	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	89%		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: E. WALL EAST HALF	Date Sampled: 05/27/10
Lab Sample ID: D13745-2	Date Received: 05/28/10
Matrix: SO - Soil	Percent Solids: 83.7
Project: PDC-PC5 & GG2 Profile Sampling	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	10.5	0.38	mg/kg	5	06/03/10	06/09/10 JM	SW846 6020 ³	SW846 3050B ⁵
Barium	234	0.96	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	< 0.96	0.96	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Chromium	8.0	0.96	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Copper	16.3	0.48	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Lead	8.9	4.8	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Mercury	< 0.12	0.12	mg/kg	1	06/07/10	06/07/10 RN	SW846 7471A ²	SW846 7471A ⁶
Nickel	14.9	2.9	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Selenium	< 4.8	4.8	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 2.9	2.9	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴
Zinc	57.3	2.9	mg/kg	1	06/03/10	06/04/10 JM	SW846 6010B ¹	SW846 3050B ⁴

- (1) Instrument QC Batch: MA718
- (2) Instrument QC Batch: MA724
- (3) Instrument QC Batch: MA730
- (4) Prep QC Batch: MP1995
- (5) Prep QC Batch: MP1996
- (6) Prep QC Batch: MP2019

RL = Reporting Limit

Report of Analysis

Client Sample ID: E. WALL EAST HALF	
Lab Sample ID: D13745-2	Date Sampled: 05/27/10
Matrix: SO - Soil	Date Received: 05/28/10
	Percent Solids: 83.7
Project: PDC-PC5 & GG2 Profile Sampling	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	06/04/10 13:13	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.0	3.3	mg/kg	1	06/04/10 23:25	JM	SW846 3060/7196A M
Redox Potential Vs H2 ^a	337		mv	1	06/02/10	AMA	ASTM E1498-76M
Solids, Percent	83.7		%	1	06/01/10	SWT	SM19 2540B M
pH	9.15		su	1	05/28/10 11:00	CJ	SW846 9045C

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

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BACKGROUND 1	Date Sampled:	05/27/10
Lab Sample ID:	D13745-3	Date Received:	05/28/10
Matrix:	SO - Soil	Percent Solids:	89.4
Project:	PDC-PC5 & GG2 Profile Sampling		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	7.1	0.34	mg/kg	5	06/03/10	06/09/10 JM	SW846 6020 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA730

(2) Prep QC Batch: MP1996

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BACKGROUND 2		
Lab Sample ID:	D13745-4	Date Sampled:	05/27/10
Matrix:	SO - Soil	Date Received:	05/28/10
		Percent Solids:	90.1
Project:	PDC-PC5 & GG2 Profile Sampling		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.4	0.32	mg/kg	5	06/03/10	06/09/10 JM	SW846 6020 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA730

(2) Prep QC Batch: MP1996

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BACKGROUND 3		
Lab Sample ID:	D13745-5	Date Sampled:	05/27/10
Matrix:	SO - Soil	Date Received:	05/28/10
		Percent Solids:	88.8
Project:	PDC-PC5 & GG2 Profile Sampling		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.7	0.37	mg/kg	5	06/03/10	06/09/10 JM	SW846 6020 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA730

(2) Prep QC Batch: MP1996

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 H2L COMPLIANCE SOLUTIONS INC.		Project Name: POL GG 2												DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank FB - Fosse Blank TB - Trip Blank				
Street Address 744 HORIZON CT, SUITE 140		Street POC																
City, State, Zip GRAND JCT CO. 81506		Billing Information (if different from Report to) Company Name POC																
Project Contact HERMAN LUCERO		Street Address 120 N. RAILROAD AVE, STE 0																
Phone # 970-243-3271		City, State, Zip PARACHUTE CO. 81635																
Sample(s) Name(s) CASEY RICHARDSON		Project Manager HERMAN LUCERO																
Attention: ADELL HENGEMAN																		
Accutest Sample #	Field ID / Point of Collection	MECH/OI Vial #	Collection		Matrix	# of bottles	Number of preserved Bottles										LAB USE ONLY	
			Date	Time			MC	MSD	HNO3	HSC04	NONE	DI Water	MEDI	ENCORE	406			
	S. WALL EAST HALF		5.27.10	1350	CR	50												
	E. WALL EAST HALF		5.27.10	1400	CR	50												01
	BACKGROUND 1		5.27.10	1330	CR	50												02
	BACKGROUND 2		5.27.10	1335	CR	50												03
	BACKGROUND 3		5.27.10	1340	CR	50												04
																		05
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 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.										NO TOTAL BASED TOTAL BASED						
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:													
1	5.27.10 1700	1	2		2													
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:													
3		3	4		4													
Relinquished by:	Date Time:	Received By:	Quatry Seal #	Intact	Preserved where applicable	On Ice	Cooler Temp											
5		5		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4.0											

4.1
4



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D13745

Client: HRL

Immediate Client Services Action Required: No

Date / Time Received: 5/28/2010 8:35:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project: PDL GG 2

Airbill #'s: fedex

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:			Infrared gun
3. Cooler media:			Ice (bag)

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www.accutest.com

4.1
4



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

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V430-MB1	5V08036.D	1	06/01/10	DC	n/a	n/a	V5V430

The QC reported here applies to the following samples:

Method: SW846 8260B

D13745-1

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	90% 70-130%
460-00-4	4-Bromofluorobenzene	84% 70-130%
17060-07-0	1,2-Dichloroethane-D4	86% 70-130%

Method Blank Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V432-MB1	5V08099.D	1	06/03/10	DC	n/a	n/a	V5V432

The QC reported here applies to the following samples:

Method: SW846 8260B

D13745-2

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	Results	Limits
2037-26-5	Toluene-D8	94%	70-130%
460-00-4	4-Bromofluorobenzene	84%	70-130%
17060-07-0	1,2-Dichloroethane-D4	95%	70-130%

5.1.2
5

Blank Spike Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V430-BS1	5V08037.D	1	06/01/10	DC	n/a	n/a	V5V430

The QC reported here applies to the following samples:

Method: SW846 8260B

D13745-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	49.7	99	68-130
100-41-4	Ethylbenzene	50	53.9	108	70-130
108-88-3	Toluene	50	53.7	107	70-130
95-47-6	m,p-Xylene	50	48.3	97	53-130
	o-Xylene	50	48.2	96	61-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	90%	70-130%
460-00-4	4-Bromofluorobenzene	98%	70-130%
17060-07-0	1,2-Dichloroethane-D4	86%	70-130%

Blank Spike Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V432-BS1	5V08100.D	1	06/03/10	DC	n/a	n/a	V5V432

The QC reported here applies to the following samples:

Method: SW846 8260B

D13745-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	53.9	108	68-130
100-41-4	Ethylbenzene	50	58.0	116	70-130
108-88-3	Toluene	50	57.8	116	70-130
	m,p-Xylene	50	53.9	108	53-130
95-47-6	o-Xylene	50	52.2	104	61-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	97%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%
17060-07-0	1,2-Dichloroethane-D4	91%	70-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D13740-4MS	5V08039.D	1	06/01/10	DC	n/a	n/a	V5V430
D13740-4MSD	5V08040.D	1	06/01/10	DC	n/a	n/a	V5V430
D13740-4	5V08038.D	1	06/01/10	DC	n/a	n/a	V5V430

The QC reported here applies to the following samples:

Method: SW846 8260B

D13745-1

CAS No.	Compound	D13740-4 ug/kg	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	272	268	98	281	103	5	55-140/30
100-41-4	Ethylbenzene	ND	272	281	103	301	111	7	56-139/30
108-88-3	Toluene	ND	272	282	104	303	111	7	57-144/30
	m,p-Xylene	ND	272	254	93	270	99	6	47-130/30
95-47-6	o-Xylene	ND	272	252	93	268	98	6	51-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D13740-4	Limits
2037-26-5	Toluene-D8	91%	91%	90%	70-130%
460-00-4	4-Bromofluorobenzene	98%	99%	84%	70-130%
17060-07-0	1,2-Dichloroethane-D4	87%	81%	89%	70-130%

5.3.1
5

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D13740-1MS	5V08102.D	1	06/03/10	DC	n/a	n/a	V5V432
D13740-1MSD	5V08103.D	1	06/03/10	DC	n/a	n/a	V5V432
D13740-1	5V08101.D	1	06/03/10	DC	n/a	n/a	V5V432

The QC reported here applies to the following samples:

Method: SW846 8260B

D13745-2

CAS No.	Compound	D13740-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	46.9	J	5350	5640	105	6010	112	6	55-140/30
100-41-4	Ethylbenzene	49.3	J	5350	6080	113	6330	118	4	56-139/30
108-88-3	Toluene	292		5350	6360	114	6680	120	5	57-144/30
	m,p-Xylene	463		5350	6070	105	6330	110	4	47-130/30
95-47-6	o-Xylene	ND		5350	5530	103	5660	106	2	51-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D13740-1	Limits
2037-26-5	Toluene-D8	93%	96%	94%	70-130%
460-00-4	4-Bromofluorobenzene	102%	103%	90%	70-130%
17060-07-0	1,2-Dichloroethane-D4	92%	88%	89%	70-130%

5.3.2
5



GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1936-MB	3G01040.D	1	06/02/10	TMB	06/01/10	OP1936	E3G25

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D13745-1, D13745-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	6.7	6.2	ug/kg	
208-96-8	Acenaphthylene	ND	33	6.9	ug/kg	
120-12-7	Anthracene	ND	6.7	4.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	6.7	6.5	ug/kg	
50-32-8	Benzo(a)pyrene	ND	6.7	4.2	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	6.7	4.8	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	6.7	4.2	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	6.7	4.2	ug/kg	
218-01-9	Chrysene	ND	6.7	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	6.7	4.9	ug/kg	
206-44-0	Fluoranthene	ND	6.7	4.1	ug/kg	
86-73-7	Fluorene	ND	6.7	6.5	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	6.7	4.4	ug/kg	
90-12-0	1-Methylnaphthalene	ND	6.7	5.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	10	ug/kg	
91-20-3	Naphthalene	ND	33	7.4	ug/kg	
85-01-8	Phenanthrene	ND	6.7	5.3	ug/kg	
129-00-0	Pyrene	ND	6.7	4.5	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
4165-60-0	Nitrobenzene-d5	62%	10-193%
321-60-8	2-Fluorobiphenyl	56%	20-138%
1718-51-0	Terphenyl-d14	76%	17-174%

Blank Spike Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1936-BS	3G01041.D	1	06/02/10	TMB	06/01/10	OP1936	E3G25

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D13745-1, D13745-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	54.8	66	40-136
208-96-8	Acenaphthylene	83.3	53.7	64	42-139
120-12-7	Anthracene	83.3	61.3	74	40-141
56-55-3	Benzo(a)anthracene	83.3	64.8	78	38-143
50-32-8	Benzo(a)pyrene	83.3	62.9	75	39-145
205-99-2	Benzo(b)fluoranthene	83.3	62.5	75	38-151
191-24-2	Benzo(g,h,i)perylene	83.3	54.4	65	35-136
207-08-9	Benzo(k)fluoranthene	83.3	67.9	81	38-147
218-01-9	Chrysene	83.3	61.7	74	39-137
53-70-3	Dibenzo(a,h)anthracene	83.3	58.3	70	35-139
206-44-0	Fluoranthene	83.3	60.8	73	34-132
86-73-7	Fluorene	83.3	56.8	68	41-136
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	58.5	70	31-144
90-12-0	1-Methylnaphthalene	83.3	54.8	66	36-130
91-57-6	2-Methylnaphthalene	83.3	54.0	65	40-131
91-20-3	Naphthalene	83.3	51.4	62	36-130
85-01-8	Phenanthrene	83.3	59.1	71	40-135
129-00-0	Pyrene	83.3	61.7	74	29-157

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	66%	10-193%
321-60-8	2-Fluorobiphenyl	64%	20-138%
1718-51-0	Terphenyl-d14	80%	17-174%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1936-MS	3G01045.D	2	06/02/10	TMB	06/01/10	OP1936	E3G25
OP1936-MSD	3G01046.D	2	06/02/10	TMB	06/01/10	OP1936	E3G25
D13642-1	3G01044.D	2	06/02/10	TMB	06/01/10	OP1936	E3G25

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D13745-1, D13745-2

CAS No.	Compound	D13642-1 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		83.3	51.8	62	41.5	50	22	20-151/30
208-96-8	Acenaphthylene	ND		83.3	56.7	68	45.1	54	23	23-156/30
120-12-7	Anthracene	ND		83.3	55.0	66	41.1	49	29	25-149/30
56-55-3	Benzo(a)anthracene	ND		83.3	62.8	75	48.3	58	26	22-157/30
50-32-8	Benzo(a)pyrene	ND		83.3	59.2	71	47.9	58	21	23-153/30
205-99-2	Benzo(b)fluoranthene	ND		83.3	60.7	73	49.0	59	21	22-161/30
191-24-2	Benzo(g,h,i)perylene	ND		83.3	52.5	63	45.0	54	15	20-158/30
207-08-9	Benzo(k)fluoranthene	ND		83.3	49.2	59	35.9	43	31* a	17-161/30
218-01-9	Chrysene	ND		83.3	54.9	66	42.0	50	27	16-159/30
53-70-3	Dibenzo(a,h)anthracene	ND		83.3	62.2	75	49.6	60	23	21-154/30
206-44-0	Fluoranthene	ND		83.3	53.8	65	40.0	48	29	16-140/30
86-73-7	Fluorene	ND		83.3	64.9	78	53.0	64	20	15-153/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		83.3	63.1	76	51.3	62	21	21-159/30
90-12-0	1-Methylnaphthalene	30.6		83.3	81.5	61	61.6	37	28	10-148/30
91-57-6	2-Methylnaphthalene	56.0	J	83.3	108	62	79.9	29	30	10-181/30
91-20-3	Naphthalene	20.2	J	83.3	71.4	61	58.9	46	19	10-176/30
85-01-8	Phenanthrene	12.5	J	83.3	64.9	63	49.9	45	26	22-152/30
129-00-0	Pyrene	ND		83.3	58.4	70	45.9	55	24	10-200/30

CAS No.	Surrogate Recoveries	MS	MSD	D13642-1	Limits
4165-60-0	Nitrobenzene-d5	64%	53%	49%	10-193%
321-60-8	2-Fluorobiphenyl	61%	48%	49%	20-138%
1718-51-0	Terphenyl-d14	65%	52%	57%	17-174%

(a) High RPD due to possible sample nonhomogeneity.



GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB268-MB	GB4917.D	1	06/06/10	LAC	n/a	n/a	GGB268

The QC reported here applies to the following samples:

Method: SW846 8015B

D13745-1, D13745-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	1.0	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	91% 60-140%

7.1.1
7

Blank Spike Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB268-BS	GB4918.D	1	06/06/10	LAC	n/a	n/a	GGB268

The QC reported here applies to the following samples:

Method: SW846 8015B

D13745-1, D13745-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	11	8.65	79	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	100%	60-140%

7.2.1

7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D13740-1MS	GB4920.D	1	06/06/10	LAC	n/a	n/a	GGB268
D13740-1MSD	GB4921.D	1	06/06/10	LAC	n/a	n/a	GGB268
D13740-1	GB4919.D	1	06/06/10	LAC	n/a	n/a	GGB268

The QC reported here applies to the following samples:

Method: SW846 8015B

D13745-1, D13745-2

CAS No.	Compound	D13740-1 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	8.37	11.5	7.95	-4* a	11.2	25* a	34* b	62-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D13740-1	Limits
120-82-1	1,2,4-Trichlorobenzene	255%* a	316%* a	323%* a	60-140%

- (a) Outside control limits due to matrix interference.
- (b) High RPD due to possible sample nonhomogeneity.



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

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1959-MB	FD1760.D	1	06/04/10	CP	06/03/10	OP1959	GFD111

The QC reported here applies to the following samples:

Method: SW846-8015B

D13745-1, D13745-2

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	103% 63-130%

Blank Spike Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1959-BS	FD1761.D	1	06/04/10	CP	06/03/10	OP1959	GFD111

The QC reported here applies to the following samples:

Method: SW846-8015B

D13745-1, D13745-2

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	106%	63-130%

8.2.1

8

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D13745
Account: PDCCOP PDC
Project: PDC-PC5 & GG2 Profile Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1959-MS	FD1763.D	20	06/04/10	CP	06/03/10	OP1959	GFD111
OP1959-MSD	FD1764.D	20	06/04/10	CP	06/03/10	OP1959	GFD111
D13738-1	FD1762.D	20	06/04/10	CP	06/03/10	OP1959	GFD111

The QC reported here applies to the following samples:

Method: SW846-8015B

D13745-1, D13745-2

CAS No.	Compound	D13738-1 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	2490	742	3540	142* a	3270	105	8	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D13738-1	Limits
84-15-1	o-Terphenyl	100%	104%	85%	63-130%

(a) Outside control limits due to high level in sample relative to spike amount.



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: D13745
Account: PDCCOP - PDC
Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1995
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 06/03/10

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	0.10	<1.0
Beryllium	1.0	.14	.21		
Boron	5.0	.35	.91		
Cadmium	1.0	.022	.12	-0.020	<1.0
Calcium	40	1.7	2.7		
Chromium	1.0	.027	.18	0.050	<1.0
Cobalt	0.50	.048	.058		
Copper	0.50	.16	.38	-0.040	<0.50
Iron	7.0	.77	.91		
Lead	5.0	.13	.24	-0.12	<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	0.030	<3.0
Phosphorus	10	1.5	3.5		
Potassium	200	38	130		
Selenium	5.0	.28	.54	0.24	<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	0.10	<3.0

Associated samples MP1995: D13745-1, D13745-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D13745
Account: PDCCOP - PDC
Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1995
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D13745
 Account: PDCCOP - PDC
 Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1995
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 06/03/10

Metal	D13591-1 Original MS		SpikeLot MPICPALL	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium	446	637	164	116.6	75-125
Beryllium					
Boron	anr				
Cadmium	0.25	33.5	41	81.2	75-125
Calcium					
Chromium	6.8	41.6	41	85.0	75-125
Cobalt					
Copper	7.8	47.3	41	96.5	75-125
Iron					
Lead	6.0	73.2	81.9	82.0	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	7.5	40.5	41	80.6	75-125
Phosphorus					
Potassium					
Selenium	1.2	67.0	81.9	80.3	75-125
Silicon					
Silver	0.0	14.5	16.4	88.5	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	26.5	60.3	41	82.5	75-125

Associated samples MP1995: D13745-1, D13745-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

9.12
 9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D13745
Account: PDCCOP - PDC
Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1995
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D13745
 Account: PDCCOP - PDC
 Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1995
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 06/03/10

Metal	D13591-1 Original MSD		SpikeLot MPICPAL % Rec	MSD RPD	QC Limit	
Aluminum						
Antimony						
Arsenic						
Barium	446	661	164	131.3N(a) 3.7	20	
Beryllium						
Boron	anr					
Cadmium	0.25	34.1	41	82.7	1.8	20
Calcium						
Chromium	6.8	42.8	41	87.9	2.8	20
Cobalt						
Copper	7.8	48.5	41	99.4	2.5	20
Iron						
Lead	6.0	74.0	81.9	83.0	1.1	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	7.5	41.7	41	83.5	2.9	20
Phosphorus						
Potassium						
Selenium	1.2	68.0	81.9	81.6	1.5	20
Silicon						
Silver	0.0	14.7	16.4	89.7	1.4	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	26.5	59.8	41	81.3	0.8	20

Associated samples MP1995: D13745-1, D13745-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

9.1.2
 9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D13745
Account: PDCCOP - PDC
Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1995
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(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: D13745
 Account: PDCCOP - PDC
 Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1995
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 06/03/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	181	200	90.5	80-120
Beryllium				
Boron	anr			
Cadmium	44.9	50	89.8	80-120
Calcium				
Chromium	47.8	50	95.6	80-120
Cobalt				
Copper	46.6	50	93.2	80-120
Iron				
Lead	94.3	100	94.3	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	46.3	50	92.6	80-120
Phosphorus				
Potassium				
Selenium	89.2	100	89.2	80-120
Silicon				
Silver	19.0	20	95.0	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	45.4	50	90.8	80-120

Associated samples MP1995: D13745-1, D13745-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

9.1.3
 9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D13745
Account: PDCCOP - PDC
Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1995
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D13745
 Account: PDCCOP - PDC
 Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1995
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 06/03/10

Metal	D13591-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	5440	5390	1.0	0-10
Beryllium				
Boron	anr			
Cadmium	3.00	0.00	100.0(a)	0-10
Calcium				
Chromium	83.1	84.5	1.7	0-10
Cobalt				
Copper	95.4	76.0	20.3*(b)	0-10
Iron				
Lead	73.4	59.0	19.6*(b)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	91.4	95.5	4.5	0-10
Phosphorus				
Potassium				
Selenium	15.0	54.5	263.3(a)	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	324	345	6.5	0-10

Associated samples MP1995: D13745-1, D13745-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

9.1.4
 9

SERIAL DILUTION RESULTS SUMMARY

Login Number: D13745
Account: PDCCOP - PDC
Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1995
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

- (anr) Analyte not requested
- (a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- (b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D13745
Account: PDCCOP - PDC
Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1996
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 06/03/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.14	.89		
Antimony	0.20	.001	.045		
Arsenic	0.40	.049	.26	0.068	<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 MP1996: D13745-1, D13745-2, D13745-3, D13745-4, D13745-5

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

9.2.1
9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D13745
 Account: PDCCOP - PDC
 Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1996
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 06/03/10

Metal	D13591-1 Original MS		SpikeLot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic	3.9	88.5	81.9	103.3	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 MP1996: D13745-1, D13745-2, D13745-3, D13745-4, D13745-5

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

9.2.2
 9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D13745
 Account: PDCCOP - PDC
 Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1996
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 06/03/10

Metal	D13591-1 Original MSD	Spikelot MPICPALL % Rec	MSD RPD	QC Limit
Aluminum				
Antimony				
Arsenic	3.9	95.4	81.9	111.7
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 MP1996: D13745-1, D13745-2, D13745-3, D13745-4, D13745-5

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

9.2.2
 9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D13745
 Account: PDCCOP - PDC
 Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1996
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 06/03/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	107	100	107.0	80-120
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 MP1996: D13745-1, D13745-2, D13745-3, D13745-4, D13745-5

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

9.2.3
 9

SERIAL DILUTION RESULTS SUMMARY

Login Number: D13745
 Account: PDCCOP - PDC
 Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP1996
 Matrix Type: SOLID

Methods: SW846 6020
 Units: ug/l

Prep Date: 06/03/10

Metal	D13591-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	48.0	45.5	5.3	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 MP1996: D13745-1, D13745-2, D13745-3, D13745-4, D13745-5

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

9.2.4
 9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D13745
Account: PDCCOP - PDC
Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP2019
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/07/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.10	.0011	.0012	0.0013	<0.10

Associated samples MP2019: D13745-1, D13745-2

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: D13745
Account: PDCCOP - PDC
Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP2019
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/07/10

Metal	D13743-3 Original MS	SpikeLot HGWSR1	% Rec	QC Limits
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Mercury 0.0076 0.38 0.442 84.3N(a) 85-115

Associated samples MP2019: D13745-1, D13745-2

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.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D13745
 Account: PDCCOP - PDC
 Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP2019
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 06/07/10

Metal	D13743-3 Original MSD	Spike HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.0076	0.39	0.459	83.3N(a) 2.6	20

Associated samples MP2019: D13745-1, D13745-2

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.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D13745
Account: PDCCOP - PDC
Project: PDC-PC5 & GG2 Profile Sampling

QC Batch ID: MP2019
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/07/10

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.35	0.4	87.5	80-120

Associated samples MP2019: D13745-1, D13745-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(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: D13745
Account: PDCCOP - PDC
Project: PDC-PC5 & GG2 Profile Sampling

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
pH	GN4588			su	8.00	7.99	99.9	99.3-100.7%

Associated Samples:

Batch GN4588: D13745-1, D13745-2

(*) Outside of QC limits

10.1
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

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #:	D13745
Accutest Quote #:	
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information							Analytical Information					
Name Accutest Mountain States (AMS)			Name Accutest - New England							XCRA	EH			Comments	
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			Phone: (508) 481-6200												
Field ID / Point of Collection	Collection		Matrix	# of bottles	Preservation						XCRA	EH			Comments
	Date	Time			HCL	NaOH	HNO3	H2SO4	None						
D13745 -1	5/27/10		Soil	1							X	X			
-2	5/27/10		Soil	1							X	X			
-															
-															
-															
-															
-															
-															
-															
-															
-															
-															
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.										For Subcontract Laboratory Use Only					
Relinquished by:	Date & Time:	Received By:	Date & Time:	Seal #:	Headspace:										
1	5/28/10	1	UPS	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	5/29/10 10:00	2	Will Dell	25/29/10 10:10 AM	<input type="checkbox"/>										
Relinquished by:	Date & Time:	Received By:	Date & Time:	Temperature °C			On Ice <input checked="" type="checkbox"/> 25°C								
3		3		3											

D13745: Chain of Custody
Page 1 of 2
Accutest Labs of New England, Inc.



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D13745

Client: AMS, CO.

Immediate Client Services Action Required: No

Date / Time Received: 5/29/2010 10:00:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project: D13745

Airbill #'s: N/A

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:			Infrared gun
3. Cooler media:			Ice (bag)

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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 property:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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

11.1
11



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: D13745
Account: ALMS - Accutest Mountain States
Project: PDCCOP: PDC-PC5 & GG2 Profile Sampling

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP11670/GN32040	2.0	0.0	mg/kg	40	39.9	99.8	80-120%
Chromium, Hexavalent	GP11670/GN32040			mg/kg	689	714	103.6	80-120%

Associated Samples:

Batch GP11670: D13745-1, D13745-2

(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D13745
Account: ALMS - Accutest Mountain States
Project: PDCCOP: PDC-PC5 & GG2 Profile Sampling

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP11670/GN32040	D13740-1	mg/kg	0.0	0.0	0.0	0-20%
Redox Potential Vs H2	GN32024	D13757-1	mv	253	255	0.8	0-20%

Associated Samples:

Batch GN32024: D13745-1, D13745-2

Batch GP11670: D13745-1, D13745-2

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D13745
Account: ALMS - Accutest Mountain States
Project: PDCCOP: PDC-PC5 & GG2 Profile Sampling

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP11670/GN32040	D13740-1	mg/kg	0.0	41.7	40.2	96.4	75-125%
Chromium, Hexavalent	GP11670/GN32040	D13740-1	mg/kg	0.0	1240	1300	104.4	75-125%

Associated Samples:

Batch GP11670: D13745-1, D13745-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

12.3
12



Technical Report for

HRL Compliance Solutions

PDC Garden Gulch 2 Job#10-352

Accutest Job Number: D12967

Sampling Date: 04/28/10

Report to:

HRL Compliance Solutions
744 Horizon Court #140
Grand Junction, CO 81506
hlucero@hrlcomp.com

ATTN: Herman Lucero

Total number of pages in report: **93**



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	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Sample Results	8
3.1: D12967-1: BTM EXC WEST 1/2	9
3.2: D12967-2: WEST END WALL	15
3.3: D12967-3: SOUTH WALL WEST 1/2	21
3.4: D12967-4: NORTH WALL WEST 1/2	27
3.5: D12967-5: BTM EXC EAST 1/2	33
3.6: D12967-6: NORTH WALL EAST 1/2	39
Section 4: Misc. Forms	45
4.1: Chain of Custody	46
Section 5: GC/MS Semi-volatiles - QC Data Summaries	47
5.1: Method Blank Summary	48
5.2: Blank Spike Summary	49
5.3: Matrix Spike/Matrix Spike Duplicate Summary	50
Section 6: GC Volatiles - QC Data Summaries	51
6.1: Method Blank Summary	52
6.2: Blank Spike Summary	54
6.3: Matrix Spike/Matrix Spike Duplicate Summary	56
Section 7: GC Semi-volatiles - QC Data Summaries	58
7.1: Method Blank Summary	59
7.2: Blank Spike Summary	61
7.3: Matrix Spike/Matrix Spike Duplicate Summary	63
Section 8: Metals Analysis - QC Data Summaries	65
8.1: Prep QC MP1824: Ba,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn	66
8.2: Prep QC MP1825: As	76
Section 9: General Chemistry - QC Data Summaries	81
9.1: Method Blank and Spike Results Summary	82
Section 10: Misc. Forms (Accutest Labs of New England, Inc.)	83
10.1: Chain of Custody	84
Section 11: Metals Analysis - QC Data (Accutest Labs of New England, Inc.)	86
11.1: Prep QC MP15228: Hg	87
Section 12: General Chemistry - QC Data (Accutest Labs of New England, Inc.)	90
12.1: Method Blank and Spike Results Summary	91
12.2: Duplicate Results Summary	92
12.3: Matrix Spike Results Summary	93



Sample Summary

HRL Compliance Solutions

Job No: D12967

PDC Garden Gulch 2 Job#10-352

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D12967-1	04/28/10	14:00 MEM	05/04/10	SO	Soil	BTM EXC WEST 1/2
D12967-2	04/28/10	14:10 MEM	05/04/10	SO	Soil	WEST END WALL
D12967-3	04/28/10	14:20 MEM	05/04/10	SO	Soil	SOUTH WALL WEST 1/2
D12967-4	04/28/10	14:25 MEM	05/04/10	SO	Soil	NORTH WALL WEST 1/2
D12967-5	04/28/10	14:30 MEM	05/04/10	SO	Soil	BTM EXC EAST 1/2
D12967-6	04/28/10	14:40 MEM	05/04/10	SO	Soil	NORTH WALL EAST 1/2

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: HRL Compliance Solutions

Job No D12967

Site: PDC Garden Gulch 2 Job#10-352

Report Dat 5/12/2010 4:15:22 PM

On 05/04/2010, six (6) samples were received at Accutest Mountain States at a temperature of 3.0°C. The samples were intact and properly preserved, unless noted below. An Accutest Mountain States Job Number of D12967 was assigned to the project. The laboratory 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.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO	Batch ID: OP1807
------------------	-------------------------

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Samples D12967-1MS and D12967-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The RPD for the MS and MSD recoveries of Indeno(1,2,3-cd)pyrene are outside control limits for sample OP1807-MSD. The MS and MSD recoveries of Indeno(1,2,3-cd)pyrene are within quality control limits

Volatiles by GC By Method SW846 8015B

Matrix SO	Batch ID: GGB233
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D12967-1MS and D12967-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8021B

Matrix SO	Batch ID: GTB233
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D12967-1MS and D12967-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO	Batch ID: OP1805
------------------	-------------------------

- All samples were extracted 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.
- Samples D12968-3MS and D12968-3MSD were used as the QC samples indicated.

Matrix SO	Batch ID: OP1827
------------------	-------------------------

- All samples were extracted 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.
- Samples D12968-5MS and D12968-5MSD were used as the QC samples indicated.

Metals By Method SW846 6010B

Matrix SO	Batch ID: MP1824
------------------	-------------------------

- All samples were digested 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.
- Samples D12967-1MS, D12967-1MSD, and D12967-1SDL were used as the QC samples for the metals analysis.
- The matrix spike and matrix spike duplicate (MS/MSD) recoveries of Nickel and Zinc and the MSD recovery of Barium are outside control limits. The blank spike (BS) recoveries of these analytes are within QC limits, proving the analysis is in control.
- The serial dilution RPDs for Cadmium, Chromium, Nickel, Selenium, and Zinc are outside control limits for sample MP1824-SD1. The percent differences are acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 6020

Matrix SO	Batch ID: MP1825
------------------	-------------------------

- All samples were digested 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.
- Samples D12967-1SDL, D12967-1MS, and D12967-1MSD were used as the QC samples for the metals analysis.

Metals By Method SW846 7471A

Matrix SO	Batch ID: M:MP15228
------------------	----------------------------

- The data for SW846 7471A meets quality control requirements.
- Mercury: Analysis performed at Accutest Laboratories, Marlborough, MA.

Wet Chemistry By Method ASTM E1498-76M

Matrix SO	Batch ID: M:GN31777
------------------	----------------------------

- The data for ASTM E1498-76M meets quality control requirements.
- The following samples were run outside of holding time for method ASTM E1498-76M: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6
- Redox Potential Vs H2: Analysis performed at Accutest Laboratories, Marlborough, MA.

Wet Chemistry By Method SM19 2540B M

Matrix SO	Batch ID: GN4210
------------------	-------------------------

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

Wet Chemistry By Method SW846 3060/7196A M

Matrix SO	Batch ID: R2208
------------------	------------------------

- The data for SW846 3060/7196A M meets quality control requirements.
- Trivalent Chromium: Calculated as: (Chromium) - (Hexavalent Chromium)

Matrix SO	Batch ID: R2209
------------------	------------------------

- The data for SW846 3060/7196A M meets quality control requirements.

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO	Batch ID: M:GP11589
------------------	----------------------------

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

Wet Chemistry By Method SW846 9045C

Matrix SO

Batch ID: GN4202

- The following samples were run outside of holding time for method SW846 9045C: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

Accutest Mountain States certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest Mountain States's Quality System precision, accuracy and complete

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.

Accutest Mountain States is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Mountain States indicated via signature on the report cov

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Accutest Mountain States

Job No D12967

Site: HRLCCOGJ: PDC Garden Gulch 2 Job#10-352

Report Date 5/12/2010 5:46:53 PM

6 Sample(s) were collected on 04/28/2010 and were received at Accutest on 05/04/2010 properly preserved, at 1.8 Deg. C and intact. These Samples received an Accutest job number of D12967. 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.

Metals By Method SW846 7471A

Matrix SO	Batch ID: MP15228
------------------	--------------------------

- All samples were digested 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) D13175-1DUP, D13175-1MS were used as the QC samples for metals.

Wet Chemistry By Method ASTM E1498-76M

Matrix SO	Batch ID: GN31777
------------------	--------------------------

- Sample(s) D12967-1DUP were used as the QC samples for Redox Potential Vs H2.

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO	Batch ID: GP11589
------------------	--------------------------

- 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) D12967-2DUP, D12967-2MS were used as the QC samples for Chromium, Hexavalent.

Matrix SO	Batch ID: GP11590
------------------	--------------------------

- 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) D12967-3DUP, D12967-3MS 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(D12967).



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	BTM EXC WEST 1/2	
Lab Sample ID:	D12967-1	Date Sampled: 04/28/10
Matrix:	SO - Soil	Date Received: 05/04/10
Method:	SW846 8270C BY SIM SW846 3540C	Percent Solids: 83.4
Project:	PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G00747.D	2	05/06/10	TMB	05/05/10	OP1807	E3G12
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	16	15	ug/kg	
208-96-8	Acenaphthylene	ND	80	16	ug/kg	
120-12-7	Anthracene	ND	16	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	16	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	16	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	16	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	16	10	ug/kg	
218-01-9	Chrysene	ND	16	8.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	16	12	ug/kg	
206-44-0	Fluoranthene	ND	16	9.8	ug/kg	
86-73-7	Fluorene	ND	16	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	16	10	ug/kg	
90-12-0	1-Methylnaphthalene	ND	16	14	ug/kg	
91-57-6	2-Methylnaphthalene	ND	80	24	ug/kg	
91-20-3	Naphthalene	ND	80	18	ug/kg	
85-01-8	Phenanthrene	ND	16	13	ug/kg	
129-00-0	Pyrene	ND	16	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	57%		10-193%
321-60-8	2-Fluorobiphenyl	53%		20-138%
1718-51-0	Terphenyl-d14	53%		17-174%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

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

Report of Analysis

3.1
3

Client Sample ID: BTM EXC WEST 1/2	
Lab Sample ID: D12967-1	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846 8015B	Percent Solids: 83.4
Project: PDC Garden Gulch 2 Job#10-352	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB4317.D	1	05/09/10	DG	n/a	n/a	GGB233
Run #2							

	Initial Weight
Run #1	1.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	1.2	1.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	105%		60-140%		

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

3.1
3

Client Sample ID: BTM EXC WEST 1/2	
Lab Sample ID: D12967-1	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846 8021B	Percent Solids: 83.4
Project: PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB4317.D	1	05/09/10	DG	n/a	n/a	GTB233
Run #2							

Run #	Initial Weight
Run #1	1.0 g
Run #2	

Purgeable Aromatics

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	103%		60-140%

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

3.1
3

Client Sample ID:	BTM EXC WEST 1/2		Date Sampled:	04/28/10
Lab Sample ID:	D12967-1		Date Received:	05/04/10
Matrix:	SO - Soil		Percent Solids:	83.4
Method:	SW846-8015B SW846 3550B			
Project:	PDC Garden Gulch 2 Job#10-352			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD1191.D	1	05/06/10	LAC	05/05/10	OP1805	GFD87
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 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	93%		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

31
3

Client Sample ID: BTM EXC WEST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-1	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 83.4
Project: PDC Garden Gulch 2 Job#10-352	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	10.7	0.41	mg/kg	5	05/07/10	05/10/10 SES	SW846 6020 ³	SW846 3050B ⁶
Barium	260	1.0	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Cadmium	< 1.0	1.0	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Chromium	8.7	1.0	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Copper	18.2	0.52	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Lead	9.2	5.2	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Mercury ^a	< 0.036	0.036	mg/kg	1	05/12/10	05/12/10 AMA	SW846 7471A ¹	SW846 7471A ⁴
Nickel	17.0	3.1	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Selenium	< 5.2	5.2	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Silver	< 3.1	3.1	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Zinc	60.6	3.1	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵

(1) Instrument QC Batch: M:MA11758

(2) Instrument QC Batch: MA648

(3) Instrument QC Batch: MA656

(4) Prep QC Batch: M:MP15228

(5) Prep QC Batch: MP1824

(6) Prep QC Batch: MP1825

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: BTM EXC WEST 1/2	
Lab Sample ID: D12967-1	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
	Percent Solids: 83.4
Project: PDC Garden Gulch 2 Job#10-352	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.4	2.4	mg/kg	1	05/10/10 15:45	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.7	3.4	mg/kg	1	05/10/10 15:45	AMA	SW846 3060/7196A M
Redox Potential Vs H2 ^a	304		mv	1	05/05/10	AMA	ASTM E1498-76M
Solids, Percent	83.4		%	1	05/04/10	SWT	SM19 2540B M
pH	8.68		su	1	05/04/10 10:05	CJ	SW846 9045C

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

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: WEST END WALL	
Lab Sample ID: D12967-2	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846 8270C BY SIM SW846 3540C	Percent Solids: 82.3
Project: PDC Garden Gulch 2 Job#10-352	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G00748.D	2	05/07/10	TMB	05/05/10	OP1807	E3G12
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	16	15	ug/kg	
208-96-8	Acenaphthylene	ND	81	17	ug/kg	
120-12-7	Anthracene	ND	16	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	16	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	16	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	16	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	16	10	ug/kg	
218-01-9	Chrysene	ND	16	8.1	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	16	12	ug/kg	
206-44-0	Fluoranthene	ND	16	9.9	ug/kg	
86-73-7	Fluorene	ND	16	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	16	11	ug/kg	
90-12-0	1-Methylnaphthalene	ND	16	14	ug/kg	
91-57-6	2-Methylnaphthalene	ND	81	25	ug/kg	
91-20-3	Naphthalene	ND	81	18	ug/kg	
85-01-8	Phenanthrene	ND	16	13	ug/kg	
129-00-0	Pyrene	ND	16	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		10-193%
321-60-8	2-Fluorobiphenyl	67%		20-138%
1718-51-0	Terphenyl-d14	72%		17-174%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

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

Report of Analysis

32
3

Client Sample ID: WEST END WALL	
Lab Sample ID: D12967-2	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846 8015B	Percent Solids: 82.3
Project: PDC Garden Gulch 2 Job#10-352	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB4320.D	1	05/09/10	DG	n/a	n/a	GGB233
Run #2							

	Initial Weight
Run #1	1.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	1.2	1.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	98%		60-140%		

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

32
3

Client Sample ID: WEST END WALL	
Lab Sample ID: D12967-2	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846 8021B	Percent Solids: 82.3
Project: PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB4320.D	1	05/09/10	DG	n/a	n/a	GTB233
Run #2							

Run #	Initial Weight
Run #1	1.0 g
Run #2	

Purgeable Aromatics

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	95%		60-140%

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

32
3

Client Sample ID: WEST END WALL	
Lab Sample ID: D12967-2	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846-8015B SW846 3550B	Percent Solids: 82.3
Project: PDC Garden Gulch 2 Job#10-352	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD1192.D	1	05/06/10	LAC	05/05/10	OP1805	GFD87
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	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

32
3

Client Sample ID: WEST END WALL	
Lab Sample ID: D12967-2	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
	Percent Solids: 82.3
Project: PDC Garden Gulch 2 Job#10-352	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	14.8	0.37	mg/kg	5	05/07/10	05/10/10 SES	SW846 6020 ³	SW846 3050B ⁶
Barium	248	0.93	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Cadmium	< 0.93	0.93	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Chromium	8.3	0.93	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Copper	18.1	0.47	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Lead	9.1	4.7	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Mercury ^a	< 0.035	0.035	mg/kg	1	05/12/10	05/12/10 AMA	SW846 7471A ¹	SW846 7471A ⁴
Nickel	15.2	2.8	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Selenium	< 4.7	4.7	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Silver	< 2.8	2.8	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Zinc	59.4	2.8	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵

- (1) Instrument QC Batch: M:MA11758
- (2) Instrument QC Batch: MA648
- (3) Instrument QC Batch: MA656
- (4) Prep QC Batch: M:MP15228
- (5) Prep QC Batch: MP1824
- (6) Prep QC Batch: MP1825

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: WEST END WALL	
Lab Sample ID: D12967-2	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
	Percent Solids: 82.3
Project: PDC Garden Gulch 2 Job#10-352	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.4	2.4	mg/kg	1	05/10/10 15:41	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.3	3.3	mg/kg	1	05/10/10 15:41	AMA	SW846 3060/7196A M
Redox Potential Vs H2 ^a	391		mv	1	05/05/10	AMA	ASTM E1498-76M
Solids, Percent	82.3		%	1	05/04/10	SWT	SM19 2540B M
pH	9.16		su	1	05/04/10 10:05	CJ	SW846 9045C

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

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SOUTH WALL WEST 1/2	
Lab Sample ID:	D12967-3	Date Sampled: 04/28/10
Matrix:	SO - Soil	Date Received: 05/04/10
Method:	SW846 8270C BY SIM SW846 3540C	Percent Solids: 85.8
Project:	PDC Garden Gulch 2 Job#10-352	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G00749.D	2	05/07/10	TMB	05/05/10	OP1807	E3G12
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	15	14	ug/kg	
208-96-8	Acenaphthylene	ND	77	16	ug/kg	
120-12-7	Anthracene	ND	15	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	15	15	ug/kg	
50-32-8	Benzo(a)pyrene	ND	15	9.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	15	11	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	15	9.7	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	15	9.8	ug/kg	
218-01-9	Chrysene	ND	15	7.7	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	15	11	ug/kg	
206-44-0	Fluoranthene	ND	15	9.5	ug/kg	
86-73-7	Fluorene	ND	15	15	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	15	10	ug/kg	
90-12-0	1-Methylnaphthalene	ND	15	14	ug/kg	
91-57-6	2-Methylnaphthalene	ND	77	24	ug/kg	
91-20-3	Naphthalene	ND	77	17	ug/kg	
85-01-8	Phenanthrene	ND	15	12	ug/kg	
129-00-0	Pyrene	ND	15	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		10-193%
321-60-8	2-Fluorobiphenyl	68%		20-138%
1718-51-0	Terphenyl-d14	71%		17-174%

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: SOUTH WALL WEST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-3	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 85.8
Method: SW846 8015B	
Project: PDC Garden Gulch 2 Job#10-352	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB4321.D	1	05/09/10	DG	n/a	n/a	GGB233
Run #2							

	Initial Weight
Run #1	1.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	1.2	1.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	105%		60-140%		

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: SOUTH WALL WEST 1/2	
Lab Sample ID: D12967-3	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846 8021B	Percent Solids: 85.8
Project: PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB4321.D	1	05/09/10	DG	n/a	n/a	GTB233
Run #2							

Run #	Initial Weight
Run #1	1.0 g
Run #2	

Purgeable Aromatics

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	102%		60-140%

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: SOUTH WALL WEST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-3	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 85.8
Method: SW846-8015B SW846 3550B	
Project: PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD1193.D	1	05/06/10	LAC	05/05/10	OP1805	GFD87
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 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	99%		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: SOUTH WALL WEST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-3	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 85.8
Project: PDC Garden Gulch 2 Job#10-352	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	11.1	0.40	mg/kg	5	05/07/10	05/10/10 SES	SW846 6020 ⁴	SW846 3050B ⁷
Barium	227	1.0	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁶
Cadmium	< 1.0	1.0	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ³	SW846 3050B ⁶
Chromium	9.5	1.0	mg/kg	1	05/07/10	05/10/10 JM	SW846 6010B ³	SW846 3050B ⁶
Copper	17.3	0.50	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁶
Lead	10	5.0	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁶
Mercury ^a	< 0.034	0.034	mg/kg	1	05/12/10	05/12/10 AMA	SW846 7471A ¹	SW846 7471A ⁵
Nickel	15.3	3.0	mg/kg	1	05/07/10	05/10/10 JM	SW846 6010B ³	SW846 3050B ⁶
Selenium	< 5.0	5.0	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁶
Silver	< 3.0	3.0	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁶
Zinc	59.1	3.0	mg/kg	1	05/07/10	05/10/10 JM	SW846 6010B ³	SW846 3050B ⁶

- (1) Instrument QC Batch: M:MA11758
- (2) Instrument QC Batch: MA648
- (3) Instrument QC Batch: MA653
- (4) Instrument QC Batch: MA656
- (5) Prep QC Batch: M:MP15228
- (6) Prep QC Batch: MP1824
- (7) Prep QC Batch: MP1825

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: SOUTH WALL WEST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-3	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 85.8
Project: PDC Garden Gulch 2 Job#10-352	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	05/10/10 16:31	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	9.5	3.3	mg/kg	1	05/10/10 16:31	AMA	SW846 3060/7196A M
Redox Potential Vs H2 ^a	334		mv	1	05/05/10	AMA	ASTM E1498-76M
Solids, Percent	85.8		%	1	05/04/10	SWT	SM19 2540B M
pH	8.79		su	1	05/04/10 10:05	CJ	SW846 9045C

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

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	NORTH WALL WEST 1/2	
Lab Sample ID:	D12967-4	Date Sampled: 04/28/10
Matrix:	SO - Soil	Date Received: 05/04/10
Method:	SW846 8270C BY SIM SW846 3540C	Percent Solids: 83.3
Project:	PDC Garden Gulch 2 Job#10-352	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G00750.D	2	05/07/10	TMB	05/05/10	OP1807	E3G12
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	16	15	ug/kg	
208-96-8	Acenaphthylene	ND	80	16	ug/kg	
120-12-7	Anthracene	ND	16	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	16	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	16	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	16	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	16	10	ug/kg	
218-01-9	Chrysene	ND	16	8.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	16	12	ug/kg	
206-44-0	Fluoranthene	ND	16	9.8	ug/kg	
86-73-7	Fluorene	ND	16	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	16	10	ug/kg	
90-12-0	1-Methylnaphthalene	ND	16	14	ug/kg	
91-57-6	2-Methylnaphthalene	ND	80	24	ug/kg	
91-20-3	Naphthalene	ND	80	18	ug/kg	
85-01-8	Phenanthrene	ND	16	13	ug/kg	
129-00-0	Pyrene	ND	16	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		10-193%
321-60-8	2-Fluorobiphenyl	54%		20-138%
1718-51-0	Terphenyl-d14	54%		17-174%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

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

Report of Analysis

3.4
3

Client Sample ID: NORTH WALL WEST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-4	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 83.3
Method: SW846 8015B	
Project: PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB4322.D	1	05/09/10	DG	n/a	n/a	GGB233
Run #2							

Run #	Initial Weight
Run #1	1.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	1.2	1.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	98%		60-140%		

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: NORTH WALL WEST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-4	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 83.3
Method: SW846 8021B	
Project: PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB4322.D	1	05/09/10	DG	n/a	n/a	GTB233
Run #2							

Run #	Initial Weight
Run #1	1.0 g
Run #2	

Purgeable Aromatics

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	95%		60-140%

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

3.4
3

Client Sample ID: NORTH WALL WEST 1/2	
Lab Sample ID: D12967-4	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846-8015B SW846 3550B	Percent Solids: 83.3
Project: PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD1194.D	1	05/06/10	LAC	05/05/10	OP1805	GFD87
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 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	99%		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: NORTH WALL WEST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-4	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 83.3
Project: PDC Garden Gulch 2 Job#10-352	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	10.2	0.36	mg/kg	5	05/07/10	05/10/10 SES	SW846 6020 ³	SW846 3050B ⁶
Barium	241	0.90	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Cadmium	< 0.90	0.90	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Chromium	8.6	0.90	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Copper	18.2	0.45	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Lead	9.5	4.5	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Mercury ^a	< 0.040	0.040	mg/kg	1	05/12/10	05/12/10 AMA	SW846 7471A ¹	SW846 7471A ⁴
Nickel	15.6	2.7	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Selenium	< 4.5	4.5	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Silver	< 2.7	2.7	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Zinc	57.7	2.7	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵

- (1) Instrument QC Batch: M:MA11758
- (2) Instrument QC Batch: MA648
- (3) Instrument QC Batch: MA656
- (4) Prep QC Batch: M:MP15228
- (5) Prep QC Batch: MP1824
- (6) Prep QC Batch: MP1825

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	NORTH WALL WEST 1/2	Date Sampled:	04/28/10
Lab Sample ID:	D12967-4	Date Received:	05/04/10
Matrix:	SO - Soil	Percent Solids:	83.3
Project:	PDC Garden Gulch 2 Job#10-352		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.4	2.4	mg/kg	1	05/10/10 15:45	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.6	3.3	mg/kg	1	05/10/10 15:45	AMA	SW846 3060/7196A M
Redox Potential Vs H2 ^a	343		mv	1	05/05/10	AMA	ASTM E1498-76M
Solids, Percent	83.3		%	1	05/04/10	SWT	SM19 2540B M
pH	9.73		su	1	05/04/10 10:05	CJ	SW846 9045C

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

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: BTM EXC EAST 1/2	
Lab Sample ID: D12967-5	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846 8270C BY SIM SW846 3540C	Percent Solids: 83.9
Project: PDC Garden Gulch 2 Job#10-352	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G00751.D	2	05/07/10	TMB	05/05/10	OP1807	E3G12
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	16	15	ug/kg	
208-96-8	Acenaphthylene	ND	79	16	ug/kg	
120-12-7	Anthracene	ND	16	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	16	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	16	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	16	9.9	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	16	10	ug/kg	
218-01-9	Chrysene	ND	16	7.9	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	16	12	ug/kg	
206-44-0	Fluoranthene	ND	16	9.8	ug/kg	
86-73-7	Fluorene	ND	16	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	16	10	ug/kg	
90-12-0	1-Methylnaphthalene	ND	16	14	ug/kg	
91-57-6	2-Methylnaphthalene	ND	79	24	ug/kg	
91-20-3	Naphthalene	ND	79	18	ug/kg	
85-01-8	Phenanthrene	ND	16	13	ug/kg	
129-00-0	Pyrene	ND	16	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		10-193%
321-60-8	2-Fluorobiphenyl	60%		20-138%
1718-51-0	Terphenyl-d14	81%		17-174%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

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

Report of Analysis

3.5
3

Client Sample ID: BTM EXC EAST 1/2	
Lab Sample ID: D12967-5	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846 8015B	Percent Solids: 83.9
Project: PDC Garden Gulch 2 Job#10-352	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB4323.D	1	05/09/10	DG	n/a	n/a	GGB233
Run #2							

	Initial Weight
Run #1	1.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	1.2	1.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	97%		60-140%		

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: BTM EXC EAST 1/2	
Lab Sample ID: D12967-5	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846 8021B	Percent Solids: 83.9
Project: PDC Garden Gulch 2 Job#10-352	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB4323.D	1	05/09/10	DG	n/a	n/a	GTB233
Run #2							

	Initial Weight
Run #1	1.0 g
Run #2	

Purgeable Aromatics

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	94%		60-140%

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

3.5
3

Client Sample ID: BTM EXC EAST 1/2	
Lab Sample ID: D12967-5	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846-8015B SW846 3550B	Percent Solids: 83.9
Project: PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD1262.D	1	05/10/10	CP	05/08/10	OP1827	GFD89
Run #2							

Run #	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)	ND	16	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: BTM EXC EAST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-5	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 83.9
Project: PDC Garden Gulch 2 Job#10-352	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	10.8	0.36	mg/kg	5	05/07/10	05/10/10 SES	SW846 6020 ³	SW846 3050B ⁶
Barium	251	0.89	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Cadmium	< 0.89	0.89	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Chromium	8.0	0.89	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Copper	17.7	0.44	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Lead	9.2	4.4	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Mercury ^a	< 0.036	0.036	mg/kg	1	05/12/10	05/12/10 AMA	SW846 7471A ¹	SW846 7471A ⁴
Nickel	15.1	2.7	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Selenium	< 4.4	4.4	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Silver	< 2.7	2.7	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Zinc	55.9	2.7	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵

- (1) Instrument QC Batch: M:MA11758
- (2) Instrument QC Batch: MA648
- (3) Instrument QC Batch: MA656
- (4) Prep QC Batch: M:MP15228
- (5) Prep QC Batch: MP1824
- (6) Prep QC Batch: MP1825

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: BTM EXC EAST 1/2	
Lab Sample ID: D12967-5	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
	Percent Solids: 83.9
Project: PDC Garden Gulch 2 Job#10-352	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.3	2.3	mg/kg	1	05/10/10 15:45	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.0	3.2	mg/kg	1	05/10/10 15:45	AMA	SW846 3060/7196A M
Redox Potential Vs H2 ^a	355		mv	1	05/05/10	AMA	ASTM E1498-76M
Solids, Percent	83.9		%	1	05/04/10	SWT	SM19 2540B M
pH	9.43		su	1	05/04/10 10:05	CJ	SW846 9045C

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

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	NORTH WALL EAST 1/2	
Lab Sample ID:	D12967-6	Date Sampled: 04/28/10
Matrix:	SO - Soil	Date Received: 05/04/10
Method:	SW846 8270C BY SIM SW846 3540C	Percent Solids: 83.8
Project:	PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G00766.D	2	05/07/10	TMB	05/05/10	OP1807	E3G12
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	16	15	ug/kg	
208-96-8	Acenaphthylene	ND	80	16	ug/kg	
120-12-7	Anthracene	ND	16	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	16	16	ug/kg	
50-32-8	Benzo(a)pyrene	ND	16	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	16	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	16	9.9	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	16	10	ug/kg	
218-01-9	Chrysene	ND	16	8.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	16	12	ug/kg	
206-44-0	Fluoranthene	ND	16	9.8	ug/kg	
86-73-7	Fluorene	ND	16	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	16	10	ug/kg	
90-12-0	1-Methylnaphthalene	ND	16	14	ug/kg	
91-57-6	2-Methylnaphthalene	ND	80	24	ug/kg	
91-20-3	Naphthalene	ND	80	18	ug/kg	
85-01-8	Phenanthrene	ND	16	13	ug/kg	
129-00-0	Pyrene	ND	16	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		10-193%
321-60-8	2-Fluorobiphenyl	70%		20-138%
1718-51-0	Terphenyl-d14	68%		17-174%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

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

Report of Analysis

3.6
3

Client Sample ID: NORTH WALL EAST 1/2	
Lab Sample ID: D12967-6	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846 8015B	Percent Solids: 83.8
Project: PDC Garden Gulch 2 Job#10-352	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB4324.D	1	05/09/10	DG	n/a	n/a	GGB233
Run #2							

	Initial Weight
Run #1	1.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	1.2	1.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	98%		60-140%		

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: NORTH WALL EAST 1/2	
Lab Sample ID: D12967-6	Date Sampled: 04/28/10
Matrix: SO - Soil	Date Received: 05/04/10
Method: SW846 8021B	Percent Solids: 83.8
Project: PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB4324.D	1	05/09/10	DG	n/a	n/a	GTB233
Run #2							

Run #	Initial Weight
Run #1	1.0 g
Run #2	

Purgeable Aromatics

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	95%		60-140%

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

3.6
3

Client Sample ID: NORTH WALL EAST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-6	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 83.8
Method: SW846-8015B SW846 3550B	
Project: PDC Garden Gulch 2 Job#10-352	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD1195.D	1	05/06/10	LAC	05/05/10	OP1805	GFD87
Run #2							

Run #	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	97%		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: NORTH WALL EAST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-6	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 83.8
Project: PDC Garden Gulch 2 Job#10-352	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	11.0	0.38	mg/kg	5	05/07/10	05/10/10 SES	SW846 6020 ³	SW846 3050B ⁶
Barium	247	0.96	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Cadmium	< 0.96	0.96	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Chromium	8.1	0.96	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Copper	16.2	0.48	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Lead	9.0	4.8	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Mercury ^a	< 0.034	0.034	mg/kg	1	05/12/10	05/12/10 AMA	SW846 7471A ¹	SW846 7471A ⁴
Nickel	14.8	2.9	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Selenium	< 4.8	4.8	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Silver	< 2.9	2.9	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵
Zinc	56.4	2.9	mg/kg	1	05/07/10	05/07/10 JM	SW846 6010B ²	SW846 3050B ⁵

- (1) Instrument QC Batch: M:MA11758
- (2) Instrument QC Batch: MA648
- (3) Instrument QC Batch: MA656
- (4) Prep QC Batch: M:MP15228
- (5) Prep QC Batch: MP1824
- (6) Prep QC Batch: MP1825

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: NORTH WALL EAST 1/2	Date Sampled: 04/28/10
Lab Sample ID: D12967-6	Date Received: 05/04/10
Matrix: SO - Soil	Percent Solids: 83.8
Project: PDC Garden Gulch 2 Job#10-352	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 2.4	2.4	mg/kg	1	05/10/10 15:45	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	8.1	3.4	mg/kg	1	05/10/10 15:45	AMA	SW846 3060/7196A M
Redox Potential Vs H2 ^a	383		mv	1	05/05/10	AMA	ASTM E1498-76M
Solids, Percent	83.8		%	1	05/04/10	SWT	SM19 2540B M
pH	9.67		su	1	05/04/10 10:05	CJ	SW846 9045C

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

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

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

4036 Youngfield Street, Wheat Ridge, Colorado 80033
 TEL: 303-425-6021; 877-737-4521 FAX: 303-425-6854
 www.accutest.com

FED-EX Tracking # _____
 Accutest Quote # _____
 Bottle Order Control # _____
 Accutest Job # **D12967**

Client / Reporting Information		Project Information				Requested Analysis (see TEST CODE sheet)										Matrix Codes			
Company Name HL's Compliance		Project Name PDC Garden Gulch 2 T/B # 10-352				<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX ITMPH</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">DEPH</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Sun Vials BAW CORC Rebk 9/10/10</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Tidel Models 9/10-1 see manual</div> </div>										Matrix Codes DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank			
Street Address 744 Horizon Ct Suite 140		Street PDC Garden Gulch 2		Billing Information (if different from Report to)															
City Grand Jct, CO 81506		City Grand Jct, CO		Company Name															
Project Contact Herman Kucera hkuera@hlscomp.com		Project #		Street Address															
Phone # 970-243-3271 - 970-243-3280		Client Purchase Order #		City															
Samples (Name/s) MEM		Project Manager Herman Kucera		Attention:				State				Zip							
Accutest Sample #	Field ID / Point of Collection	MEQ/DI Vial #	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	None	DI Water	MEQH	ENUCONE	LAB USE ONLY			
	Btm Exc West 1/2		4/28/10	14:00	MEM	SO	4									01			
	West End Wall			14:10												02			
	South wall West 1/2			14:20												03			
	North wall West 1/2			14:25												04			
	Btm Exc East 1/2			14:30												05			
	North wall East 1/2			14:40												06			
Turnaround Time (Business days)		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		Approved By (Accutest PM) / Date:				<input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <small>Level 1 = Results Only Level 2 = Results + QC Summary + Case Narrative Level 3 = Results + QC Summary + Partial Raw data Level 4 = Full Deliverable</small>		<input type="checkbox"/> PDF <input type="checkbox"/> EDD Format <input type="checkbox"/> Other		Do Not Run BAW, Run Tidel BAW.									
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:							
[Signature]		5-3-10 1700		1				2				2							
Relinquished by Sampler		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:							
3				3				4				4							
Relinquished by:		Date Time:		Received By:		Date Time:		Custody Seal #		<input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Preserved where applicable		<input type="checkbox"/> On Ice <input checked="" type="checkbox"/> N/A		Cooler Temp. 3.0			
5				5				51410 9/10											

4.1
4

D12967: Chain of Custody

Page 1 of 1



GC/MS Semi-volatiles

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1807-MB	3G00744.D	1	05/06/10	TMB	05/05/10	OP1807	E3G12

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	6.7	6.2	ug/kg	
208-96-8	Acenaphthylene	ND	33	6.9	ug/kg	
120-12-7	Anthracene	ND	6.7	4.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	6.7	6.5	ug/kg	
50-32-8	Benzo(a)pyrene	ND	6.7	4.2	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	6.7	4.8	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	6.7	4.2	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	6.7	4.2	ug/kg	
218-01-9	Chrysene	ND	6.7	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	6.7	4.9	ug/kg	
206-44-0	Fluoranthene	ND	6.7	4.1	ug/kg	
86-73-7	Fluorene	ND	6.7	6.5	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	6.7	4.4	ug/kg	
90-12-0	1-Methylnaphthalene	ND	6.7	5.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	10	ug/kg	
91-20-3	Naphthalene	ND	33	7.4	ug/kg	
85-01-8	Phenanthrene	ND	6.7	5.3	ug/kg	
129-00-0	Pyrene	ND	6.7	4.5	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
4165-60-0	Nitrobenzene-d5	88%	10-193%
321-60-8	2-Fluorobiphenyl	80%	20-138%
1718-51-0	Terphenyl-d14	98%	17-174%

Blank Spike Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1807-BS	3G00745.D	1	05/06/10	TMB	05/05/10	OP1807	E3G12

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	63.9	77	40-136
208-96-8	Acenaphthylene	83.3	63.4	76	42-139
120-12-7	Anthracene	83.3	66.6	80	40-141
56-55-3	Benzo(a)anthracene	83.3	69.3	83	38-143
50-32-8	Benzo(a)pyrene	83.3	69.7	84	39-145
205-99-2	Benzo(b)fluoranthene	83.3	70.0	84	38-151
191-24-2	Benzo(g,h,i)perylene	83.3	65.4	78	35-136
207-08-9	Benzo(k)fluoranthene	83.3	70.7	85	38-147
218-01-9	Chrysene	83.3	67.5	81	39-137
53-70-3	Dibenzo(a,h)anthracene	83.3	65.6	79	35-139
206-44-0	Fluoranthene	83.3	67.2	81	34-132
86-73-7	Fluorene	83.3	64.5	77	41-136
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	65.5	79	31-144
90-12-0	1-Methylnaphthalene	83.3	63.3	76	36-130
91-57-6	2-Methylnaphthalene	83.3	63.1	76	40-131
91-20-3	Naphthalene	83.3	64.3	77	36-130
85-01-8	Phenanthrene	83.3	63.8	77	40-135
129-00-0	Pyrene	83.3	69.1	83	29-157

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	85%	10-193%
321-60-8	2-Fluorobiphenyl	76%	20-138%
1718-51-0	Terphenyl-d14	81%	17-174%

5.2.1
5

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1807-MS	3G00757.D	2	05/07/10	TMB	05/05/10	OP1807	E3G12
OP1807-MSD	3G00758.D	2	05/07/10	TMB	05/05/10	OP1807	E3G12
D12967-1	3G00747.D	2	05/06/10	TMB	05/05/10	OP1807	E3G12

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

CAS No.	Compound	D12967-1 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND	99.9	70.4	71	66.5	67	6	20-151/30	
208-96-8	Acenaphthylene	ND	99.9	73.6	74	70.3	71	5	23-156/30	
120-12-7	Anthracene	ND	99.9	72.1	72	68.6	69	5	25-149/30	
56-55-3	Benzo(a)anthracene	ND	99.9	93.0	93	86.0	86	8	22-157/30	
50-32-8	Benzo(a)pyrene	ND	99.9	89.9	90	81.8	82	9	23-153/30	
205-99-2	Benzo(b)fluoranthene	ND	99.9	90.7	91	85.2	85	6	22-161/30	
191-24-2	Benzo(g,h,i)perylene	ND	99.9	71.4	72	64.2	64	11	20-158/30	
207-08-9	Benzo(k)fluoranthene	ND	99.9	73.8	74	64.8	65	13	17-161/30	
218-01-9	Chrysene	ND	99.9	73.1	73	67.5	68	8	16-159/30	
53-70-3	Dibenzo(a,h)anthracene	ND	99.9	70.9	71	66.2	66	7	21-154/30	
206-44-0	Fluoranthene	ND	99.9	85.5	86	79.7	80	7	16-140/30	
86-73-7	Fluorene	ND	99.9	71.8	72	68.8	69	4	15-153/30	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	99.9	74.8	75	42.1	42	56* a	21-159/30	
90-12-0	1-Methylnaphthalene	ND	99.9	72.9	73	68.6	69	6	10-148/30	
91-57-6	2-Methylnaphthalene	ND	99.9	72.0	72	67.8	68	6	10-181/30	
91-20-3	Naphthalene	ND	99.9	71.0	71	67.2	67	5	10-176/30	
85-01-8	Phenanthrene	ND	99.9	67.8	68	62.2	62	9	22-152/30	
129-00-0	Pyrene	ND	99.9	75.4	76	70.4	71	7	10-200/30	

CAS No.	Surrogate Recoveries	MS	MSD	D12967-1	Limits
4165-60-0	Nitrobenzene-d5	76%	76%	57%	10-193%
321-60-8	2-Fluorobiphenyl	72%	68%	53%	20-138%
1718-51-0	Terphenyl-d14	71%	66%	53%	17-174%

(a) High RPD due to possible sample nonhomogeneity.

5.3.1
 5



GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB233-MB	GB4315.D	1	05/09/10	DG	n/a	n/a	GGB233

The QC reported here applies to the following samples:

Method: SW846 8015B

D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	1.0	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	105% 60-140%

Method Blank Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB233-MB	TB4315.D	1	05/09/10	DG	n/a	n/a	GTB233

The QC reported here applies to the following samples:

Method: SW846 8021B

D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	5.0	ug/kg	
100-41-4	Ethylbenzene	ND	10	10	ug/kg	
108-88-3	Toluene	ND	10	10	ug/kg	
95-47-6	o-Xylene	ND	10	10	ug/kg	
	m,p-Xylene	ND	10	10	ug/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	103% 60-140%

6.1.2
6

Blank Spike Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB233-BS	GB4316.D	1	05/09/10	DG	n/a	n/a	GGB233

The QC reported here applies to the following samples:

Method: SW846 8015B

D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	11	10.1	92	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	120%	60-140%

6.2.1
6

Blank Spike Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB233-BS	TB4316.D	1	05/09/10	DG	n/a	n/a	GTB233

The QC reported here applies to the following samples:

Method: SW846 8021B

D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	136	123	90	70-130
100-41-4	Ethylbenzene	228	214	94	70-130
108-88-3	Toluene	1060	961	91	70-130
95-47-6	o-Xylene	330	324	98	70-130
	m,p-Xylene	750	713	95	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	111%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D12967-1MS	GB4318.D	1	05/09/10	DG	n/a	n/a	GGB233
D12967-1MSD	GB4319.D	1	05/09/10	DG	n/a	n/a	GGB233
D12967-1	GB4317.D	1	05/09/10	DG	n/a	n/a	GGB233

The QC reported here applies to the following samples:

Method: SW846 8015B

D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

CAS No.	Compound	D12967-1 mg/kg	Spike Q mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	13.2	10.3	78	10.0	76	3	62-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D12967-1	Limits
120-82-1	1,2,4-Trichlorobenzene	117%	107%	105%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D12967-1MS	TB4318.D	1	05/09/10	DG	n/a	n/a	GTB233
D12967-1MSD	TB4319.D	1	05/09/10	DG	n/a	n/a	GTB233
D12967-1	TB4317.D	1	05/09/10	DG	n/a	n/a	GTB233

The QC reported here applies to the following samples:

Method: SW846 8021B

D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

CAS No.	Compound	D12967-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	163	137	84	137	84	0	70-130/30
100-41-4	Ethylbenzene	ND	273	223	82	217	79	3	62-130/30
108-88-3	Toluene	ND	1270	1040	82	1020	80	2	70-130/30
95-47-6	o-Xylene	ND	395	336	85	325	82	3	65-135/30
	m,p-Xylene	ND	899	740	82	716	80	3	60-140/30

CAS No.	Surrogate Recoveries	MS	MSD	D12967-1	Limits
120-82-1	1,2,4-Trichlorobenzene	106%	98%	103%	60-140%



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

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1805-MB	FD1177.D	1	05/06/10	LAC	05/05/10	OP1805	GFD87

The QC reported here applies to the following samples:

Method: SW846-8015B

D12967-1, D12967-2, D12967-3, D12967-4, D12967-6

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	112% 63-130%

7.1.1
7

Method Blank Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1827-MB	FD1254.D	1	05/10/10	CP	05/08/10	OP1827	GFD89

The QC reported here applies to the following samples:

Method: SW846-8015B

D12967-5

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	92% 63-130%

7.1.2
7

Blank Spike Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1805-BS	FD1178.D	1	05/06/10	LAC	05/05/10	OP1805	GFD87

The QC reported here applies to the following samples:

Method: SW846-8015B

D12967-1, D12967-2, D12967-3, D12967-4, D12967-6

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	694	104	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	112%	63-130%

7.2.1

7

Blank Spike Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1827-BS	FD1258.D	1	05/10/10	CP	05/08/10	OP1827	GFD89

The QC reported here applies to the following samples:

Method: SW846-8015B

D12967-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	731	110	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	116%	63-130%

7.2.2

7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1805-MS	FD1180.D	1	05/06/10	LAC	05/05/10	OP1805	GFD87
OP1805-MSD	FD1181.D	1	05/06/10	LAC	05/05/10	OP1805	GFD87
D12968-3	FD1179.D	1	05/06/10	LAC	05/05/10	OP1805	GFD87

The QC reported here applies to the following samples:

Method: SW846-8015B

D12967-1, D12967-2, D12967-3, D12967-4, D12967-6

CAS No.	Compound	D12968-3 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	27.0	774	712	89	758	95	6	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D12968-3	Limits
84-15-1	o-Terphenyl	98%	105%	104%	63-130%

7.3.1

7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D12967
Account: HRLCCOGJ HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1827-MS	FD1260.D	1	05/10/10	CP	05/08/10	OP1827	GFD89
OP1827-MSD	FD1261.D	1	05/10/10	CP	05/08/10	OP1827	GFD89
D12968-5	FD1259.D	1	05/10/10	CP	05/08/10	OP1827	GFD89

The QC reported here applies to the following samples:

Method: SW846-8015B

D12967-5

CAS No.	Compound	D12968-5 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND	790	823	104	785	99	5	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D12968-5	Limits
84-15-1	o-Terphenyl	107%	102%	112%	63-130%

7.3.2
7



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: D12967
Account: HRLCCOGJ - HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1824
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 05/07/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	5.0	.35	.98		
Antimony	1.5	.085	.25		
Arsenic	1.3	.14	.36		
Barium	0.50	.007	.025	0.010	<0.50
Beryllium	0.50	.07	.11		
Boron	2.5	.18	.46		
Cadmium	0.50	.011	.06	0.020	<0.50
Calcium	20	.85	1.3		
Chromium	0.50	.014	.09	0.045	<0.50
Cobalt	0.25	.024	.029		
Copper	0.25	.08	.19	0.12	<0.25
Iron	3.5	.39	.46		
Lead	2.5	.065	.12	-0.16	<2.5
Lithium	0.10	.038	.045		
Magnesium	10	.29	.47		
Manganese	0.25	.011	.014		
Molybdenum	0.50	.021	.08		
Nickel	1.5	.019	.038	0.020	<1.5
Phosphorus	5.0	.75	1.8		
Potassium	100	19	64		
Selenium	2.5	.14	.27	-0.0050	<2.5
Silicon	2.5	.6	.34		
Silver	1.5	.049	.034	0.0	<1.5
Sodium	20	12	3.1		
Strontium	2.5	.0046	.01		
Thallium	0.50	.16	.11		
Tin	2.5	.7	.28		
Titanium	0.50	.0049	.021		
Uranium	2.5	.11	.27		
Vanadium	0.50	.014	.017		
Zinc	1.5	.038	.25	0.25	<1.5

Associated samples MP1824: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D12967
Account: HRLCCOGJ - HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1824
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

8.1.1

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D12967
 Account: HRLCCOGJ - HRL Compliance Solutions
 Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1824
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 05/07/10

Metal	D12967-1 Original MS		Spike/lot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic					
Barium	260	427	207	80.8	75-125
Beryllium					
Boron					
Cadmium	0.54	43.3	51.7	82.7	75-125
Calcium					
Chromium	8.7	51.1	51.7	82.0	75-125
Cobalt					
Copper	18.2	65.7	51.7	91.9	75-125
Iron					
Lead	9.2	92.3	103	80.4	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	17.0	54.1	51.7	71.8N(a)	75-125
Phosphorus					
Potassium					
Selenium	2.3	83.1	103	78.2	75-125
Silicon					
Silver	0.0	18.2	20.7	88.0	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	60.6	93.2	51.7	63.1N(a)	75-125

Associated samples MP1824: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

8.12
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D12967
Account: HRLCCOGJ - HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1824
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

- (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: D12967
 Account: HRLCCOGJ - HRL Compliance Solutions
 Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1824
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 05/07/10

Metal	D12967-1 Original MSD		SpikeLot MPICPAL % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium	260	409	207	72.1N(a)	4.3	20
Beryllium						
Boron						
Cadmium	0.54	43.4	51.7	82.9	0.2	20
Calcium						
Chromium	8.7	51.8	51.7	83.4	1.4	20
Cobalt						
Copper	18.2	66.3	51.7	93.1	0.9	20
Iron						
Lead	9.2	92.5	103	80.6	0.2	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	17.0	54.5	51.7	72.6N(a)	0.7	20
Phosphorus						
Potassium						
Selenium	2.3	83.2	103	78.3	0.1	20
Silicon						
Silver	0.0	18.4	20.7	89.0	1.1	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	60.6	97.1	51.7	70.6N(a)	4.1	20

Associated samples MP1824: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

8.12
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D12967
Account: HRLCCOGJ - HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1824
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

- (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: D12967
 Account: HRLCCOGJ - HRL Compliance Solutions
 Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1824
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 05/07/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	189	200	94.5	80-120
Beryllium				
Boron				
Cadmium	45.9	50	91.8	80-120
Calcium				
Chromium	48.6	50	97.2	80-120
Cobalt				
Copper	49.0	50	98.0	80-120
Iron				
Lead	94.7	100	94.7	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	47.0	50	94.0	80-120
Phosphorus				
Potassium				
Selenium	85.7	100	85.7	80-120
Silicon				
Silver	19.3	20	96.5	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	46.0	50	92.0	80-120

Associated samples MP1824: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

8.1.3
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D12967
Account: HRLCCOGJ - HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1824
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D12967
 Account: HRLCCOGJ - HRL Compliance Solutions
 Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1824
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 05/07/10

Metal	D12967-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	2520	2760	9.6	0-10
Beryllium				
Boron				
Cadmium	5.20	4.50	13.5 (a)	0-10
Calcium				
Chromium	83.9	95.0	13.2*(b)	0-10
Cobalt				
Copper	177	176	0.6	0-10
Iron				
Lead	89.3	82.5	7.6	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	164	193	17.2*(b)	0-10
Phosphorus				
Potassium				
Selenium	21.8	29.5	35.3 (a)	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	586	725	23.7*(b)	0-10

Associated samples MP1824: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

8.1.4
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: D12967
Account: HRLCCOGJ - HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1824
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

- (anr) Analyte not requested
- (a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- (b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D12967
Account: HRLCCOGJ - HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1825
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 05/07/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.14	.89		
Antimony	0.20	.001	.045		
Arsenic	0.40	.049	.26	0.13	<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 MP1825: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

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

8.2.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D12967
 Account: HRLCCOGJ - HRL Compliance Solutions
 Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1825
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 05/07/10

Metal	D12967-1 Original MS		SpikeLot MPICPALL % Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	10.7	112	103	98.0 60-119
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese				
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium				
Selenium	anr			
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP1825: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

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

8.2.2
 8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D12967
 Account: HRLCCOGJ - HRL Compliance Solutions
 Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1825
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 05/07/10

Metal	D12967-1 Original MSD		SpikeLot MPICPAL % Rec	MSD RPD	QC Limit	
Aluminum						
Antimony	anr					
Arsenic	10.7	107	103	93.2	4.6	20
Barium	anr					
Beryllium	anr					
Boron	anr					
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese						
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium						
Selenium	anr					
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	anr					

Associated samples MP1825: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

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

8.2.2
 8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D12967
 Account: HRLCCOGJ - HRL Compliance Solutions
 Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1825
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 05/07/10 05/07/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum								
Antimony	anr							
Arsenic	101	100	101.0	80-120	101	100	101.0	80-120
Barium	anr							
Beryllium	anr							
Boron	anr							
Cadmium	anr							
Calcium								
Chromium	anr							
Cobalt								
Copper	anr							
Iron	anr							
Lead	anr							
Magnesium	anr							
Manganese								
Molybdenum	anr							
Nickel	anr							
Phosphorus								
Potassium								
Selenium	anr							
Silver								
Sodium								
Strontium								
Thallium								
Tin								
Titanium								
Uranium								
Vanadium								
Zinc	anr							

Associated samples MP1825: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

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

8.2.3
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: D12967
 Account: HRLCCOGJ - HRL Compliance Solutions
 Project: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP1825
 Matrix Type: SOLID

Methods: SW846 6020
 Units: ug/l

Prep Date: 05/07/10

Metal	D12967-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	103	110	6.6	0-10
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese				
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium				
Selenium	anr			
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP1825: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

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

8.2.4
 8



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: D12967
Account: HRLCCOGJ - HRL Compliance Solutions
Project: PDC Garden Gulch 2 Job#10-352

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
pH	GN4202			su	8.00	7.96	99.5	99.3-100.7%

Associated Samples:

Batch GN4202: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

(*) Outside of QC limits



Misc. Forms

Custody Documents and Other Forms

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

4036 Youngfield St., Wheat Ridge, CO 80033
 303-425-6021 FAX: 303-425-6854

Accutest Job #:	D12967
Accutest Quote #:	
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information							Analytical Information				Comments
Name			Name											
Accutest Mountain States (AMS)			Accutest - New England											
Address			Address											
4036 Youngfield St.			495 Technology Center West, BLDG O											
City	State	Zip	City	State	Zip									
Wheat Ridge,	CO	80033	Marlborough	MA	01752									
Send Report to:			Contact:											
Tiffany Pham			Sample Management											
Any questions contact:														
Amanda Kissell														
Phone/Fax #:			Phone:											
(303) 425-6021; (303) 425-6854			(508) 481-6200											
Field ID / Point of Collection	Collection		Matrix	# of bottles	Preservation					XCRA	H			
	Date	Time			HCL	NaOH	HNO3	UPSe4	None					
D12967 -1	4/28/10	2:00 PM	Soil	1						X	X			
-2	4/28/10	2:10 PM	Soil	1						X	X			
-3	4/28/10	2:20 PM	Soil	1						X	X			
-4	4/28/10	2:25 PM	Soil	1						X	X			
-5	4/28/10	2:30 PM	Soil	1						X	X			
-6	4/28/10	2:40 PM	Soil	1						X	X			
-														
-														
-														
-														
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 checked="" 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. <i>iob</i>				
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: Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>									
1	5/4/10 1600	1	1/10/10	1										
Relinquished by:	Date & Time:	Received By:	Date & Time:	Preserved where applicable:										
2	5/5/10 10:15	2	5/5/10 10:15	<input type="checkbox"/>										
Relinquished by:	Date & Time:	Received By:	Date & Time:	Temperature °C	On Ice <input checked="" type="checkbox"/>									
3		3		1.8°										

10.1 10

D12967: Chain of Custody
Page 1 of 2
Accutest Labs of New England, Inc.



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D12967

Client: AMS

Immediate Client Services Action Required: No

Date / Time Received: 5/5/2010 10:15:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project: N/A

Airbill #'s: N/A

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:			Infrared gun
3. Cooler media:			Ice (bag)

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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 property:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
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

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
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

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10.1
10



Metals Analysis

QC Data Summaries

(Accutest Labs of New England, Inc.)

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: D12967
Account: ALMS - Accutest Mountain States
Project: HRLCCOGJ: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP15228
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 05/12/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0058	.014	0.0010	<0.033

Associated samples MP15228: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

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

11.11
11

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D12967
 Account: ALMS - Accutest Mountain States
 Project: HRLCCOGJ: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP15228
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 05/12/10 05/12/10

Metal	D13175-1 Original MS	Spike lot	HGRWS1	% Rec	QC Limits	D13175-1 Original DUP	RPD	QC Limits	
Mercury	0.090	0.78	0.665	103.8	75-125	0.090	0.094	4.3	0-20

Associated samples MP15228: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

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

11.12
11

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D12967
 Account: ALMS - Accutest Mountain States
 Project: HRLCCOGJ: PDC Garden Gulch 2 Job#10-352

QC Batch ID: MP15228
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 05/12/10 05/12/10

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	LCS Result	Spikelot HGLCSD68	% Rec	QC Limits
Mercury	0.49	0.5	98.0	80-120	8.7	14.1	61.7	27-110

Associated samples MP15228: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

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

11.1.3
11



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: D12967
Account: ALMS - Accutest Mountain States
Project: HRLCCOGJ: PDC Garden Gulch 2 Job#10-352

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP11589/GN31808	2.0	0.0	mg/kg	40	42.4	106.0	80-120%
Chromium, Hexavalent	GP11589/GN31808			mg/kg	1100	1150	104.5	80-120%
Chromium, Hexavalent	GP11590/GN31809	2.0	0.0	mg/kg	40	42.0	105.0	80-120%
Chromium, Hexavalent	GP11590/GN31809			mg/kg	1240	1270	102.4	80-120%

Associated Samples:

Batch GP11589: D12967-1, D12967-2, D12967-4, D12967-5, D12967-6

Batch GP11590: D12967-3

(*) Outside of QC limits

12.1
12

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D12967
Account: ALMS - Accutest Mountain States
Project: HRLCCOGJ: PDC Garden Gulch 2 Job#10-352

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP11589/GN31808	D12967-2	mg/kg	0.0	0.0	0.0	0-20%
Chromium, Hexavalent	GP11590/GN31809	D12967-3	mg/kg	0.0	0.0	0.0	0-20%
Redox Potential Vs H2	GN31777	D12967-1	mv	304	301	1.0	0-20%

Associated Samples:

Batch GN31777: D12967-1, D12967-2, D12967-3, D12967-4, D12967-5, D12967-6

Batch GP11589: D12967-1, D12967-2, D12967-4, D12967-5, D12967-6

Batch GP11590: D12967-3

(*) Outside of QC limits

12.2
12

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D12967
Account: ALMS - Accutest Mountain States
Project: HRLCCOGJ: PDC Garden Gulch 2 Job#10-352

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP11589/GN31808	D12967-2	mg/kg	0.0	48.6	44.1	90.7	75-125%
Chromium, Hexavalent	GP11589/GN31808	D12967-2	mg/kg	0.0	1100	1190	108.2	75-125%
Chromium, Hexavalent	GP11590/GN31809	D12967-3	mg/kg	0.0	46.6	41.9	89.9	75-125%
Chromium, Hexavalent	GP11590/GN31809	D12967-3	mg/kg	0.0	1430	1420	99.1	75-125%

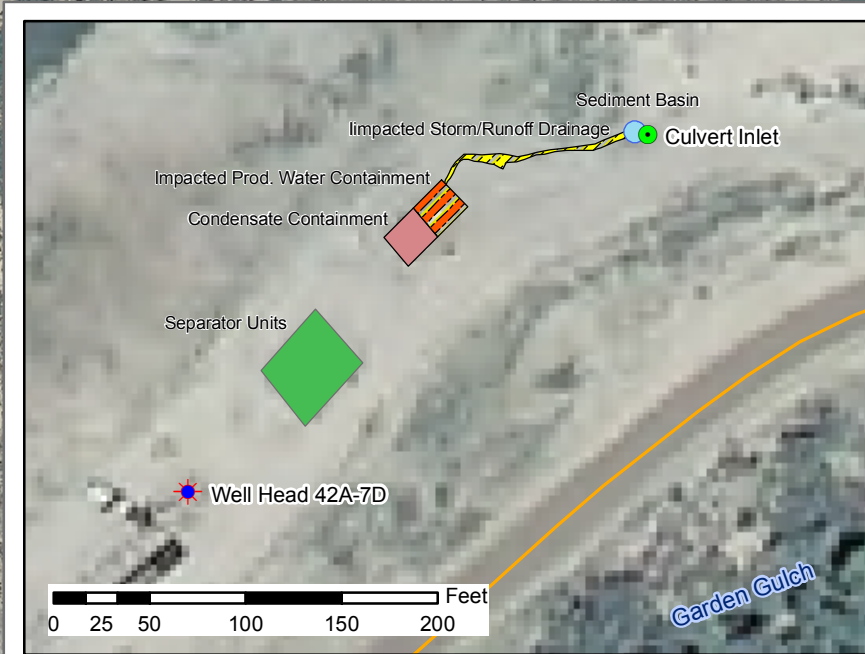
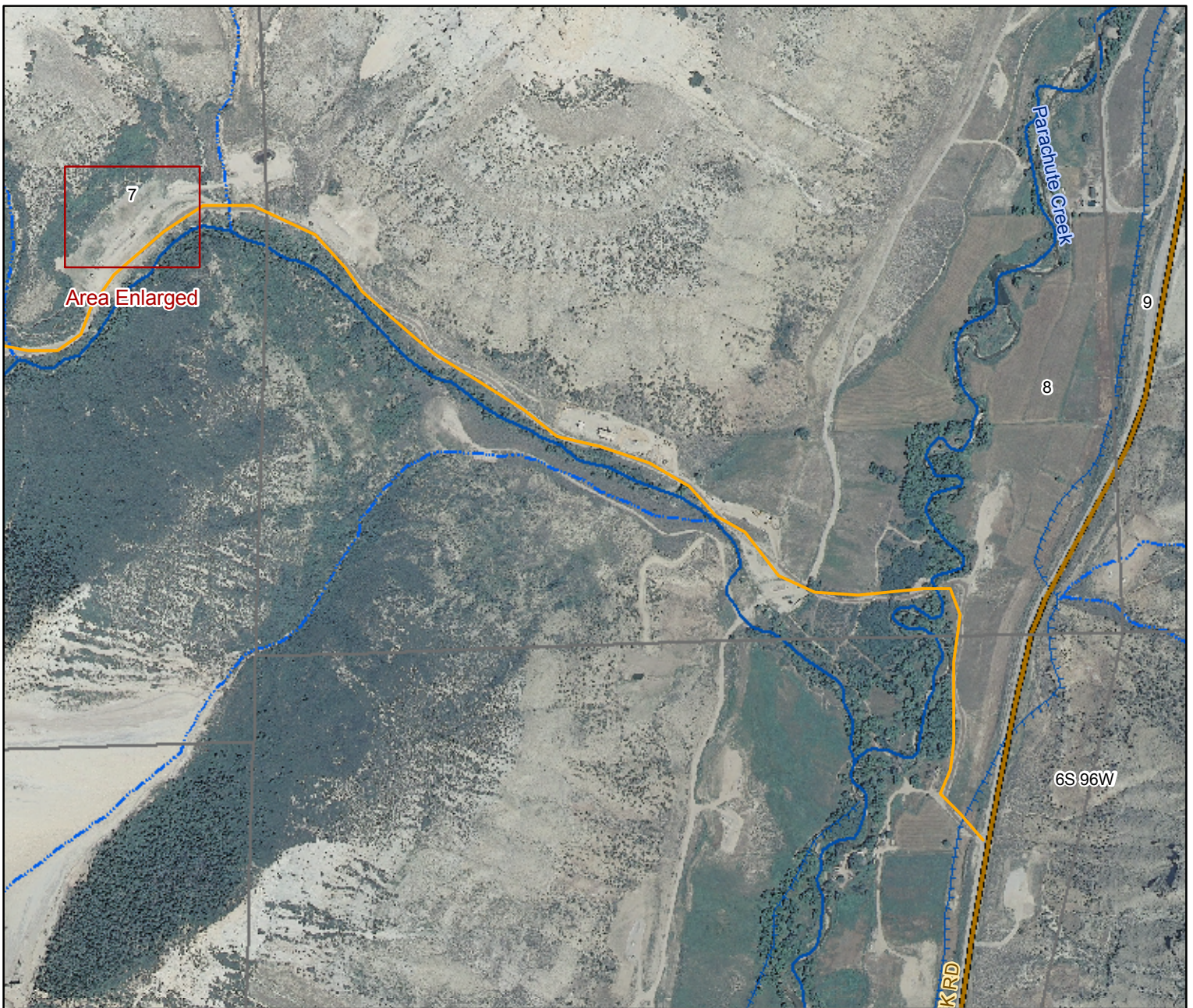
Associated Samples:

Batch GP11589: D12967-1, D12967-2, D12967-4, D12967-5, D12967-6

Batch GP11590: D12967-3

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



Attachment A - Spill Location Map
Location: GG2 Wellpad
Petroleum Development Corporation

Legend

Location Features	Transportation Features
★ Well Head Location	Highways
▨ Affected Area	Public Roads
PLSS	Access Road
▭ Township	River
▭ Section	Hydrographic Features
	— Perennial Stream
	- - - Intermittent Stream
	- - - Ditch/Canal

0 375 750 1,500

Feet

0 0.125 0.25

Miles