District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office to accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **Burlington Resources Oil & Gas Company**	Contact **Crystal Tafoya**
Address 3401 East 30th St, Farmington, NM	Telephone No.(505) 326-9837
Facility Name: **Kattler 1**	Facility Type: **Gas Well**

Surface Owner **Fee**	Mineral Owner **Fee**	API No.**30-045-08844**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	**2**	**29N**	**12W**	**990**	**North**	**1650**	**West**	**San Juan**

Latitude 36.75908 Longitude 108.07066

NATURE OF RELEASE

Type of Release **Produced Fluids**	Volume of Release **Unknown**	Volume Recovered **None**
Source of Release **Below Grade Tank**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **July 17, 2012**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RCVD FEB 22 '13
OIL CONS. DIV.
DIST. 3

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Below Grade Tank Closure Activities

Describe Area Affected and Cleanup Action Taken.*
The below grade tank sample results were above regulatory standards by USEPA method 418.1 for TPH confirming a release. Th excavation was 24' x 20' x 5.5' and 98 cubic yards of soil was transported to a third party landfarm. Excavation and confirmation sampling occurred. Analytical results for TPH, BTEX and Chlorides were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Release; therefore no further action is required. The final report is attached for review.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Crystal L. Tafoya	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Jonathan D. Kelly
Printed Name: **Crystal Tafoya**	
Title: **Field Environmental Specialist**	Approval Date: 2/27/2013 Expiration Date:
E-mail Address: crystal.tafoya@conocophillips.com	Conditions of Approval: Attached ☐
Date: 2/19/2013 Phone: (505) 326-9837	

* Attach Additional Sheets If Necessary

nJK1305848821

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

January 31, 2013

Crystal Tafoya
ConocoPhillips
San Juan Business Unit
Office 214-05
5525 Hwy 64
Farmington, New Mexico 87401

RE: Below Grade Tank Closure, Release, and Excavation Report
Kattler #1
San Juan County, New Mexico

Dear Ms. Tafoya:

Animas Environmental Services, LLC (AES) is pleased to provide the final report associated with the below grade tank (BGT) closure and final excavation of chloride contaminated soils at the ConocoPhillips (CoP) Kattler #1, located in San Juan County, New Mexico. Tank removal had been completed by CoP contractors prior to AES' arrival at the location. The final excavation was completed by CoP contractors while AES was on location on July 20, 2012.

1.0 Site Information

1.1 Location

Site Name – Kattler #1
Legal Description - NE¼ NW¼, Section 2, T29N, R12W, San Juan County, New Mexico
Well Latitude/Longitude - N36.75951 and W108.07107, respectively
BGT Latitude/Longitude - N36.75972 and W108.07124, respectively
Land Jurisdiction - Private
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, July 2012

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and no prior ranking information was located. The New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and no registered water wells were reported to be located within 1,000 feet of the location.

Additionally, Google Earth and the New Mexico Tech Petroleum Recovery Research Center online mapping tool (http://ford.nmt.edu/react/project.html) were accessed to aid in the identification of downgradient surface water.

Once on site, AES personnel further assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was greater than 100 feet below ground surface (bgs). A tributary to the wash in Hargis Arroyo is located approximately 270 feet north of the location. Based on this information, the location was assessed a ranking score of 10.

1.3 Assessments

AES was initially contacted by Jess Henson, CoP representative, on July 17, 2012, and on July 18, 2012, Deborah Watson and Nathan Willis of AES met with Jess Henson at the location. AES personnel collected six soil samples from below the BGT liner. Four samples were collected from the perimeter of the BGT footprint, one sample was collected from the center of the BGT footprint, and one sample was composited from the four perimeter samples and one center sample. Sample locations are shown on Figure 2.

On July 20, 2012, AES personnel returned to the site to collect confirmation soil samples of the excavation. The field screening activities included collection of five confirmation samples (SC-1 through SC-5) of the walls and base of the excavation. A composite sample (SC-6) was composited from the four walls and base of the excavation. The final excavation was approximately 24 feet by 20 feet by 4 feet grading to 5.5 feet in depth. Sample locations and excavation extents are shown on Figure 3.

2.0 Soil Sampling

On July 18, 2012, AES personnel conducted field screening and collected five soil samples (S-1 through S-5) and one 5-point composite (SC-1) from below the BGT. Soil samples were collected from approximately 0.5 feet below the former BGT for field screening of volatile organic compounds (VOCs), total petroleum hydrocarbon (TPH), and chlorides. Soil sample SC-1 was submitted for confirmation laboratory analysis. Soil sample locations are included on Figure 2.

On July 20, 2012, AES personnel conducted field screening and collected five 5-point composites (SC-1 through SC-5) of the walls and base of the excavation for field screening of chlorides. One samples, SC-6, was composited from SC-1 through SC-5 and submitted for confirmation laboratory analysis.

2.1 Field Screening

2.1.1 Volatile Organic Compounds

A portion of each sample collected on July 18, 2012, was utilized for field screening of VOC vapors with a photo-ionization detector (PID) organic vapor meter (OVM). Before beginning field screening, the PID-OVM was first calibrated with 100 parts per million (ppm) isobutylene gas.

2.1.2 Total Petroleum Hydrocarbons

Soil samples (SC-1 through SC-5, July 18) were also analyzed in the field for TPH per USEPA Method 418.1 using a Buck Scientific Model HC-404 Total Hydrocarbon Analyzer Infrared Spectrometer (Buck). A 3-point calibration was completed prior to conducting soil analyses. Field analytical protocol followed AES's *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

2.1.3 Chlorides

All soil samples were field screened for chlorides using Chloride Drop Count Titration with silver nitrate. Sampling and analysis methods followed procedures provided by Hach Company.

2.2 Laboratory Analyses

The composite soil samples collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto a sample chain of custody record. The samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Soil sample SC-1 (July 18) was laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8260B; and
- Chloride per USEPA Method 300.0.

Note sample SC-6 (July 20) was only analyzed for chloride per USEPA 300.0.

2.3 Field Screening and Laboratory Analytical Results

On July 18, 2012, field screening results for VOCs via OVM showed concentrations ranging from 4.5 ppm in S-4 up to 11.7 ppm in S-3. Field TPH concentrations ranged from 55.3 mg/kg in S-1 up to 68.7 mg/kg in S-4. Field chloride concentrations were between 80 and 240 mg/kg.

On July 20, 2012, final excavation field screening results for chlorides showed concentrations ranging from 100 mg/kg in SC-2 through SC-4 up to 180 mg/kg in SC-1

and SC-5. Results are included below in Table 1 and on Figures 2 and 3. The AES Field Screening Reports are attached.

Table 1. Soil Field Screening VOCs, TPH, and Chloride Results
Kattler #1 BGT Closure and Final Excavation, July 2012

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs OVM Reading (ppm)	Field TPH (mg/kg)	Field Chlorides (mg/kg)
NMOCD Action Level (NMAC 19.15.17.13E)			**--**	***100***	***250***
S-1	7/18/12	0.5	10.3	55.3	200
S-2	7/18/12	0.5	7.8	66.2	80
S-3	7/18/12	0.5	11.7	63.8	160
S-4	7/18/12	0.5	4.5	68.7	160
S-5	7/18/12	0.5	7.5	60.2	240
SC-1	7/20/12	1 to 5	NA	NA	180
SC-2	7/20/12	1 to 5	NA	NA	100
SC-3	7/20/12	1 to 5	NA	NA	100
SC-4	7/20/12	1 to 5	NA	NA	100
SC-5	7/20/12	5	NA	NA	180

NA - not analyzed

Laboratory analytical results for SC-1 (July 18) reported benzene and total BTEX concentrations in SC-1 as less than 0.050 mg/kg and 0.25 mg/kg, respectively. However, the laboratory chloride concentration was reported at 680 mg/kg.

Laboratory analytical results for SC-6 (July 20) were used to confirm field screening results during excavation activities, and the chloride concentration was reported at 90 mg/kg. Results are presented in Table 2 and on Figures 2 and 3. Laboratory analytical reports are attached.

Table 2. Soil Laboratory Analytical Results
Kattler #1 BGT Closure and Final Excavation, July 2012

Sample ID	Date Sampled	Depth (ft)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Chlorides (mg/kg)
NMOCD Action Level (NMAC 19.15.17.13E)			***0.2***	***50***	***100***		***250***
SC-1	07/18/12	0.5	<0.050	<0.25	NA	NA	**680**
SC-6	07/20/12	1 to 5.5	NA	NA	NA	NA	90

NA - not analyzed

3.0 Conclusions and Recommendations

NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13E. Field TPH concentrations were below the NMOCD action level of 100 mg/kg, with the highest concentration reported in S-4 with 68.7 mg/kg. Benzene and total BTEX concentrations in SC-1 were below the NMOCD action level of 0.2 mg/kg and 50 mg/kg, respectively. However, chloride concentrations in SC-1 (July 18) exceeded the NMOCD action level of 250 mg/kg with 680 mg/kg. Excavation of chloride contaminated soils was recommended.

On July 20, 2012, final assessment of the excavation area was completed. Field screening results of the excavation extents showed that chloride concentrations were below applicable NMOCD action levels for all of the final four walls and base of the excavation. Laboratory analytical results from July 20, 2012, confirmed that chloride concentrations were below NMOCD action levels.

Based on field screening and laboratory analytical results for benzene, total BTEX, TPH, and chlorides, no further work is recommended at the Kattler #1.

If you have any questions about this report or site conditions, please do not hesitate to contact Deborah Watson at (505) 564-2281.

Sincerely,

Heather M. Woods

Heather M. Woods
Staff Geologist

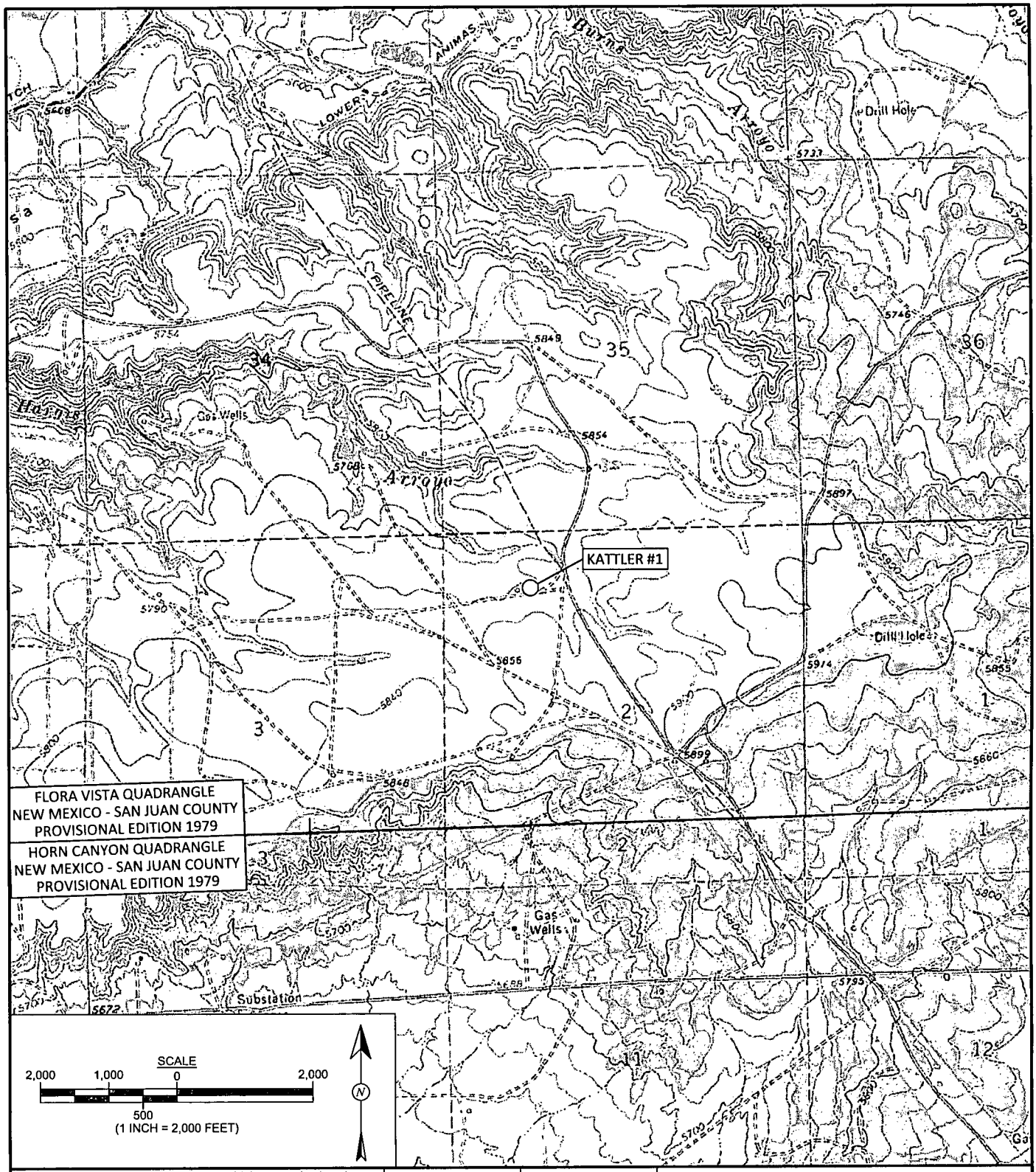
Elizabeth McNally

Elizabeth McNally, P.E.

Attachments:

Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, July 2012
Figure 3. Final Excavation Soil Sample Locations and Results, July 2012
AES Field Screening Report 071812
AES Field Screening Report 072012
Hall Analytical Report 1207801
Hall Analytical Report 1207948

R:\Animas 2000\Dropbox\2013 Projects\ConocoPhillips\Kattler #1\BGT Closure\Kattler #1 BGT Closure and Excavation Report 013113.docx

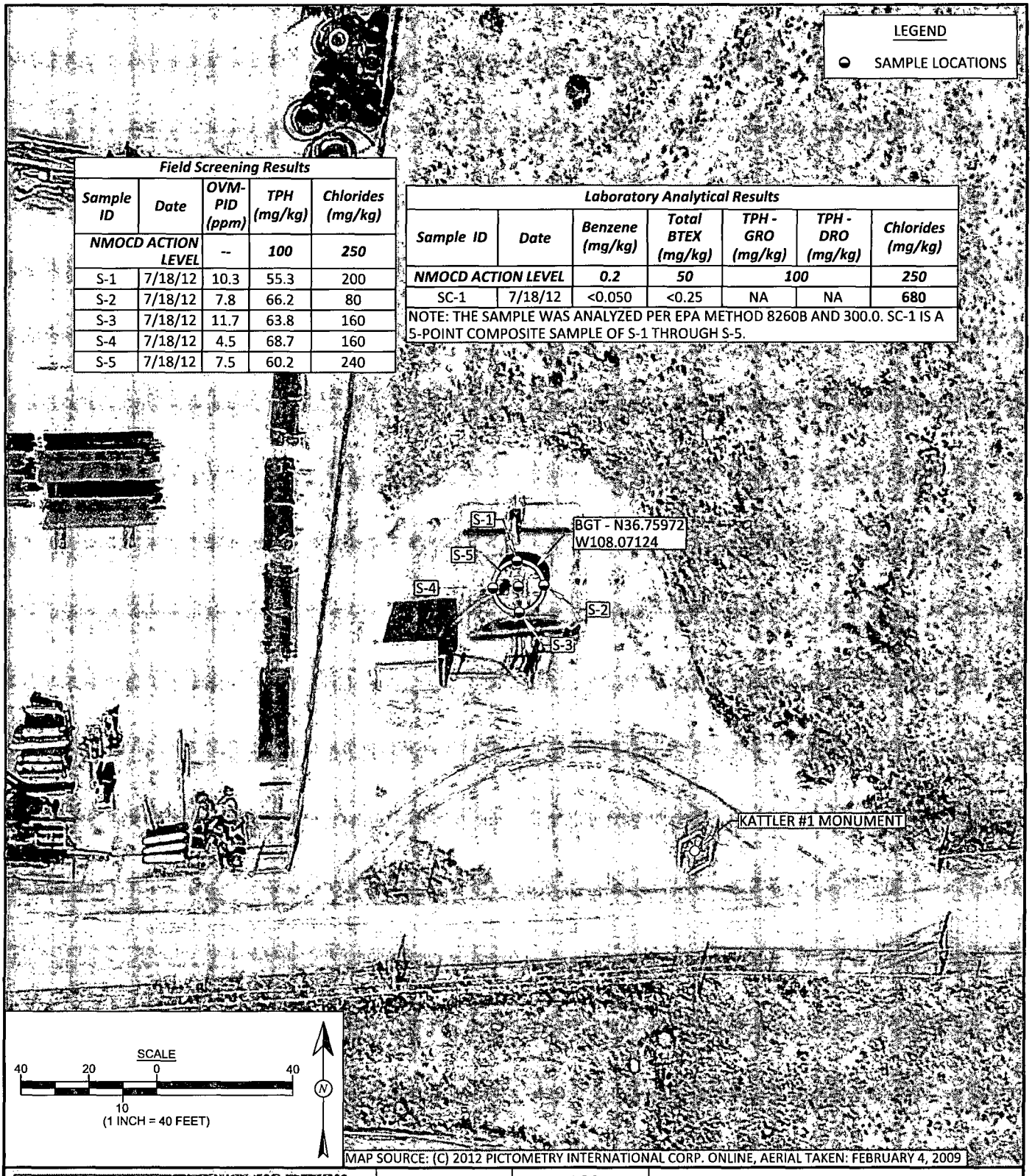


Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** July 18, 2012
REVISIONS BY: C. Lameman	**DATE REVISED:** July 18, 2012
CHECKED BY: D. Watson	**DATE CHECKED:** January 17, 2013
APPROVED BY: E. McNally	**DATE APPROVED:** January 17, 2013

FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP
ConocoPhillips
KATTLER #1
SAN JUAN COUNTY, NEW MEXICO
NE¼ NW¼, SECTION 2, T29N, R12W
N36.75951, W108.07107



Field Screening Results

Sample ID	Date	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		--	100	250
S-1	7/18/12	10.3	55.3	200
S-2	7/18/12	7.8	66.2	80
S-3	7/18/12	11.7	63.8	160
S-4	7/18/12	4.5	68.7	160
S-5	7/18/12	7.5	60.2	240

Laboratory Analytical Results

Sample ID	Date	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		0.2	50	100		250
SC-1	7/18/12	<0.050	<0.25	NA	NA	680

NOTE: THE SAMPLE WAS ANALYZED PER EPA METHOD 8260B AND 300.0. SC-1 IS A 5-POINT COMPOSITE SAMPLE OF S-1 THROUGH S-5.

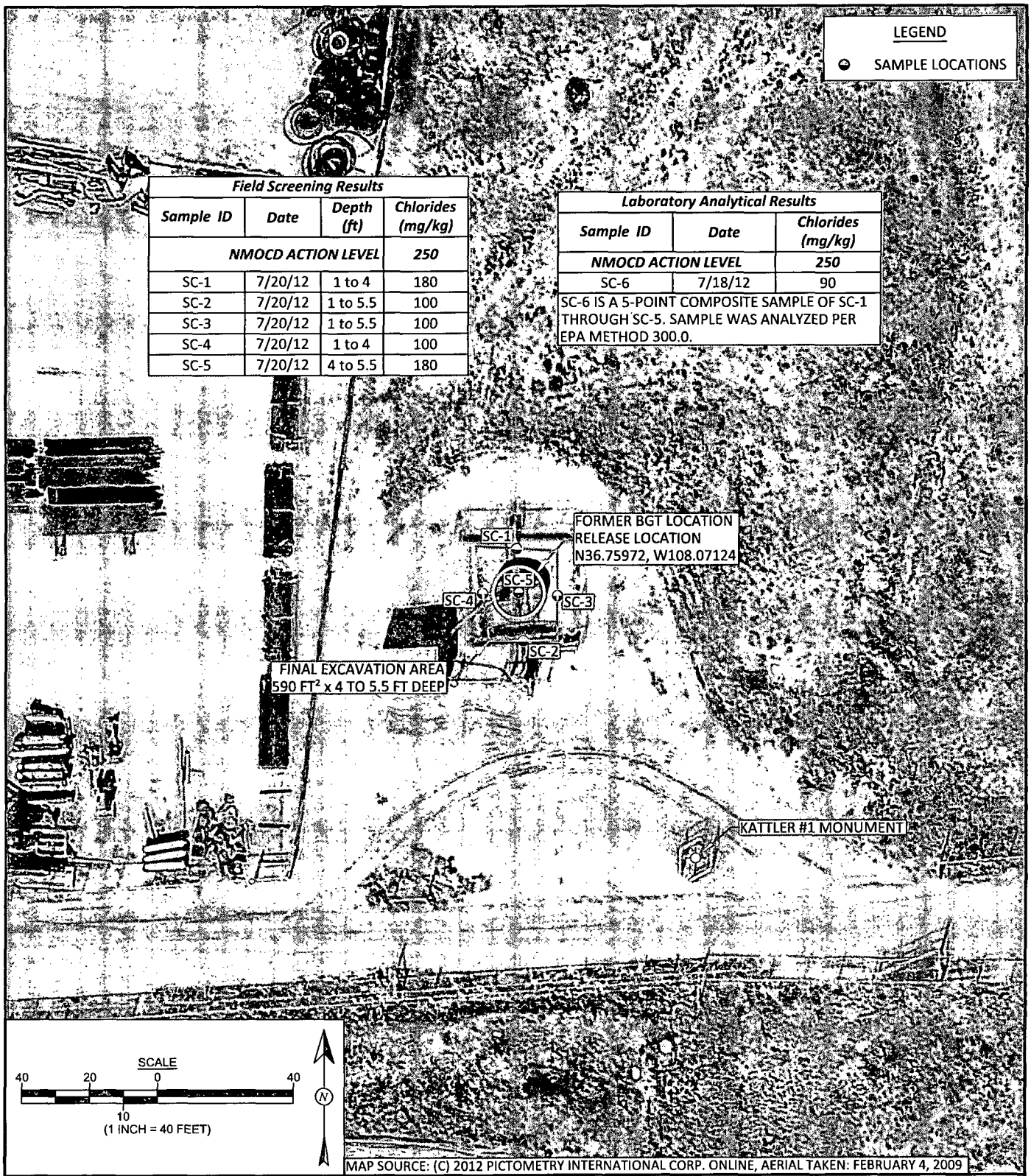
MAP SOURCE: (C) 2012 PICTOMETRY INTERNATIONAL CORP. ONLINE, AERIAL TAKEN: FEBRUARY 4, 2009

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	DATE DRAWN: July 18, 2012
REVISIONS BY: C. Lameman	DATE REVISED: July 18, 2012
CHECKED BY: D. Watson	DATE CHECKED: January 17, 2013
APPROVED BY: E. McNally	DATE APPROVED: January 17, 2013

FIGURE 2

AERIAL SITE MAP
BELOW GRADE TANK CLOSURE
JULY 2012
ConocoPhillips
KATTLER #1
SAN JUAN COUNTY, NEW MEXICO
NE¼, NW¼, SECTION 2, T29N, R12W
N36.75951, W108.07107



Field Screening Results

Sample ID	Date	Depth (ft)	Chlorides (mg/kg)
NMOCD ACTION LEVEL			250
SC-1	7/20/12	1 to 4	180
SC-2	7/20/12	1 to 5.5	100
SC-3	7/20/12	1 to 5.5	100
SC-4	7/20/12	1 to 4	100
SC-5	7/20/12	4 to 5.5	180

Laboratory Analytical Results

Sample ID	Date	Chlorides (mg/kg)
NMOCD ACTION LEVEL		250
SC-6	7/18/12	90

SC-6 IS A 5-POINT COMPOSITE SAMPLE OF SC-1 THROUGH SC-5. SAMPLE WAS ANALYZED PER EPA METHOD 300.0.

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** January 17, 2013	**FIGURE 3**
REVISIONS BY: C. Lameman	**DATE REVISED:** January 17, 2013	**FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS JULY 2012**
CHECKED BY: D. Watson	**DATE CHECKED:** January 17, 2013	ConocoPhillips KATTLER #1 SAN JUAN COUNTY, NEW MEXICO NE¼, NW¼, SECTION 2, T29N, R12W N36.75951, W108.07107
APPROVED BY: E. McNally	**DATE APPROVED:** January 17, 2013	

AES Field Screening Report

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3274

Client: ConocoPhillips

Project Location: Kattler #1

Date: 7/18/2012

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field Chloride (mg/kg)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
S-1	7/18/2012	8:55	North	10.3	200	9:59	55.3	20.0	1	DAW
S-2	7/18/2012	8:57	East	7.8	80	10:29	66.2	20.0	1	DAW
S-3	7/18/2012	9:00	South	11.7	160	10:04	63.8	20.0	1	DAW
S-4	7/18/2012	9:03	West	4.5	160	10:06	68.7	20.0	1	DAW
S-5	7/18/2012	9:05	Center	7.5	240	10:09	60.2	20.0	1	DAW

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

NA Not Analyzed

DF Dilution Factor

**Field TPH concentrations recorded may be below PQL.*

Field Chloride - Quantab Chloride Titrators or Drop Count Titration with Silver Nitrate

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: Deborah Watson

Report Finalized: 07/18/12

AES Field Screening Report

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3274

Client: ConocoPhillips

Project Location: Kattler #1

Date: 7/20/2012

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field Chloride (mg/kg)	Field TPH Analysis Time	Field TPH (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	7/20/2012	13:19	North	NA	180	*Not Analyzed for TPH.*				
SC-2	7/20/2012	13:21	South	NA	100	*Not Analyzed for TPH.*				
SC-3	7/20/2012	13:25	East	NA	100	*Not Analyzed for TPH.*				
SC-4	7/20/2012	13:29	West	NA	100	*Not Analyzed for TPH.*				
SC-5	7/20/2012	13:32	Base	NA	180	*Not Analyzed for TPH.*				

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

NA Not Analyzed

DF Dilution Factor

Field Chloride - Quantab Chloride Titrators or Drop Count Titration with Silver Nitrate

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: Heather M. Woods

Report Finalized: 07/20/12

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 03, 2012

Debbie Watson

Animas Environmental Services
624 East Comanche
Farmington, NM 87401
TEL: (505) 486-4071
FAX

RE: COP Kattler #1 OrderNo.: 1207801

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/19/2012 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 27, 2012.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1207801**
Date Reported: **8/3/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: SC-1
Project: COP Kattler #1
Collection Date: 7/18/2012 9:10:00 AM
Lab ID: 1207801-001
Matrix: MEOH (SOIL)
Received Date: 7/19/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	680	30		mg/Kg	20	7/19/2012 12:16:00 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	ND	0.050		mg/Kg	1	7/19/2012 12:58:37 PM
Toluene	ND	0.050		mg/Kg	1	7/19/2012 12:58:37 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/19/2012 12:58:37 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/19/2012 12:58:37 PM
Surr: 1,2-Dichloroethane-d4	94.8	70-130		%REC	1	7/19/2012 12:58:37 PM
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	7/19/2012 12:58:37 PM
Surr: Dibromofluoromethane	89.5	70-130		%REC	1	7/19/2012 12:58:37 PM
Surr: Toluene-d8	101	70-130		%REC	1	7/19/2012 12:58:37 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: Stockpile
Project: COP Kattler #1
Collection Date: 7/18/2012 12:49:00 PM
Lab ID: 1207801-002
Matrix: SOIL
Received Date: 7/19/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 7471: MERCURY						Analyst: **DBD**
Mercury	ND	0.033		mg/Kg	1	7/20/2012 2:49:13 PM
MERCURY, TCLP						Analyst: **DBD**
Mercury	ND	0.020		mg/L	1	8/1/2012 1:42:01 PM
EPA METHOD 6010B: SOIL METALS						Analyst: **ELS**
Arsenic	ND	12		mg/Kg	5	7/20/2012 6:54:36 AM
Barium	390	1.0		mg/Kg	10	7/20/2012 6:58:51 AM
Cadmium	ND	0.50		mg/Kg	5	7/20/2012 6:54:36 AM
Chromium	7.4	1.5		mg/Kg	5	7/20/2012 6:54:36 AM
Lead	5.2	1.2		mg/Kg	5	7/20/2012 8:38:17 AM
Selenium	ND	12		mg/Kg	5	7/20/2012 8:38:17 AM
Silver	ND	1.2		mg/Kg	5	7/20/2012 6:54:36 AM
EPA METHOD 6010B: TCLP METALS						Analyst: **ELS**
Arsenic	ND	5.0		mg/L	1	8/3/2012 6:27:11 AM
Barium	ND	100		mg/L	1	8/2/2012 3:54:22 PM
Cadmium	ND	1.0		mg/L	1	8/3/2012 6:27:11 AM
Chromium	ND	5.0		mg/L	1	8/2/2012 3:54:22 PM
Lead	ND	5.0		mg/L	1	8/2/2012 3:54:22 PM
Selenium	ND	1.0		mg/L	1	8/2/2012 3:54:22 PM
Silver	ND	5.0		mg/L	1	8/2/2012 3:54:22 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID	**MB-2907**	SampType: **MBLK**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID: **2907**			RunNo: **4157**					
Prep Date:	**7/19/2012**	Analysis Date: **7/19/2012**			SeqNo: **118814**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-2907**	SampType: **LCS**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID: **2907**			RunNo: **4157**					
Prep Date:	**7/19/2012**	Analysis Date: **7/19/2012**			SeqNo: **118815**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.3	90	110			

Sample ID	**1207599-001AMS**	SampType: **MS**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**BatchQC**	Batch ID: **2907**			RunNo: **4157**					
Prep Date:	**7/19/2012**	Analysis Date: **7/19/2012**			SeqNo: **118819**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	7.5	15.00	2.511	81.1	64.4	117			

Sample ID	**1207599-001AMSD**	SampType: **MSD**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**BatchQC**	Batch ID: **2907**			RunNo: **4157**					
Prep Date:	**7/19/2012**	Analysis Date: **7/19/2012**			SeqNo: **118820**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	7.5	15.00	2.511	84.6	64.4	117	3.56	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID	**MB-2919**	SampType: **MBLK**			TestCode: **EPA Method 7471: Mercury**					
Client ID:	**PBS**	Batch ID: **2919**			RunNo: **4199**					
Prep Date:	**7/19/2012**	Analysis Date: **7/20/2012**			SeqNo: **120246**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	**LCS-2919**	SampType: **LCS**			TestCode: **EPA Method 7471: Mercury**					
Client ID:	**LCSS**	Batch ID: **2919**			RunNo: **4199**					
Prep Date:	**7/19/2012**	Analysis Date: **7/20/2012**			SeqNo: **120247**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	102	80	120			

Sample ID	**1207796-008AMS**	SampType: **MS**			TestCode: **EPA Method 7471: Mercury**					
Client ID:	**BatchQC**	Batch ID: **2919**			RunNo: **4199**					
Prep Date:	**7/19/2012**	Analysis Date: **7/20/2012**			SeqNo: **120251**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1661	0	98.8	75	125			

Sample ID	**1207796-008AMSD**	SampType: **MSD**			TestCode: **EPA Method 7471: Mercury**					
Client ID:	**BatchQC**	Batch ID: **2919**			RunNo: **4199**					
Prep Date:	**7/19/2012**	Analysis Date: **7/20/2012**			SeqNo: **120252**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1643	0	98.0	75	125	1.87	20	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID	**MB-3127**	SampType: **MBLK**			TestCode: **MERCURY, TCLP**					
Client ID:	**PBW**	Batch ID: **3127**			RunNo: **4577**					
Prep Date:	**8/1/2012**	Analysis Date: **8/1/2012**			SeqNo: **128440**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020								

Sample ID	**LCS-3127**	SampType: **LCS**			TestCode: **MERCURY, TCLP**					
Client ID:	**LCSW**	Batch ID: **3127**			RunNo: **4577**					
Prep Date:	**8/1/2012**	Analysis Date: **8/1/2012**			SeqNo: **128441**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	101	80	120			

Sample ID	**1207B34-006AMS**	SampType: **MS**			TestCode: **MERCURY, TCLP**					
Client ID:	**BatchQC**	Batch ID: **3127**			RunNo: **4577**					
Prep Date:	**8/1/2012**	Analysis Date: **8/1/2012**			SeqNo: **128454**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	104	75	125			

Sample ID	**1207B34-006AMSD**	SampType: **MSD**			TestCode: **MERCURY, TCLP**					
Client ID:	**BatchQC**	Batch ID: **3127**			RunNo: **4577**					
Prep Date:	**8/1/2012**	Analysis Date: **8/1/2012**			SeqNo: **128455**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	93.4	75	125	0	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID	MB-2912	SampType:	MBLK		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	PBS	Batch ID:	2912		RunNo:	4168				
Prep Date:	7/19/2012	Analysis Date:	7/20/2012		SeqNo:	119211	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Silver	ND	0.25								

Sample ID	LCS-2912	SampType:	LCS		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	LCSS	Batch ID:	2912		RunNo:	4168				
Prep Date:	7/19/2012	Analysis Date:	7/20/2012		SeqNo:	119212	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0.2515	101	80	120			
Barium	24	0.10	25.00	0	94.3	80	120			
Cadmium	24	0.10	25.00	0	95.3	80	120			
Chromium	24	0.30	25.00	0.09550	93.7	80	120			
Silver	4.8	0.25	5.000	0.03050	96.3	80	120			

Sample ID	MB-2912	SampType:	MBLK		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	PBS	Batch ID:	2912		RunNo:	4174				
Prep Date:	7/19/2012	Analysis Date:	7/20/2012		SeqNo:	119449	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.25								
Selenium	ND	2.5								

Sample ID	LCS-2912	SampType:	LCS		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	LCSS	Batch ID:	2912		RunNo:	4174				
Prep Date:	7/19/2012	Analysis Date:	7/20/2012		SeqNo:	119451	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	24	0.25	25.00	0	96.0	80	120			
Selenium	22	2.5	25.00	0	86.1	80	120			

Sample ID	MB-2912	SampType:	MBLK		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	PBS	Batch ID:	2912		RunNo:	4414				
Prep Date:	7/19/2012	Analysis Date:	7/25/2012		SeqNo:	123190	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID **MB-2912** SampType: **MBLK** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **PBS** Batch ID: **2912** RunNo: **4414**

Prep Date: **7/19/2012** Analysis Date: **7/25/2012** SeqNo: **123190** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.25								
Selenium	ND	2.5								
Silver	ND	0.25								

Sample ID **LCS-2912** SampType: **LCS** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **LCSS** Batch ID: **2912** RunNo: **4414**

Prep Date: **7/19/2012** Analysis Date: **7/25/2012** SeqNo: **123191** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0.7230	96.9	80	120			
Barium	25	0.10	25.00	0	100	80	120			
Cadmium	25	0.10	25.00	0	100	80	120			
Chromium	24	0.30	25.00	0.06600	96.9	80	120			
Lead	25	0.25	25.00	0	100	80	120			
Selenium	25	2.5	25.00	0	98.2	80	120			
Silver	5.1	0.25	5.000	0	103	80	120			

Sample ID **1207640-001BMS** SampType: **MS** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **BatchQC** Batch ID: **2912** RunNo: **4414**

Prep Date: **7/19/2012** Analysis Date: **7/25/2012** SeqNo: **123197** Units: **mg/Kg-dry**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	15	28.40	0	88.1	75	125			
Barium	42	0.58	28.40	36.21	21.6	75	125			S
Cadmium	28	0.58	28.40	0	96.9	75	125			
Chromium	30	1.7	28.40	2.024	97.4	75	125			
Lead	29	1.5	28.40	2.697	93.5	75	125			
Selenium	28	15	28.40	6.868	73.4	75	125			S
Silver	5.4	1.5	5.679	0	95.7	75	125			

Sample ID **1207640-001BMSD** SampType: **MSD** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **BatchQC** Batch ID: **2912** RunNo: **4414**

Prep Date: **7/19/2012** Analysis Date: **7/25/2012** SeqNo: **123198** Units: **mg/Kg-dry**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	26	15	28.58	0	89.5	75	125	2.19	20	
Barium	43	0.58	28.58	36.21	23.0	75	125	1.08	20	S
Cadmium	27	0.58	28.58	0	95.3	75	125	0.988	20	
Chromium	29	1.7	28.58	2.024	94.9	75	125	1.85	20	
Lead	29	1.5	28.58	2.697	93.7	75	125	0.831	20	
Selenium	32	15	28.58	6.868	87.2	75	125	13.7	20	
Silver	5.3	1.5	5.717	0	93.3	75	125	1.94	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID **MB-3144**	SampType: **MBLK**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **PBW**	Batch ID: **3144**	RunNo: **4617**
Prep Date: **8/1/2012**	Analysis Date: **8/2/2012**	SeqNo: **129447** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	100								
Chromium	ND	5.0								
Lead	ND	5.0								
Selenium	ND	1.0								
Silver	ND	5.0								

Sample ID **LCS-3144**	SampType: **LCS**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **LCSW**	Batch ID: **3144**	RunNo: **4617**
Prep Date: **8/1/2012**	Analysis Date: **8/2/2012**	SeqNo: **129448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	100	0.5000	0	92.7	80	120			
Chromium	ND	5.0	0.5000	0	95.3	80	120			
Lead	ND	5.0	0.5000	0	95.9	80	120			
Selenium	ND	1.0	0.5000	0	104	80	120			
Silver	ND	5.0	0.1000	0.004880	96.6	80	120			

Sample ID **1207C56-003AMS**	SampType: **MS**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **BatchQC**	Batch ID: **3144**	RunNo: **4617**
Prep Date: **8/1/2012**	Analysis Date: **8/2/2012**	SeqNo: **129483** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	5.0	0.5000	0	99.8	75	125			
Selenium	ND	1.0	0.5000	0	104	75	125			
Silver	ND	5.0	0.1000	0.01075	100	75	125			

Sample ID **1207C56-003AMSD**	SampType: **MSD**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **BatchQC**	Batch ID: **3144**	RunNo: **4617**
Prep Date: **8/1/2012**	Analysis Date: **8/2/2012**	SeqNo: **129484** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	5.0	0.5000	0	91.9	75	125	0	20	
Selenium	ND	1.0	0.5000	0	101	75	125	0	20	
Silver	ND	5.0	0.1000	0.01075	90.9	75	125	0	20	

Sample ID **MB-3144**	SampType: **MBLK**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **PBW**	Batch ID: **3144**	RunNo: **4622**
Prep Date: **8/1/2012**	Analysis Date: **8/3/2012**	SeqNo: **129665** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0								
Cadmium	ND	1.0								

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID	LCS-3144	SampType:	LCS		TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	LCSW	Batch ID:	3144		RunNo:	4622				
Prep Date:	8/1/2012	Analysis Date:	8/3/2012		SeqNo:	129666	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	107	80	120			
Cadmium	ND	1.0	0.5000	0	98.8	80	120			

Sample ID	1207C56-003AMS	SampType:	MS		TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	BatchQC	Batch ID:	3144		RunNo:	4622				
Prep Date:	8/1/2012	Analysis Date:	8/3/2012		SeqNo:	129686	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	1.0	0.5000	0	94.3	75	125			

Sample ID	1207C56-003AMSD	SampType:	MSD		TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	BatchQC	Batch ID:	3144		RunNo:	4622				
Prep Date:	8/1/2012	Analysis Date:	8/3/2012		SeqNo:	129689	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	1.0	0.5000	0	91.8	75	125	0	20	

Sample ID	1207C56-003AMS	SampType:	MS		TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	BatchQC	Batch ID:	3144		RunNo:	4622				
Prep Date:	8/1/2012	Analysis Date:	8/3/2012		SeqNo:	129691	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	500	0.5000	1.293	92.8	75	125			

Sample ID	1207C56-003AMSD	SampType:	MSD		TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	BatchQC	Batch ID:	3144		RunNo:	4622				
Prep Date:	8/1/2012	Analysis Date:	8/3/2012		SeqNo:	129692	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	500	0.5000	1.293	92.9	75	125	0	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
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- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Enviro ital Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Animas Environmental Work Order Number: 1207801

Received by/date: RM 07/19/12

Logged By: Lindsay Mangin 7/19/2012 10:10:00 AM

Completed By: Lindsay Mangin 07/19/12

Reviewed By: IO 07/19/12

Chain of Custody

1. Were seals intact?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Client		

Log In

4. Coolers are present? (see 19. for cooler specific information)	Yes ☑	No ☐	NA ☐
5. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
7. Sample(s) in proper container(s)?	Yes ☑	No ☐	
8. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
12. Were any sample containers received broken?	Yes ☐	No ☑	
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15. Is it clear what analyses were requested?	Yes ☑	No ☐	
16. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services, LLC

Mailing Address: 624 E Comanche Farmington NM 87401

Phone #: 505-564 2281

email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: ASAP- metals
☐ Standard ☒ Rush same day

Project Name: CoP Kattker #1

Project #:

Project Manager: R. Kennemer

Sampler: Debbie Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1200180	BTEX + MTBE + TPH (Gas and Diesel)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	300.0 Chlorides			Air Bubbles (Y or N)
1-18-12	0910	Soil	SC-1	1-4oz / 1 Moltar	non / MeOH	-001	X											X			
1-18-12	1249	Soil	Stockpile	2-4oz	non	-002							X								

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/18/12	1622	Debbie Watson	Christine Walker	7/18/12	1622
7/18/12	1702	Christine Walker		7/19/12	1010

Remarks: Bill to ConocoPhillips
WO: 10336323 User ID: KAITLW
act. code: C200 Work ordered: Jess Henson
Supervisor: Harry Dee Area: 3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 24, 2012

Debbie Watson

Animas Environmental Services
624 East Comanche
Farmington, NM 87401
TEL: (505) 486-4071
FAX

RE: COP Kattler #1 OrderNo.: 1207948

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/21/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1207948**
Date Reported: **7/24/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: COP Kattler #1
Lab ID: 1207948-001 **Matrix:** SOIL

Client Sample ID: SC-6
Collection Date: 7/20/2012 1:40:00 PM
Received Date: 7/21/2012 2:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	90	30		mg/Kg	20	7/23/2012 11:09:34 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: Background
Project: COP Kattler #1
Collection Date: 7/18/2012 12:08:00 PM
Lab ID: 1207948-002 **Matrix:** SOIL **Received Date:** 7/21/2012 2:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	ND	30		mg/Kg	20	7/23/2012 11:21:59 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207948**

24-Jul-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID	**MB-2967**	SampType: **MBLK**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID: **2967**			RunNo: **4241**					
Prep Date:	**7/23/2012**	Analysis Date: **7/23/2012**			SeqNo: **121293**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-2967**	SampType: **LCS**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID: **2967**			RunNo: **4241**					
Prep Date:	**7/23/2012**	Analysis Date: **7/23/2012**			SeqNo: **121294**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.1	90	110			

Sample ID	**1207838-001AMS**	SampType: **MS**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**BatchQC**	Batch ID: **2967**			RunNo: **4241**					
Prep Date:	**7/23/2012**	Analysis Date: **7/23/2012**			SeqNo: **121298**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	48	15	15.00	35.17	88.6	64.4	117			

Sample ID	**1207838-001AMSD**	SampType: **MSD**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**BatchQC**	Batch ID: **2967**			RunNo: **4241**					
Prep Date:	**7/23/2012**	Analysis Date: **7/23/2012**			SeqNo: **121299**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	50	15	15.00	35.17	98.1	64.4	117	2.89	20	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Animas Environmental — Work Order Number: 1207948

Received by/date: AF 07/21/12

Logged By: **Anne Thorne** 7/21/2012 2:00:00 PM — Anne Thorne

Completed By: **Anne Thorne** 7/23/2012 — Anne Thorne

Reviewed By: AF 07/23/12

Chain of Custody

1. Were seals intact? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☑ NA ☐

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

18. Additional remarks:

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.2	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services, LLC

Mailing Address: 624 E. Comanche
Farmington, NM 87401

Phone #: (505) 564-2281

email or Fax#: (505) 326-2022

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☒ Rush Same Day

Project Name: CoP Kattler #1

Project #:

Project Manager: D. Watson

Sampler: Heather Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No 1207944	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F^-, NO_3, NO_2, PO_4, SO_4) 300.0	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
7/20/12	1340	Soil	SC-10	2 4oz Jars	None	-001								X				
7/10/12	1208	Soil	Background	1 4oz Jar	None	-002								X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/20/12	1530	Heather M. Woods	Christine Walters	7/20/12	1530
7/20/12	1600	Christine Walters		7/21/12	1400

Remarks: Bill to ConocoPhillips
WO#: 10336323 Area: 3
Activity Code: C200 Supervisor: Harry Dee
User ID: KAITLW

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

January 31, 2013

Crystal Tafoya
ConocoPhillips
San Juan Business Unit
Office 214-05
5525 Hwy 64
Farmington, New Mexico 87401

RE: Initial Release Assessment and Final Excavation Report
Kattler #1
San Juan County, New Mexico

Dear Ms. Tafoya:

On July 18, 2012, Animas Environmental Services, LLC (AES) completed an initial release assessment and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) Kattler #1, located in San Juan County, New Mexico. The final excavation was completed by CoP contractors while AES was on site on July 18, 2012. The historical release was associated with the compressor at the location. Surface staining was visible near the recently removed compressor pad.

1.0 Site Information

1.1 Location

Site Name – Kattler #1
Legal Description - NE¼ NW¼, Section 2, T29N, R12W, San Juan County, New Mexico
Well Latitude/Longitude - N36.75951 and W108.07107, respectively
Release Location Latitude/Longitude – N36.75964 and W108.07134, respectively
Land Jurisdiction – Private
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, July 2012

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and no prior ranking information was located. The New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and no registered water wells were reported to be located within 1,000 feet of the location. Additionally, Google Earth and the New Mexico Tech Petroleum Recovery Research

Center online mapping tool (http://ford.nmt.edu/react/project.html) were accessed to aid in the identification of downgradient surface water.

Once on site, AES personnel further assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was greater than 100 feet below ground surface (bgs). A tributary to the wash in Hargis Arroyo is located approximately 270 feet north of the location. Based on this information, the location was assessed a ranking score of 10 per the *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993).

1.3 Assessments

AES was initially contacted by Jess Henson, CoP representative, on July 17, 2012, and on July 18, 2012, Deborah Watson and Nathan Willis of AES completed the release assessment field work. The assessment included collection and field screening of three samples from one test hole (TH-1). Based on the field screening results, AES recommended excavation of the release area.

Excavation of the release area was also completed on July 18, 2012, and AES collected confirmation samples of the excavation. The field screening activities included collection of five confirmation soil samples (SC-2 through SC-6) of the walls and base of the excavation. The area of the final excavation was approximately 19 feet by 13.5 feet by 3 feet in depth. Sample locations and excavation extents are shown on Figure 3.

2.0 Soil Sampling

A total of three soil samples from test hole TH-1 and five composite samples (SC-2 through SC-6) were collected during the assessments. All soil samples were field screened for volatile organic compounds (VOCs) and select samples were also analyzed for total petroleum hydrocarbons (TPH). A waste characterization sample was submitted for laboratory analysis.

2.1 Field Screening

2.1.1 Volatile Organic Compounds

Field screening for VOC vapors was conducted with a photo-ionization detector (PID) organic vapor meter (OVM). Before beginning field screening, the PID-OVM was first calibrated with 100 parts per million (ppm) isobutylene gas.

2.1.2 Total Petroleum Hydrocarbons

Field TPH samples were analyzed per USEPA Method 418.1 using a Buck Scientific Model HC-404 Total Hydrocarbon Analyzer Infrared Spectrometer (Buck). A 3-point calibration was completed prior to conducting soil analyses. Field analytical protocol followed AES's *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1.*

2.2 Field Screening Results

On July 18, 2012, initial assessment field screening results from TH-1 for VOCs via OVM showed concentrations ranging from 1.7 ppm up to 39.5 ppm. Field TPH concentrations were 1,332 mg/kg in TH-1 at 2 feet bgs.

Final excavation field screening results for VOCs via OVM ranged from 6.5 ppm in SC-6 to 40.1 ppm in SC-3. Field TPH concentrations ranged from 44.4 mg/kg in SC-3 up to 62.6 mg/kg in SC-4. Results are included below in Table 1 and on Figure 3. The AES Field Screening Report is attached.

Table 1. Soil Field Screening VOCs and TPH Results
Kattler #1 Release Assessment and Final Excavation, July 2012

Sample ID	*Date Sampled*	*Sample Depth (ft bgs)*	*VOCs via OVM (ppm)*	*Field TPH (mg/kg)*
	*NMOCD Action Level**		*100*	*1,000*
TH-1	7/18/12	0.5	39.5	NA
		1	11.1	NA
		2	1.7	**1,330**
SC-2	7/18/12	1 to 3	25.5	51.7
SC-3	7/18/12	1 to 3	40.1	44.4
SC-4	7/18/12	1 to 3	22.2	62.6
SC-5	7/18/12	1 to 3	34.4	61.4
SC-6	7/18/12	3	6.5	55.3

NA – not analyzed
*Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993)

3.0 Conclusions and Recommendations

On July 18, 2012, Animas Environmental Services, LLC (AES) conducted an initial assessment of petroleum contaminated soils located near the location of the former compressor at the Kattler #1. Action levels for releases are determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993), and the site was assigned a rank of 10. Field screening results were reported below the NMOCD action level of 100 ppm VOCs in TH-1. However, field screening results reported TPH concentrations above the NMOCD action level of 1,000 mg/kg in TH-1 at 2 feet bgs, with 1,330 mg/kg. Excavation of the release area was recommended and completed on July 18, 2012.

Final assessment of the excavation area was completed on July 18, 2012, and field screening results of the excavation extents showed that VOC and TPH concentrations were below applicable NMOCD action levels for all of the final four walls and base of the excavation.

Based on final field screening results of the excavation of petroleum contaminated soils at the Kattler #1, VOCs and TPH concentrations were below applicable NMOCD action levels for each of the sidewalls and base of the excavation. No further work is recommended.

If you have any questions about this report or site conditions, please do not hesitate to contact Deborah Watson at (505) 564-2281.

Sincerely,

Heather M. Woods

Heather M. Woods
Staff Geologist

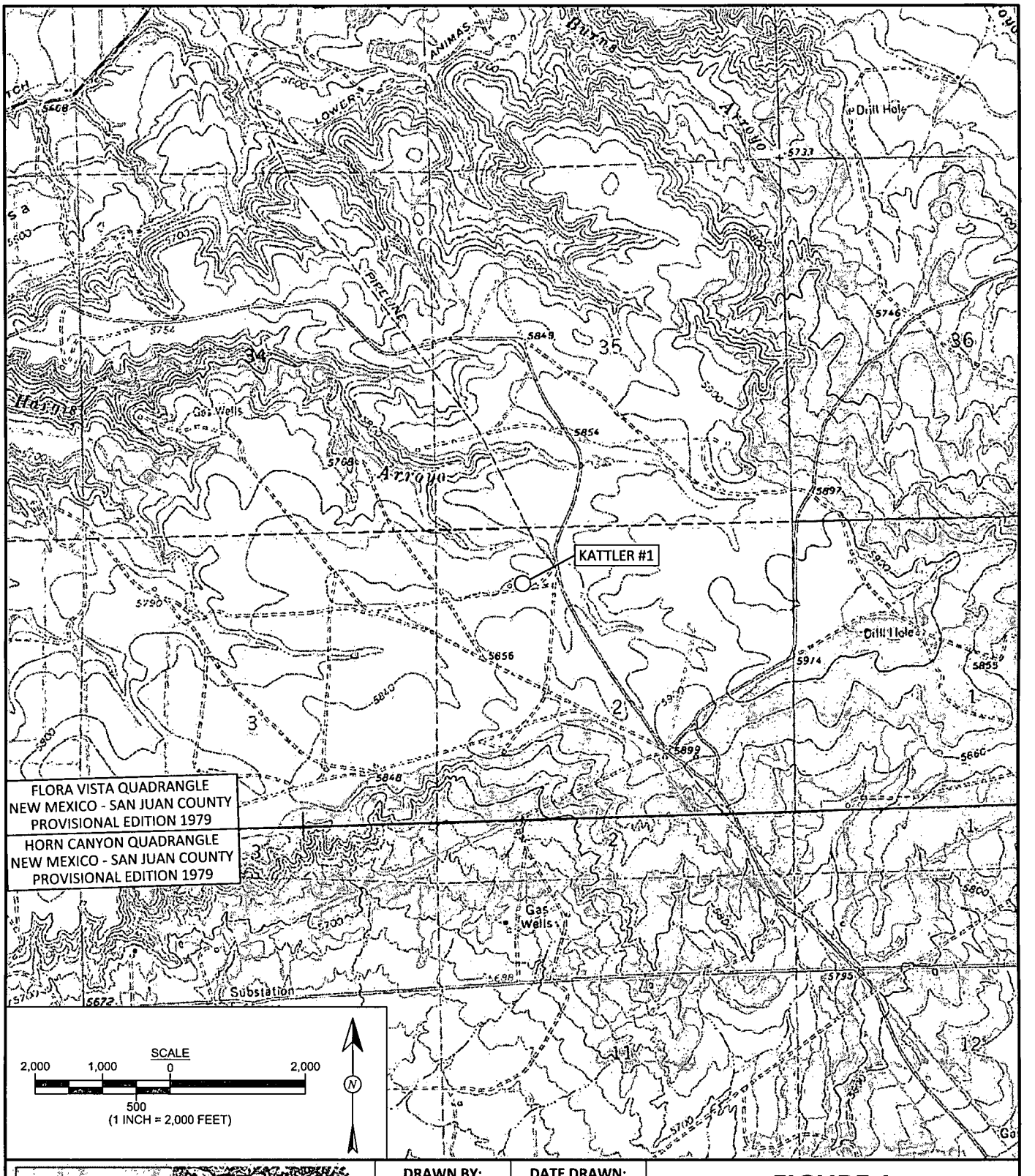
Elizabeth McNally

Elizabeth McNally, PE

Attachments:

Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, July 2012
Figure 3. Final Excavation Soil Sample Locations and Results, July 2012
AES Field Screening Report 071812
Hall Laboratory Analytical Report 1207801 (Stockpile)

R:\Animas 2000\Dropbox\2013 Projects\ConocoPhillips\Kattler #1\Release Assessment\Kattler #1 Release and Final Excavation Report 013113.docx

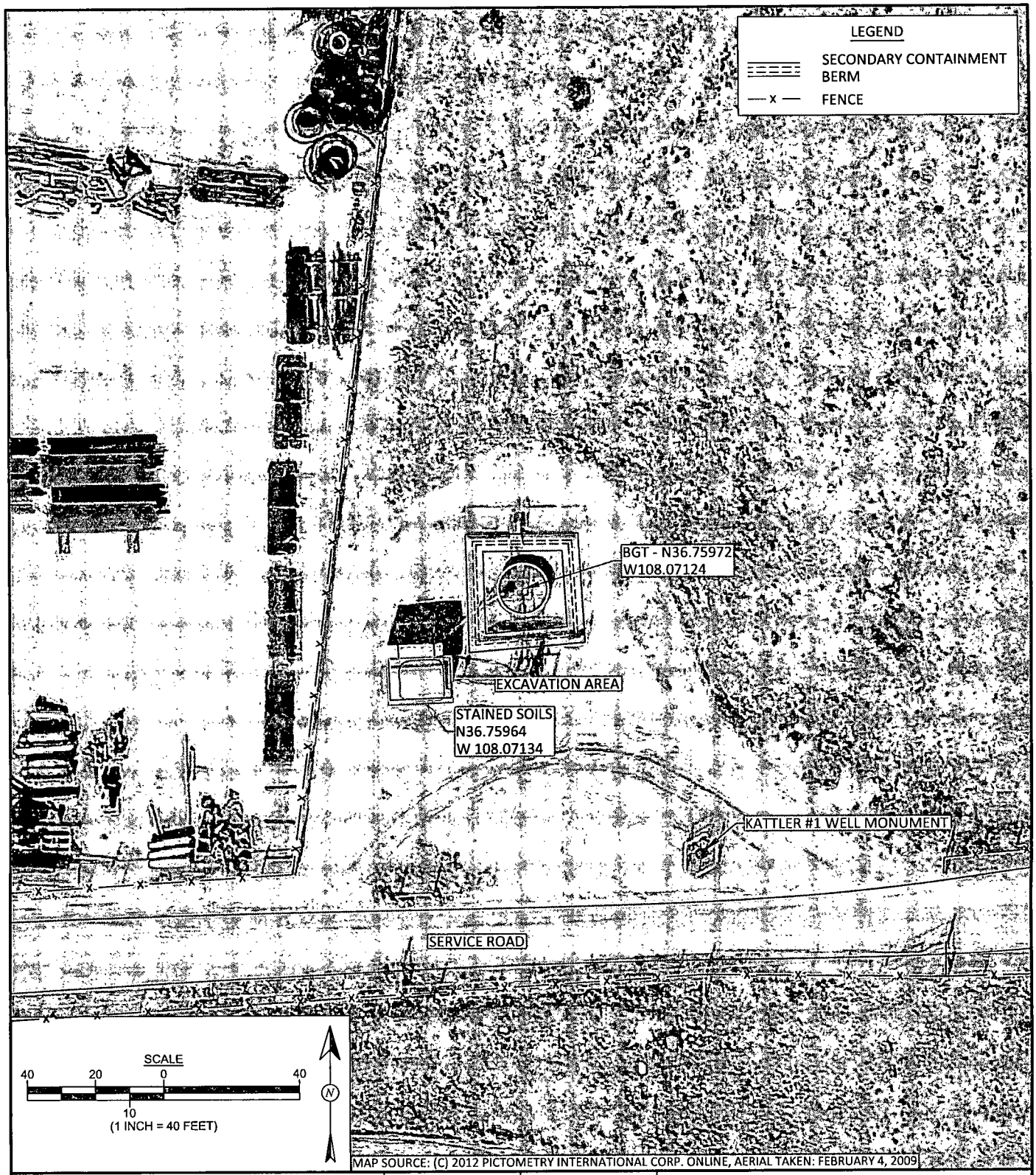


Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** July 18, 2012
REVISIONS BY: C. Lameman	**DATE REVISED:** July 18, 2012
CHECKED BY: D. Watson	**DATE CHECKED:** January 17, 2013
APPROVED BY: E. McNally	**DATE APPROVED:** January 17, 2013

FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP
ConocoPhillips
KATTLER #1
SAN JUAN COUNTY, NEW MEXICO
NE¼ NW¼, SECTION 2, T29N, R12W
N36.75951, W108.07107

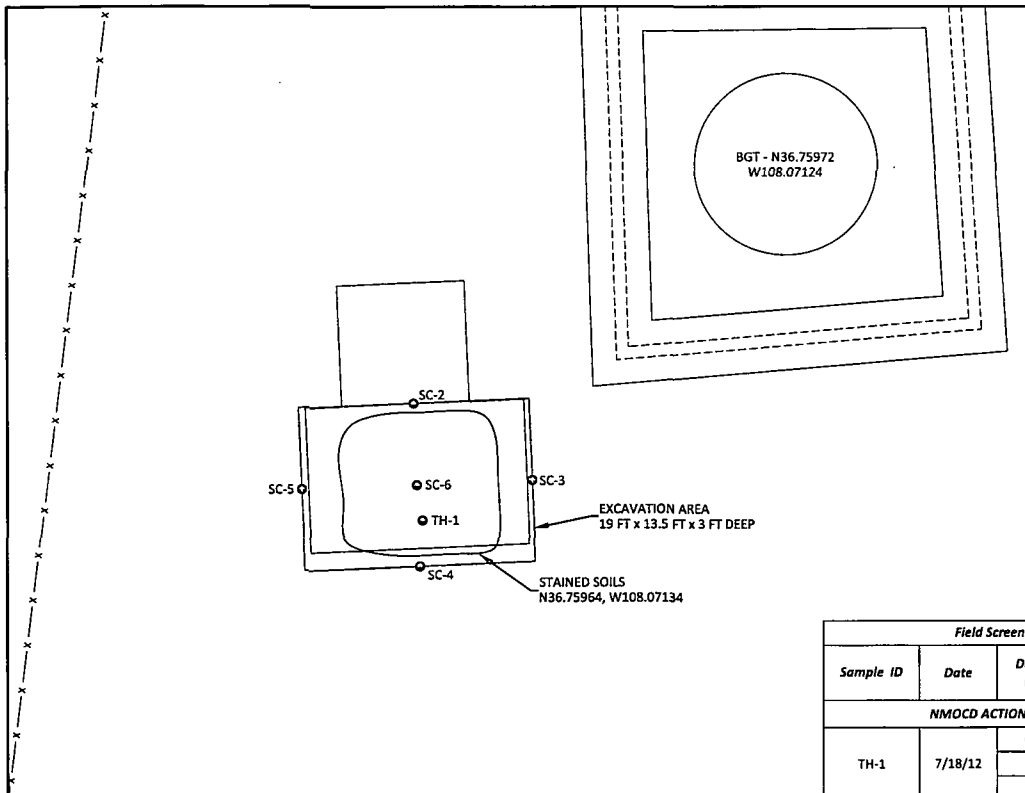


Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** July 18, 2012
REVISIONS BY: C. Lameman	**DATE REVISED:** September 12, 2012
CHECKED BY: D. Watson	**DATE CHECKED:** January 17, 2013
APPROVED BY: E. McNally	**DATE APPROVED:** January 17, 2013

FIGURE 2

AERIAL SITE MAP
JULY 2012
ConocoPhillips
KATTLER #1
SAN JUAN COUNTY, NEW MEXICO
NE¼ NW¼, SECTION 2, T29N, R12W
N36.75951, W108.07107



Field Screening Results				
Sample ID	*Date*	*Depth (ft)*	*OVM-PID (ppm)*	*TPH (mg/kg)*
NMOCD ACTION LEVEL			*100*	*1,000*
TH-1	7/18/12	0.5	39.5	*NA*
		1	11.1	*NA*
		2	1.7	1,330
SC-2	7/18/12	1 to 3	25.5	51.7
SC-3	7/18/12	1 to 3	40.1	44.4
SC-4	7/18/12	1 to 3	22.2	62.6
SC-5	7/18/12	1 to 3	34.4	61.4
SC-6	7/18/12	3	6.5	55.3
NA - NOT ANALYZED				

KATTLER #1 WELL MONUMENT

FIGURE 3

SAMPLE LOCATIONS, RESULTS, AND EXCAVATION DETAILS
JULY 2012
ConocoPhillips
KATTLER #1
SAN JUAN COUNTY, NEW MEXICO
NE¼ NW¼, SECTION 2, T29N, R12W
N36.75951, W108.07107

Animas Environmental Services, LLC

DRAWN BY:	DATE DRAWN:
C. Lameman	September 18, 2012
REVISIONS BY:	**DATE REVISED:**
C. Lameman	September 18, 2012
CHECKED BY:	**DATE CHECKED:**
D. Watson	January 13, 2013
APPROVED BY:	**DATE APPROVED:**
E. McNally	January 13, 2013

LEGEND

SAMPLE LOCATIONS

—x— FENCE

N

SCALE

10 5 0 10

2

(1 INCH = 10 FEET)

AES Field Screening Report

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3274

Client: ConocoPhillips

Project Location: Kattler #1

Date: 7/18/2012

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
TH-1 @ 0.5'	7/18/2012	10:08	Center	39.5	*Not Analyzed for TPH*				
TH-1 @ 1'	7/18/2012	10:10	Center	11.1	*Not Analyzed for TPH*				
TH-1 @ 2'	7/18/2012	10:12	Center	1.7	10:34	1,330	20.0	1	DAW
SC-2	7/18/2012	11:50	North Wall	25.5	12:26	51.7	20.0	1	DAW
SC-3	7/18/2012	11:52	East Wall	40.1	12:30	44.4	20.0	1	DAW
SC-4	7/18/2012	11:55	South Wall	22.2	12:32	62.6	20.0	1	DAW
SC-5	7/18/2012	11:57	West Wall	34.4	12:34	61.4	20.0	1	DAW
SC-6	7/18/2012	12:00	Base	6.5	12:36	55.3	20.0	1	DAW

Total Petroleum Hydrocarbons - USEPA 418.1

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

DF Dilution Factor

**Field TPH concentrations recorded may be below PQL.*

Analyst: Deborah Watson

Report Finalized: 07/18/12

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 03, 2012

Debbie Watson

Animas Environmental Services
624 East Comanche
Farmington, NM 87401
TEL: (505) 486-4071
FAX

RE: COP Kattler #1 OrderNo.: 1207801

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/19/2012 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 27, 2012.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1207801**
Date Reported: **8/3/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: COP Kattler #1
Lab ID: 1207801-001

Client Sample ID: SC-1
Collection Date: 7/18/2012 9:10:00 AM
Matrix: MEOH (SOIL)
Received Date: 7/19/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	680	30		mg/Kg	20	7/19/2012 12:16:00 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	ND	0.050		mg/Kg	1	7/19/2012 12:58:37 PM
Toluene	ND	0.050		mg/Kg	1	7/19/2012 12:58:37 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/19/2012 12:58:37 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/19/2012 12:58:37 PM
Surr: 1,2-Dichloroethane-d4	94.8	70-130		%REC	1	7/19/2012 12:58:37 PM
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	7/19/2012 12:58:37 PM
Surr: Dibromofluoromethane	89.5	70-130		%REC	1	7/19/2012 12:58:37 PM
Surr: Toluene-d8	101	70-130		%REC	1	7/19/2012 12:58:37 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: Stockpile
Project: COP Kattler #1
Collection Date: 7/18/2012 12:49:00 PM
Lab ID: 1207801-002
Matrix: SOIL
Received Date: 7/19/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 7471: MERCURY						Analyst: **DBD**
Mercury	ND	0.033		mg/Kg	1	7/20/2012 2:49:13 PM
MERCURY, TCLP						Analyst: **DBD**
Mercury	ND	0.020		mg/L	1	8/1/2012 1:42:01 PM
EPA METHOD 6010B: SOIL METALS						Analyst: **ELS**
Arsenic	ND	12		mg/Kg	5	7/20/2012 6:54:36 AM
Barium	390	1.0		mg/Kg	10	7/20/2012 6:58:51 AM
Cadmium	ND	0.50		mg/Kg	5	7/20/2012 6:54:36 AM
Chromium	7.4	1.5		mg/Kg	5	7/20/2012 6:54:36 AM
Lead	5.2	1.2		mg/Kg	5	7/20/2012 8:38:17 AM
Selenium	ND	12		mg/Kg	5	7/20/2012 8:38:17 AM
Silver	ND	1.2		mg/Kg	5	7/20/2012 6:54:36 AM
EPA METHOD 6010B: TCLP METALS						Analyst: **ELS**
Arsenic	ND	5.0		mg/L	1	8/3/2012 6:27:11 AM
Barium	ND	100		mg/L	1	8/2/2012 3:54:22 PM
Cadmium	ND	1.0		mg/L	1	8/3/2012 6:27:11 AM
Chromium	ND	5.0		mg/L	1	8/2/2012 3:54:22 PM
Lead	ND	5.0		mg/L	1	8/2/2012 3:54:22 PM
Selenium	ND	1.0		mg/L	1	8/2/2012 3:54:22 PM
Silver	ND	5.0		mg/L	1	8/2/2012 3:54:22 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID	**MB-2907**	SampType: **MBLK**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID: **2907**			RunNo: **4157**					
Prep Date:	**7/19/2012**	Analysis Date: **7/19/2012**			SeqNo: **118814**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-2907**	SampType: **LCS**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID: **2907**			RunNo: **4157**					
Prep Date:	**7/19/2012**	Analysis Date: **7/19/2012**			SeqNo: **118815**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.3	90	110			

Sample ID	**1207599-001AMS**	SampType: **MS**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**BatchQC**	Batch ID: **2907**			RunNo: **4157**					
Prep Date:	**7/19/2012**	Analysis Date: **7/19/2012**			SeqNo: **118819**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	7.5	15.00	2.511	81.1	64.4	117			

Sample ID	**1207599-001AMSD**	SampType: **MSD**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**BatchQC**	Batch ID: **2907**			RunNo: **4157**					
Prep Date:	**7/19/2012**	Analysis Date: **7/19/2012**			SeqNo: **118820**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	7.5	15.00	2.511	84.6	64.4	117	3.56	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID **MB-2919**	SampType: **MBLK**	TestCode: **EPA Method 7471: Mercury**
Client ID: **PBS**	Batch ID: **2919**	RunNo: **4199**
Prep Date: **7/19/2012**	Analysis Date: **7/20/2012**	SeqNo: **120246** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID **LCS-2919**	SampType: **LCS**	TestCode: **EPA Method 7471: Mercury**
Client ID: **LCSS**	Batch ID: **2919**	RunNo: **4199**
Prep Date: **7/19/2012**	Analysis Date: **7/20/2012**	SeqNo: **120247** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	102	80	120			

Sample ID **1207796-008AMS**	SampType: **MS**	TestCode: **EPA Method 7471: Mercury**
Client ID: **BatchQC**	Batch ID: **2919**	RunNo: **4199**
Prep Date: **7/19/2012**	Analysis Date: **7/20/2012**	SeqNo: **120251** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1661	0	98.8	75	125			

Sample ID **1207796-008AMSD**	SampType: **MSD**	TestCode: **EPA Method 7471: Mercury**
Client ID: **BatchQC**	Batch ID: **2919**	RunNo: **4199**
Prep Date: **7/19/2012**	Analysis Date: **7/20/2012**	SeqNo: **120252** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1643	0	98.0	75	125	1.87	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID	**MB-3127**	SampType: **MBLK**			TestCode: **MERCURY, TCLP**					
Client ID:	**PBW**	Batch ID: **3127**			RunNo: **4577**					
Prep Date:	**8/1/2012**	Analysis Date: **8/1/2012**			SeqNo: **128440**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020								

Sample ID	**LCS-3127**	SampType: **LCS**			TestCode: **MERCURY, TCLP**					
Client ID:	**LCSW**	Batch ID: **3127**			RunNo: **4577**					
Prep Date:	**8/1/2012**	Analysis Date: **8/1/2012**			SeqNo: **128441**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	101	80	120			

Sample ID	**1207B34-006AMS**	SampType: **MS**			TestCode: **MERCURY, TCLP**					
Client ID:	**BatchQC**	Batch ID: **3127**			RunNo: **4577**					
Prep Date:	**8/1/2012**	Analysis Date: **8/1/2012**			SeqNo: **128454**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	104	75	125			

Sample ID	**1207B34-006AMSD**	SampType: **MSD**			TestCode: **MERCURY, TCLP**					
Client ID:	**BatchQC**	Batch ID: **3127**			RunNo: **4577**					
Prep Date:	**8/1/2012**	Analysis Date: **8/1/2012**			SeqNo: **128455**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	93.4	75	125	0	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID	MB-2912	SampType:	MBLK		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	PBS	Batch ID:	2912		RunNo:	4168				
Prep Date:	7/19/2012	Analysis Date:	7/20/2012		SeqNo:	119211	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Silver	ND	0.25								

Sample ID	LCS-2912	SampType:	LCS		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	LCSS	Batch ID:	2912		RunNo:	4168				
Prep Date:	7/19/2012	Analysis Date:	7/20/2012		SeqNo:	119212	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0.2515	101	80	120			
Barium	24	0.10	25.00	0	94.3	80	120			
Cadmium	24	0.10	25.00	0	95.3	80	120			
Chromium	24	0.30	25.00	0.09550	93.7	80	120			
Silver	4.8	0.25	5.000	0.03050	96.3	80	120			

Sample ID	MB-2912	SampType:	MBLK		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	PBS	Batch ID:	2912		RunNo:	4174				
Prep Date:	7/19/2012	Analysis Date:	7/20/2012		SeqNo:	119449	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.25								
Selenium	ND	2.5								

Sample ID	LCS-2912	SampType:	LCS		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	LCSS	Batch ID:	2912		RunNo:	4174				
Prep Date:	7/19/2012	Analysis Date:	7/20/2012		SeqNo:	119451	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	24	0.25	25.00	0	96.0	80	120			
Selenium	22	2.5	25.00	0	86.1	80	120			

Sample ID	MB-2912	SampType:	MBLK		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	PBS	Batch ID:	2912		RunNo:	4414				
Prep Date:	7/19/2012	Analysis Date:	7/25/2012		SeqNo:	123190	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID **MB-2912**	SampType: **MBLK**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **PBS**	Batch ID: **2912**	RunNo: **4414**
Prep Date: **7/19/2012**	Analysis Date: **7/25/2012**	SeqNo: **123190** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.25								
Selenium	ND	2.5								
Silver	ND	0.25								

Sample ID **LCS-2912**	SampType: **LCS**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS**	Batch ID: **2912**	RunNo: **4414**
Prep Date: **7/19/2012**	Analysis Date: **7/25/2012**	SeqNo: **123191** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0.7230	96.9	80	120			
Barium	25	0.10	25.00	0	100	80	120			
Cadmium	25	0.10	25.00	0	100	80	120			
Chromium	24	0.30	25.00	0.06600	96.9	80	120			
Lead	25	0.25	25.00	0	100	80	120			
Selenium	25	2.5	25.00	0	98.2	80	120			
Silver	5.1	0.25	5.000	0	103	80	120			

Sample ID **1207640-001BMS**	SampType: **MS**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **BatchQC**	Batch ID: **2912**	RunNo: **4414**
Prep Date: **7/19/2012**	Analysis Date: **7/25/2012**	SeqNo: **123197** Units: **mg/Kg-dry**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	15	28.40	0	88.1	75	125			
Barium	42	0.58	28.40	36.21	21.6	75	125			S
Cadmium	28	0.58	28.40	0	96.9	75	125			
Chromium	30	1.7	28.40	2.024	97.4	75	125			
Lead	29	1.5	28.40	2.697	93.5	75	125			
Selenium	28	15	28.40	6.868	73.4	75	125			S
Silver	5.4	1.5	5.679	0	95.7	75	125			

Sample ID **1207640-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **BatchQC**	Batch ID: **2912**	RunNo: **4414**
Prep Date: **7/19/2012**	Analysis Date: **7/25/2012**	SeqNo: **123198** Units: **mg/Kg-dry**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	26	15	28.58	0	89.5	75	125	2.19	20	
Barium	43	0.58	28.58	36.21	23.0	75	125	1.08	20	S
Cadmium	27	0.58	28.58	0	95.3	75	125	0.988	20	
Chromium	29	1.7	28.58	2.024	94.9	75	125	1.85	20	
Lead	29	1.5	28.58	2.697	93.7	75	125	0.831	20	
Selenium	32	15	28.58	6.868	87.2	75	125	13.7	20	
Silver	5.3	1.5	5.717	0	93.3	75	125	1.94	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID **MB-3144**	SampType: **MBLK**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **PBW**	Batch ID: **3144**	RunNo: **4617**
Prep Date: **8/1/2012**	Analysis Date: **8/2/2012**	SeqNo: **129447** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	100								
Chromium	ND	5.0								
Lead	ND	5.0								
Selenium	ND	1.0								
Silver	ND	5.0								

Sample ID **LCS-3144**	SampType: **LCS**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **LCSW**	Batch ID: **3144**	RunNo: **4617**
Prep Date: **8/1/2012**	Analysis Date: **8/2/2012**	SeqNo: **129448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	100	0.5000	0	92.7	80	120			
Chromium	ND	5.0	0.5000	0	95.3	80	120			
Lead	ND	5.0	0.5000	0	95.9	80	120			
Selenium	ND	1.0	0.5000	0	104	80	120			
Silver	ND	5.0	0.1000	0.004880	96.6	80	120			

Sample ID **1207C56-003AMS**	SampType: **MS**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **BatchQC**	Batch ID: **3144**	RunNo: **4617**
Prep Date: **8/1/2012**	Analysis Date: **8/2/2012**	SeqNo: **129483** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	5.0	0.5000	0	99.8	75	125			
Selenium	ND	1.0	0.5000	0	104	75	125			
Silver	ND	5.0	0.1000	0.01075	100	75	125			

Sample ID **1207C56-003AMSD**	SampType: **MSD**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **BatchQC**	Batch ID: **3144**	RunNo: **4617**
Prep Date: **8/1/2012**	Analysis Date: **8/2/2012**	SeqNo: **129484** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	5.0	0.5000	0	91.9	75	125	0	20	
Selenium	ND	1.0	0.5000	0	101	75	125	0	20	
Silver	ND	5.0	0.1000	0.01075	90.9	75	125	0	20	

Sample ID **MB-3144**	SampType: **MBLK**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **PBW**	Batch ID: **3144**	RunNo: **4622**
Prep Date: **8/1/2012**	Analysis Date: **8/3/2012**	SeqNo: **129665** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0								
Cadmium	ND	1.0								

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207801**

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID	LCS-3144	SampType:	LCS		TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	LCSW	Batch ID:	3144		RunNo:	4622				
Prep Date:	8/1/2012	Analysis Date:	8/3/2012		SeqNo:	129666	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	107	80	120			
Cadmium	ND	1.0	0.5000	0	98.8	80	120			

Sample ID	1207C56-003AMS	SampType:	MS		TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	BatchQC	Batch ID:	3144		RunNo:	4622				
Prep Date:	8/1/2012	Analysis Date:	8/3/2012		SeqNo:	129686	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	1.0	0.5000	0	94.3	75	125			

Sample ID	1207C56-003AMSD	SampType:	MSD		TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	BatchQC	Batch ID:	3144		RunNo:	4622				
Prep Date:	8/1/2012	Analysis Date:	8/3/2012		SeqNo:	129689	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	1.0	0.5000	0	91.8	75	125	0	20	

Sample ID	1207C56-003AMS	SampType:	MS		TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	BatchQC	Batch ID:	3144		RunNo:	4622				
Prep Date:	8/1/2012	Analysis Date:	8/3/2012		SeqNo:	129691	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	500	0.5000	1.293	92.8	75	125			

Sample ID	1207C56-003AMSD	SampType:	MSD		TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	BatchQC	Batch ID:	3144		RunNo:	4622				
Prep Date:	8/1/2012	Analysis Date:	8/3/2012		SeqNo:	129692	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	500	0.5000	1.293	92.9	75	125	0	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Animas Environmental Work Order Number: 1207801

Received by/date: RM 07/19/12

Logged By: Lindsay Mangin 7/19/2012 10:10:00 AM

Completed By: Lindsay Mangin 07/19/12

Reviewed By: JO 07/19/12

Chain of Custody

1. Were seals intact?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Client		

Log In

4. Coolers are present? (see 19. for cooler specific information)	Yes ☑	No ☐	NA ☐
5. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
7. Sample(s) in proper container(s)?	Yes ☑	No ☐	
8. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
12. Were any sample containers received broken?	Yes ☐	No ☑	
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15. Is it clear what analyses were requested?	Yes ☑	No ☐	
16. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services, LLC

Mailing Address: 624 E Comanche Farmington NM 87401

Phone #: 505-564 2281

email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: ASAP- metals
☐ Standard ☒ Rush same day

Project Name: CoP Kattler #1

Project #:

Project Manager: R. Kennemer

Sampler: Delgue Watson

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1206180	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	300.0 Chlorides	Air Bubbles (Y or N)
1-18-12	0910	soil	SC-1	1-4oz jar	non MeOH	-001											X	
1-18-12	1249	soil	Stockpile	2-4oz	non	-002						X						

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/18/12	1622	Delgue Watson	Christine Walker	7/18/12	1622
7/18/12	1702	Christine Walker		7/19/12	1018

Remarks: Bill to ConocoPhillips
WO: 10336323 User ID: KAITLW
act. code: C200 Workordered: Jess Henson
Supervisor: Harry Dee Area: 3