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

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

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

Form C-141

Revised August 8, 2011

			Refea	ise Nouncaud				CHOI	I.			
						<b>PERAT</b>			Initi	al Report		Final Repor
				& Gas Company			stal Tafoya	007		<del></del>		
Address 340			gton, NM				lo.(505) 326-98 e: <b>Gas Well</b>	837				
Facility Nar												
Surface Ow	ner <b>Tribal</b>		1	Mineral Owner	er Tribal (I-22-IND-2772)				API No	.30-045-11	426	
				LOCATIO	N	OF REI	EASE					
Unit Letter	Section	Township	Range			outh Line	Feet from the	East/V	West Line	County		
F	16	32N	14W	2708		uth	1608		West	San Juan		
		•		Latitude <u>36.988</u>	รกร	Langitud	le 108 3174					
				NATURI		_						
Type of Rele		uced Water		NATUR		Volume of	Release 230			Recovered	150	bbls
Source of Release Produced Water Tank							our of Occurren	ce		Hour of Disc	covery	
Was Immedia	ate Notice C	liven?				Unknown If YES, To	Whom?		3/4/2013	at 4:30 am		
,, as minedia	I TOLICO O		Yes 🔲	No Not Require			er (COBLM) &	Brande	on Powell	(NMOCD)		
By Whom?	Lisa Hu	nter		-		Date and H	our 3/4/2013 a	t 1:26 pi	 m			
Was a Water		hed?					lume Impacting					
			Yes 🛛 N	)					R	CVD JUL 1	11:1:	Q ·
If a Watercou	ırse was Imp	pacted, Descri	be Fully.*							JIL CONS.		L_T
N/A									_			
										DIST.	3	
25' X 35' X 3 encountered Excavation a	g was conde 3' Deep wit and excava and confirm	ucted on 3/7/ h 97 cubic ya nted. The exc nation sampli	13 with records of soil cavation waiting occurre	n.* commendations of ex transported to a thir as 15' X 18' X 2' Dee d on 5/21/13. Field s action will be perfor	d pa p w scree	orty landfar ith 20 cubic ening result	rm. On 5/21/13 yards of soil best indicated TPI	during eing tra H concer	excavatior nsported t ntrations l	n a historic r o a third par	elease rty land	was lfarm.
regulations al public health should their o	Il operators a or the envir operations ha nment. In ac	are required to onment. The ave failed to a ddition, NMO	o report and acceptance adequately i OCD accepta	s true and complete to /or file certain release of a C-141 report by nvestigate and remedi ance of a C-141 report	not the l ate o	ifications an NMOCD macontamination	d perform corre arked as "Final F on that pose a the the operator of	ctive act Report" of reat to grands respons	ions for rel loes not rel round wate ibility for c	eases which in ieve the oper in surface was compliance was compliance where we have the compliance where the compliance was a surface where the compliance where the compliance was a surface where the compliance where the compliance was a surface where the compliance where the compliance was a surface w	may en ator of ter, hur vith any	danger liability nan health
			di .				OIL CON	SERV	ATION	DIVISIO	<u>IN</u>	1
	y tal	Z Tap	oya								///	/
Signature:	<del></del>	Ų	0		$A_{j}$	pproved by	Environmental S	Specialis		atto 1.	Ko M	y
Printed Name	e: Crystal T	<b>Cafoya</b>							Pio	-0-14	, ~	()
Title: Field			st		A	pproval Date	e:8/1/20	3	Expiration	Date:		<b>J</b>
E-mail Addre				om	Conditions of Approval:							
Date: 7/10/2	013	Phone: (	(505) 326-9	837		•					_	
Attach Addi				001	1	~ <del>~</del>	121171	70	)1 \	حائلت ٢	10	1450
			•			ハンド	132135	ロムー	// <del>X</del>	attached fremedication	er og	Sorums

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

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

Initial Report

Form C-141

Final Report

Revised August 8, 2011

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

## **Release Notification and Corrective Action**

**OPERATOR** 

Address 3401 East 30th St, Farmington, NM	Telephone No.(505) 326-9837				
Facility Name: Ute 12	Facility Type: Gas Well				
				ADI NI~	30 045 11426
· · · · · · · · · · · · · · · · · · ·	er Tribal (I-22			APINO	.30-045-11426
	ION OF RE	~~~~	T		
Unit Letter   Section   Township   Range   Feet from the   No.   Section   Township   Range   Feet from the   No.   Section   Township   Range   Feet from the   No.   No.   Section   No.   S	orth/South Line South	Feet from the 1608	1	/est Line Vest	County San Juan
			· · · ·	, est	our guar
	<u>8808</u> Longitu	·			
	RE OF REL			W 1 1 10	1 0111
ype of Release Ource of Release Produced Water Produced Water Tank	Volume o	f Release 39 bl Hour of Occurrence		Volume R	Recovered 0 bbls Hour of Discovery
	12/3/2012	,			2 at 5:15 am
/as Immediate Notice Given?	If YES, To	o Whom? ner (COBLM) &	. Charlia	Parrin (N	IMOCD)
y Whom? Crystal Tafoya		Hour 12/3/2012			
Vas a Watercourse Reached?		olume Impacting			
☐ Yes ⊠ No				R(	
a Watercourse was Impacted, Describe Fully.*					IL CONS. DIV.
//A					trong a la l
<u> </u>					water and
Equalizer line between Tank #1 and Tank #2 became plugged and produced water overflowed out of the tank and into the berm. The Describe Area Affected and Cleanup Action Taken.*  Soil sampling was conducted on 12/6/12 with recommendation of the commendation of the co	ne fluid did not l	eave the bermed	area.		ble 910-1 Standards. The
produced water overflowed out of the tank and into the berm. Th	excavation using transported to a	eave the bermed g Ute Mountain U a third party land	area. Ute & CC dfarm E below ap	OGCC Tal	and confirmation sampling UMUT Standards for all of t
Describe Area Affected and Cleanup Action Taken.*  soil sampling was conducted on 12/6/12 with recommendation of excavation was 25' X 25' X 3' Deep and 70 cubic yards of soil was ccurred. Field screening results of the excavation extents showed	excavation using transported to d that TPH conditions and to the best of my see notifications and the NMOCD in the diate contaminal diate contaminal to the first the transported to the best of my see notifications and the transported to the best of my see notifications are the transported to the best of my see notifications are the transported to the best of my see notifications are transported to the best of my see notifications	g Ute Mountain Use third party land centrations were led and the final stand perform corrections that pose a third pose a third that pose a third the operator of	Ute & COdfarm E below apreport is	OGCC Tal excavation oplicable U attached if d that purs ons for rele oes not reli ound water bility for co	and confirmation sampling JMUT Standards for all of t for review.  Suant to NMOCD rules and eases which may endanger lieve the operator of liability r, surface water, human health ompliance with any other
Describe Area Affected and Cleanup Action Taken.* oil sampling was conducted on 12/6/12 with recommendation of excavation was 25' X 25' X 3' Deep and 70 cubic yards of soil was courred. Field screening results of the excavation extents showed anal four walls and the base of the excavation. No further action thereby certify that the information given above is true and complete egulations all operators are required to report and/or file certain release ublic health or the environment. The acceptance of a C-141 report by mould their operations have failed to adequately investigate and remer the environment. In addition, NMOCD acceptance of a C-141 report by deeral, state, or local laws and/or regulations.	excavation using transported to d that TPH conditions and to the best of my see notifications and the NMOCD in the diate contaminal diate contaminal to the first the transported to the best of my see notifications and the transported to the best of my see notifications are the transported to the best of my see notifications are the transported to the best of my see notifications are transported to the best of my see notifications	g Ute Mountain Use third party land centrations were led and the final stand perform corrections that pose a third pose a third that pose a third the operator of	Ute & COdfarm E below apreport is	OGCC Tal excavation oplicable U attached if d that purs ons for rele oes not reli ound water bility for co	and confirmation sampling JMUT Standards for all of to for review.  Suant to NMOCD rules and eases which may endanger lieve the operator of liability resurface water, human health
Describe Area Affected and Cleanup Action Taken.* oil sampling was conducted on 12/6/12 with recommendation of excavation was 25' X 25' X 3' Deep and 70 cubic yards of soil was courred. Field screening results of the excavation extents showed nal four walls and the base of the excavation. No further action thereby certify that the information given above is true and complete egulations all operators are required to report and/or file certain release ublic health or the environment. The acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report external, state, or local laws and/or regulations.	excavation using transported to d that TPH conditions and to the best of my see notifications and the NMOCD in the diate contaminal diate contaminal to the first the transported to the best of my see notifications and the transported to the best of my see notifications are the transported to the best of my see notifications are the transported to the best of my see notifications are transported to the best of my see notifications	g Ute Mountain Use third party land centrations were led and the final stand perform corrections that pose a third pose a third that pose a third the operator of	Ute & COdfarm E below apreport is	OGCC Tal excavation oplicable U attached if d that purs ons for rele oes not reli ound water bility for co	and confirmation sampling JMUT Standards for all of t for review.  Suant to NMOCD rules and eases which may endanger lieve the operator of liability r, surface water, human health ompliance with any other
Describe Area Affected and Cleanup Action Taken.* oil sampling was conducted on 12/6/12 with recommendation of excavation was 25' X 25' X 3' Deep and 70 cubic yards of soil was courred. Field screening results of the excavation extents showed nal four walls and the base of the excavation. No further action thereby certify that the information given above is true and complete egulations all operators are required to report and/or file certain release ublic health or the environment. The acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report external, state, or local laws and/or regulations.	excavation using transported to a that TPH cond will be perform to the best of my use notifications a yethe NMOCD madiate contaminate out does not relie	g Ute Mountain Use third party land centrations were led and the final stand perform corrections that pose a third pose a third that pose a third the operator of	Ute & COdfarm E below apreport is understanctive active ac	DGCC Talexcavation opplicable Use attached in the distance of the constant of	and confirmation sampling JMUT Standards for all of t for review.  Suant to NMOCD rules and eases which may endanger lieve the operator of liability r, surface water, human health ompliance with any other
Describe Area Affected and Cleanup Action Taken.* oil sampling was conducted on 12/6/12 with recommendation of excavation was 25' X 25' X 3' Deep and 70 cubic yards of soil was courred. Field screening results of the excavation extents showed nal four walls and the base of the excavation. No further action thereby certify that the information given above is true and complete egulations all operators are required to report and/or file certain release ublic health or the environment. The acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report external, state, or local laws and/or regulations.	excavation using transported to a that TPH cond will be perform to the best of my use notifications a yethe NMOCD madiate contaminate out does not relie	g Ute Mountain Use third party land centrations were led and the final stand perform correct as "Final Ration that pose a third ve the operator of OIL CON	Ute & COdfarm E below apreport is understanctive active ac	DGCC Talexcavation opplicable Use attached in the distance of the constant of	and confirmation sampling JMUT Standards for all of t for review.  Suant to NMOCD rules and eases which may endanger lieve the operator of liability r, surface water, human health ompliance with any other
Describe Area Affected and Cleanup Action Taken.*  oil sampling was conducted on 12/6/12 with recommendation of excavation was 25' X 25' X 3' Deep and 70 cubic yards of soil was courred. Field screening results of the excavation extents showed nal four walls and the base of the excavation. No further action thereby certify that the information given above is true and complete egulations all operators are required to report and/or file certain release ublic health or the environment. The acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report external, state, or local laws and/or regulations.	excavation using transported to defend that TPH conditions and to the best of myse notifications and the NMOCD mediate contaminate ort does not relied.  Approved by	g Ute Mountain Use third party land centrations were sed and the final result of the contraction of the cont	Ute & COdfarm E below apreport is report de responsible SERV.	OGCC Talexcavation oplicable Use attached if that pursons for relevant water billity for condition of the co	and confirmation sampling JMUT Standards for all of the for review.  Suant to NMOCD rules and eases which may endanger lieve the operator of liability resurface water, human health ompliance with any other  DIVISION
Describe Area Affected and Cleanup Action Taken.*  oil sampling was conducted on 12/6/12 with recommendation of excavation was 25' X 25' X 3' Deep and 70 cubic yards of soil was courred. Field screening results of the excavation extents showed nal four walls and the base of the excavation. No further action thereby certify that the information given above is true and complete egulations all operators are required to report and/or file certain release ublic health or the environment. The acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report external, state, or local laws and/or regulations.  Taken and into the berm. The true and complete exceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report external, state, or local laws and/or regulations.  Taken and into the berm. The true and complete exceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report external state, or local laws and/or regulations.	excavation using transported to a that TPH cond will be perform to the best of my use notifications a yethe NMOCD madiate contaminate out does not relie	g Ute Mountain Use third party land centrations were led and the final reserved as "Final Region that pose a third perform correct that pose a third the operator of OIL CON y Environmental State:	Ute & COdfarm E below apreport is report de responsible SERV.	DGCC Talexcavation opplicable Use attached in the distance of the constant of	and confirmation sampling JMUT Standards for all of the for review.  Suant to NMOCD rules and eases which may endanger lieve the operator of liability resurface water, human health ompliance with any other  DIVISION
Describe Area Affected and Cleanup Action Taken.*  oil sampling was conducted on 12/6/12 with recommendation of excavation was 25' X 25' X 3' Deep and 70 cubic yards of soil was courred. Field screening results of the excavation extents showed and four walls and the base of the excavation. No further action thereby certify that the information given above is true and complete egulations all operators are required to report and/or file certain release ublic health or the environment. The acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report ederal, state, or local laws and/or regulations.  Taken T	excavation using transported to defend that TPH conditions and the performance of the best of myse notifications and the NMOCD mediate contaminate of the performance	g Ute Mountain Use third party land centrations were led and the final reserved as "Final Region that pose a third perform correct that pose a third the operator of OIL CON y Environmental State:	Ute & COdfarm E below apreport is report de responsible SERV.	OGCC Talexcavation oplicable Use attached if that pursons for relevant water billity for condition of the co	and confirmation sampling JMUT Standards for all of the for review.  Suant to NMOCD rules and eases which may endanger ieve the operator of liability resurface water, human health ompliance with any other  DIVISION  Date:
Describe Area Affected and Cleanup Action Taken.*  Tool sampling was conducted on 12/6/12 with recommendation of a excavation was 25' X 25' X 3' Deep and 70 cubic yards of soil was courred. Field screening results of the excavation extents showed in all four walls and the base of the excavation. No further action thereby certify that the information given above is true and complete egulations all operators are required to report and/or file certain releasublic health or the environment. The acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment. In addition, NMOCD acceptance of a C-141 report by the environment.	excavation using transported to d that TPH conditions and the perform to the best of myse notifications as y the NMOCD mediate contaminate out does not relied to the best of myse notifications and the NMOCD mediate contaminate out does not relied to the best of myse notifications and the NMOCD mediate contaminate out does not relied to the Approved by the Approved	g Ute Mountain Use third party land centrations were led and the final reserved as "Final Region that pose a third perform correct that pose a third the operator of OIL CON y Environmental State:	Ute & Codfarm E below apreport is report de reat to groresponsible SERV.	d that pursons for relevant water bility for continuous attached for the continuous at	and confirmation sampling JMUT Standards for all of the for review.  Suant to NMOCD rules and eases which may endanger ieve the operator of liability resurface water, human health ompliance with any other  DIVISION  Date:

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

## State of New Mexico Energy Minerals and Natural Resources

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

Form C-141

Revised August 8, 2011

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

1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa	a Fe, NM 87505						
Release Notificat	ion and Corrective Ac	tion					
	OPERATOR	☐ Initial Report ☐ Final Report					
Name of Company Burlington Resources Oil & Gas Company	Contact Crystal Tafoya						
Address 3401 East 30 <sup>th</sup> St, Farmington, NM	Telephone No.(505) 326-9837						
Facility Name: Ute 12	Facility Type: Gas Well						
Surface Owner <b>Tribal</b> Mineral Own	ner Tribal (I-22-IND-2772)	API No.30-045-11426					
	ION OF RELEASE	1					
		East/West Line County West San Juan					
Latitude <u>36.9</u>	8808 Longitude <u>108.3174</u>						
	RE OF RELEASE						
Type of Release Produced Water	Volume of Release 35 bbls	Volume Recovered 30 bbls					
Source of Release Produced Water Tank	Date and Hour of Occurrence	Date and Hour of Discovery 1/17/2013 at 6:00am					
Was Immediate Notice Given?  ☐ Yes ☐ No ☐ Not Requi	red If YES, To Whom? COBLM (Ryan Joyner) & N						
By Whom? Crystal Tafoya	Date and Hour 1/17/2013 at 1						
Was a Watercourse Reached?  ☐ Yes ☒ No	If YES, Volume Impacting the	If YES, Volume Impacting the Watercourse.  RCVD JUL 11 '13					
If a Watercourse was Impacted, Describe Fully.*		OIL CONS. DIV.					
N/A		DIST. 3					
		WIDI. J					
Describe Cause of Problem and Remedial Action Taken.*  A hole in the produced water tank released 35bbls of produced water truck was able to recover 30bbls of produced water. The well is s		ne release did not leave location and a water					
Describe Area Affected and Cleanup Action Taken.*  Soil sampling was conducted on 1/25/2013 with recommendations excavation included the release from 12/3/2012 and was 25' X 25'  Excavation and confirmation sampling occurred. Field screening applicable UMUT Standards for all of the final four walls and the is attached for review.	X 3' Deep and 70 cubic yards of soil results of the excavation extents sh	l was transported to a third party landfarm. lowed that TPH concentrations were below					
I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report be should their operations have failed to adequately investigate and reme or the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations.	se notifications and perform correctively the NMOCD marked as "Final Reporting that pose a threat	ve actions for releases which may endanger ort" does not relieve the operator of liability to ground water, surface water, human health					
Signature:  Printed Name: Crystal Tafoya	OIL CONSI  Approved by Environmental Spec	cialist: Crack Division					
Printed Name: Crystal Tafoya	10.01/02/7	V V					
Title: Field Environmental Specialist	Approval Date: 6/1/2015	Expiration Date:					
E-mail Address: crystal.tafoya@conocophillips.com	Conditions of Approval:	Attached					

\* Attach Additional Sheets If Necessary

Phone: (505) 326-9837

Date: 7/10/2013

nJX 1321355869 4 2 additional C-1415 ottached for adjoining remediation



Animas Environmental Services, LLC

www.animasenvironmental.com

624 E. Comanche Farmington, NM 87401 505-564-2281

> Durango, Colorado 970-403-3084

July 2, 2013

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

Via electronic mail to: <u>SJBUE-Team@ConocoPhillips.com</u>

RE: Initial Release Assessments and Final Excavation Report

Ute #12

San Juan County, New Mexico

Dear Ms. Tafoya:

On December 6, 2012, Animas Environmental Services, LLC (AES) completed an initial release assessment at the Ute #12, located in San Juan County, New Mexico. The release consisted of approximately 39 barrels (bbls) of produced water which overflowed from the northernmost produced water tank in the tank battery.

On January 25, 2013, AES returned to the location and completed an additional initial release assessment at the Ute #12. The second release consisted of approximately 35 bbls of produced water that leaked from a hole in the northernmost produced water tank in the tank battery.

On March 7, 2013, AES again returned to the location and completed an initial release assessment for a corrosion caused produced water release from the southernmost tank in the tank battery. The third release was estimated to be approximately 230 bbls.

On May 21, 2013, AES returned to the location and completed confirmation sampling on two excavations within the tank battery. During the confirmation sampling, an additional release area associated with the former drip tank was discovered, and AES completed confirmation sampling for an excavation associated with that release as well.

### 1.0 Site Information

#### 1.1 Location

Location - NE¼ SW¼, Section 16, T32N, R14W, San Juan County, New Mexico Well/Facility Location Latitude/Longitude - N36.98711 and W108.31692, respectively

Release #1 and #2 Latitude/Longitude - N36.98733 and W108.31715, respectively Release #3 Latitude/Longitude - N36.98725 and W108.31721, respectively Release #4 Latitude/Longitude - N36.98720 and W108.31763, respectively Land Jurisdiction — Ute Mountain Ute Tribe (UMUT) Figure 1. Topographic Site Location Map

Figure 1. Topographie Site Location i

Figure 2. Aerial Site Map

## 1.2 Regulatory

Standards for releases are determined by the Ute Mountain Ute Environmental Programs Department Standards for Spill Clean-Up and Reclamation based on Colorado Oil and Gas Commission Standards outlined within the COGCC Rules 900 Series Exploration and Production (E&P) Waste Management Table 910-1. These rules are applicable only to E&P waste, as defined in §34-60-103(4.5); Colorado Revised Statutes (CRS).

### 1.3 Distance to Groundwater and Surface Water

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and a Cathodic Protection Report dated January 1995 for the Ute #12 reported the depth to groundwater as 340 feet below ground surface (bgs). 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 (<a href="http://ford.nmt.edu/react/project.html">http://ford.nmt.edu/react/project.html</a>) were accessed to aid in the identification of downgradient surface water.

Once on site, AES personnel further assessed the site 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 bgs. An unnamed wash is located approximately 400 feet southeast of the location and drains to Barker Arroyo

### 1.4 Assessments

#### Release #1

AES was initially contacted by Crystal Tafoya of CoP on December 6, 2012, and on the same day, Deborah Watson of AES completed the initial release assessment field work. The assessment included collecting one 5-point composite soil sample (SC-1) from visibly stained surface soils in the release area for laboratory analysis. Sampling locations are shown on Figure 3.

#### Release #2

AES was contacted by Crystal Tafoya of CoP on January 22, 2013, and on January 25, 2013, Kelsey Christiansen and Corwin Lameman of AES completed the initial release assessment field work. The assessment included collection and field screening of 36 soil samples from 9 soil borings (SB-1 through SB-9) within the release area. Additionally, one soil sample (SC-2) was composited from surface samples collected in SB-1 through SB-9 for laboratory analysis. Sampling locations are shown on Figure 4.

### Release #3

AES was contacted by Crystal Tafoya of CoP on March 6, 2013, and on March 7, 2013, Deborah Watson and Heather Woods of AES completed the initial release assessment field work. The assessment included collection and field screening of 23 soil samples from 11 soil borings (SB-10 through SB-20) within the release area. Additionally, three soil samples (SC-3 through SC-5) were composited from surface samples collected in SB-10 through SB-20. Sampling locations are shown on Figure 5.

#### Release #4

During final excavation confirmation sampling on May 21, 2013, a release from the former drip tank was identified, and AES personnel recommended an area of excavation based on visual observations and consultation with CoP personnel.

### **Final Excavation Confirmation Sampling**

On May 21, 2013, AES personnel completed confirmation sampling on three excavation areas (Area A, B, and C). Composite soil samples were collected from the walls and base of each excavation, for a total of 15 samples (SC-6 through SC-20). Additionally, samples SC-16 through SC-20 were composited into sample SC-21 and submitted for laboratory analysis. Sample locations and excavation extents are shown on Figure 6.

## 2.0 Soil Sampling

A total of 59 soil samples were collected from 20 soil borings (SB-1 through SB-20). Additionally, five composite samples (SC-1 through SC-5) were collected during the assessments. Fifteen composite samples (SC-6 through SC-20) were collected during final excavation confirmation sampling. Soil samples were field-screened for volatile organic compounds (VOCs) and selected samples were also analyzed for total petroleum hydrocarbons (TPH). Additionally, composite samples SC-1 through SC-5 and SC-21 were 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 Laboratory Analyses

The composite soil samples (SC-1 through SC-5 and SC-21) 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. Samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Soil samples SC-1 through SC-5 and SC-21 were laboratory analyzed per Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 Requirements, which included the following:

- VOCs per USEPA Methods 8015/8021: total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and total xylenes (BTEX);
- Polynuclear Aromatic Hydrocarbons (PAHs) per USEPA Method 8270C: acenaphthene, anthracene, benzo(A)anthracene, benzo(B)fluoranthene, benzo(K)fluoranthene, benzo(A)pyrene, chrysene, dibenzo(A,H)anthracene, fluoranthene, fluorene, indeno(1,2,3,C,D)pyrene, naphthalene, and pyrene;
- Inorganics: electrical conductivity, sodium adsorption ratio, and pH; and
- Metals per USEPA Method 6010B and 7471: arsenic, barium, cadmium, chromium (III), chromium (VI), copper, lead, mercury, nickel, selenium, silver, and zinc.

### 2.3 Field Screening and Laboratory Analytical Results

On January 25, 2013, release assessment field screening results for VOCs via OVM showed concentrations ranging from 0.1 ppm in SB-5 up to 773 ppm in SB-1. Field TPH concentrations ranged from less than 20 mg/kg in SB-5 through SB-9 to greater than 2,500 mg/kg in SB-1.

On March 7, 2013, release assessment field screening results for VOCs via OVM showed concentrations ranging from 2.5 ppm in SB-10 up to 1,040 ppm in SB-18. Field TPH

concentrations ranged from 39.5 mg/kg in SB-15 to greater than 2,500 mg/kg in SB-16 and SB-18.

On May 21, 2013, final excavation field screening results for VOCs via OVM showed concentrations ranging from 0.6 ppm (SC-10) to 218 ppm (SC-8) in Area A; from 1.4 ppm (SC-15) to 58.9 ppm (SC-12) in Area B; and from 0.4 ppm (SC-19) to 64.3 ppm (SC-20) in Area C. Field TPH concentrations ranged from 34.0 mg/kg (SC-10) to 107 mg/kg (SC-7) in Area A; from 46.6 mg/kg (SC-11) to 100 mg/kg (SC-12) in Area B; and from 46.6 mg/kg (SC-18) to 484 mg/kg (SC-20) in Area C. Results are included below in Table 1 and on Figures 3 through 5. The AES Field Screening Reports are attached.

Table 1. Soil Field Screening Results
Ute #12 Initial Release Assessments and Final Excavation
December 2012 through May 2013

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs OVM Reading (ppm)	Field TPH (mg/kg)
•	<u>-</u>	Standards*		500
	,	0.5	773	>2,500
	•	2	21.1	NA
SB-1	1/25/13	4	27.0	NA
	- -	6	24.4	NA
	<b>-</b>	8	11.1	34.4
		0.5	12.2	41.4
		2	8.6	NA
SB-2	1/25/13	4	10.1	NA
		6	5.7	NA
		8	7.2	82.5
		0.5	2.5	NA
SB-3	1/25/13	2	1.9	NA
		3.5	1.2	40.0
	_	0.5	27.5	26.3
	_	1.5	2.1	NA
SB-4	1/25/13	4	1.1	NA
		6	0.9	NA
		8	5.7	30.4
		0.5	70.3	658
SB-5	1/25/13	2	2.2	NA
		. 3	0.1	<20.0
CD C	1 /25 /12	0.5	15.4	31.8
SB-6	1/25/13 -	1	5.8	<20.0

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs OVM Reading (ppm)	Field TPH (mg/kg)
	UMUT	Standards*		500
		0.5	1.7	26.3
	_	2	17.9	NA
SB-7	1/25/13	4	19.1	NA
		6	1.2	NA
		8	1.5	<20.0
		0.5	0.7	<20.0
SB-8	1/25/13	2	0.6	NA
	•	4	0.7	<20.0
		0.5	1.1	<20.0
	•	2	3.1	NA
SB-9	1/25/13	4	6.5	NA
	•	6	8.0	NA
	•	8	9.9	<20.0
	· · ·	Surface	3.3	47.8
SB-10	3/7/13	2 ·	2.5	50.6
	•	4	9.1	56.1
CD 11	2/7/12	Surface	5.5	68.5
SB-11	3/7/13	2	7.3	54.7
		Surface	11.8	151
SB-12	3/7/13	2	4.7	NA
	•	4	5.8	NA
		Surface	11.2	65.8
SB-13	3/7/13	2	5.7	NA
	•	4	5.4	· NA
SB-14	3/7/13	Surface	2.6	54.7
SB-15	3/7/13	Surface	4.9	39.5
20-12	5/7/15	1	4.0	NA
CD 16	2/7/12	Surface	319	>2,500
SB-16	3/7/13	2	13.1	52.0
SB-17	3/7/13	Surface	12.3	93.4
3D-17	2///12	2	8.1	NA
SB-18	3/7/13	Surface	1,040	>2,500
20-10	3///13	2	63.1	139
SB-19	2/7/12	Surface	7.2	52.0
3D-13	3/7/13	2	6.7	NA
SB-20	3/7/13	Surface	5.5	NA
SC-6	5/21/13	1 to 3	0.9	38.2

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs OVM Reading (ppm)	Field TPH (mg/kg)
- Sumple 15		Standards*	( <i>ppiii</i> )	500
SC-7	5/21/13	1 to 3	149	107
SC-8	5/21/13	1 to 3	218	38.2
SC-9	5/21/13	1 to 3	189	52.3
SC-10	5/21/13	3	0.6	34.0
SC-11	5/21/13	1 to 3	1.6	46.6
SC-12	5/21/13	1 to 3	58.9	100
SC-13	5/21/13	1 to 3	1.8	50.9
SC-14	5/21/13	1 to 3	2.1	48.1
SC-15	5/21/13	3	1.4	53.7
SC-16	5/21/13	1 to 2.5	4.8	52.3
SC-17	5/21/13	1 to 2.5	1.9	59.3
SC-18	5/21/13	1 to 2.5	2.1	46.6
SC-19	5/21/13	1 to 2.5	0.4	69.1
SC-20	5/21/13	2.5	64.3	484

NA - Not Analyzed;

Laboratory analytical results for the composite samples SC-1 through SC-5 and SC-21 are included below in Table 2, and laboratory analytical reports are attached.

Table 2. Soil Laboratory Analytical Results
Ute #12 Initial Release Assessments and Final Excavation
December 2012 through May 2013

Analytical Parameter	SC-1 12/6/12	SC-2 1/25/13	SC-3 3/29/13	SC-4 3/29/13	SC-5 3/29/13	SC-21 5/22/13	UMUT Standard*
Benzene (mg/kg)	<0.96	<0.19	<0.047	<0.047	<0.47	<0.047	0.17
Toluene (mg/kg)	<0.96	0.021	<0.047	<0.047	<0.47	<0.047	85
Ethylbenzene (mg/kg)	1.1	0.079	<0.047	<0.047	0.14	<0.047	100
Total Xylenes (mg/kg)	15	0.32	<0.093	<0.093	5.7	0.014	175
GRO (mg/kg)	370	44	<4.7	<4.7	580	<4.7	
DRO (mg/kg)	11,000	2,200	53	<10	850	22	500
MRO (mg/kg)	NA	<500	<52	<51	<51	<50	

<sup>\*</sup>UMUT Standards of Spill Clean-up and Reclamation (based on Colorado Oil and Gas Commission Standards)

Analytical Parameter	SC-1 12/6/12	SC-2 1/25/13	SC-3 3/29/13	SC-4 3/29/13	SC-5 3/29/13	SC-21 5/22/13	UMUT Standard*
Acenaphthene (mg/kg)	<0.40	<0.10	<0.020	<0.020	0.31	<0.020	1,000
Anthracene (mg/kg)	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	1,000
Benzo(A)anthracene (mg/kg)	<0.040	<0.020	<0.020	<0.020	0.023	<0.020	0.22
Benzo(B)fluoranthene (mg/kg)	<0.040	0.0050	<0.020	0.0084	0.037	0.012	0.22
Benzo(K)fluoranthene (mg/kg)	<0.040	<0.020	<0.020	<0.020	0.010	0.0083	2.2
Benzo(A)pyrene (mg/kg)	<0.040	<0.020	<0.020	<0.020	0.021	<0.020	0.022
Chrysene (mg/kg)	<0.040	<0.020	<0.020	<0.020	0.023	<0.020	22
Dibenzo(A,H) anthracene(mg/kg)	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	0.022
Fluoranthene (mg/kg)	<0.040	<0.020	0.0043	0.0037	0.051	<0.020	1,000
Fluorene (mg/kg)	0.54	<0.10	<0.020	<0.020	0.65	<0.020	1,000
Indeno(1,2,3,C,D) pyrene (mg/kg)	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	0.22
Naphthalene (mg/kg)	4.1	0.46	0.0047	0.0047	0.56	<0.020	23
Pyrene (mg/kg)	<0.040	<0.020	<0.020	<0.020	0.054	<0.020	1,000
Electrical Conductivity (µmhos/cm)	6,900	5,200	5,000	1,900	4,200	2,400	<4,000
Sodium Adsorption Ratio	89	63	91	3.0	60	34	<12
рН	8.12	8.2	8.7	7.9	8.4	8.8	6-9
Arsenic (mg/kg)*	7.1	1.9	<3.1	<3.1	<3.1	4.0	0.39
Barium (mg/kg)	150	160	190	130	130	200	15,000
Cadmium (mg/kg)	<0.10	0.037	<0.50	<0.50	<0.50	<0.20	70
Chromium (III) (mg/kg)	4.2	4.9	6.4	7.7	5.2	8.5	120,000
Chromium (VI) (mg/kg)	<2.0	<2.0	<2.0	<50	<2.0	<10	23
<del></del>	~2.0						
Copper (mg/kg)	8.5	9.0	10	9.5	9.7	11 .	3,100

Analytical Parameter	SC-1 12/6/12	SC-2 1/25/13	SC-3 3/29/13	SC-4 3/29/13	SC-5 3/29/13	SC-21 5/22/13	UMUT Standard*
Mercury (mg/kg)	<0.033	0.020	0.0079	0.043	0.0063	0.036	23
Nickel (mg/kg)	3.6	3.7	5.0	7.6	4.4	9.1	1,600
Selenium (mg/kg)	<2.5	<2.5	<12	<12	<12	<5.0	390
Silver (mg/kg)	<0.25	<0.25	<1.2	<1.2	<1.3	<0.50	390
Zinc (mg/kg)	24	24	37	44	28	47	23,000

<sup>\*</sup>Per Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1

### 3.0 Conclusions and Recommendations

AES conducted initial assessments of four release areas at the Ute #12, located in San Juan County, New Mexico, from December 2012 through March 2013. Based on visual observations, field screening, and laboratory analytical results from the assessments, three excavation areas (A, B, and C) were recommended. On May 21, 2013, AES returned to conduct confirmation sampling on the final excavation areas. Soil arsenic concentrations were reported above the UMUT threshold of 0.39 mg/kg (which is based on the COGCC residential standard) in SC-1, SC-2, and SC-21; however, background arsenic concentrations in the general vicinity are known to be elevated. Additionally, sodium adsorption ratios exceeded UMUT Standards, which is consistent with previous work experience in the general area of this location.

### AREA A: Releases #1 and #2

On December 6, 2012, AES completed an initial assessment for an approximately 39 bbl produced water and condensate release that occurred when the northernmost tank in the tank battery was overfilled. The assessment included the collection of one 5-point composite soil sample (SC-1) from visibly stained surface soils in the release area for laboratory analysis. Laboratory analytical results confirmed TPH concentrations above UMUT Standards.

On January 25, 2013, AES completed an initial assessment for an approximately 35 bbl produced water release that resulted from a corrosion hole in the northernmost tank in the tank battery. The assessment included collection and field screening of 36 soil samples from 9 soil borings (SB-1 through SB-9) within the release area. Additionally, one soil sample (SC-2) was composited from surface samples collected in SB-1 through SB-9 for laboratory analysis. Field screening and laboratory analytical results confirmed

TPH concentrations above UMUT Standards, and an area of excavation (Area A) was recommended that would remove soils impacted by both Release #1 and #2.

On May 21, 2013, AES conducted confirmation sampling of the final excavation for Area A, which measured approximately 475 feet<sup>2</sup> by 3 feet in depth. Field screening results of the excavation extents showed that VOC and TPH concentrations were below applicable UMUT Standards for all of the final four walls and the base of the excavation.

### AREA B: Release #3

On March 7, 2013, AES completed an initial assessment for an approximately 230 bbl release of produced water that resulted from a corrosion hole in the southernmost tank in the tank battery. The assessment included collection and field screening of 23 soil samples from 11 soil borings (SB-10 through SB-20) within the release area. Additionally, three soil samples (SC-3 through SC-5) were composited from surface samples collected in SB-10 through SB-20. Field screening and laboratory analytical results confirmed TPH concentrations above UMUT standards, and an area of excavation (Area B) was recommended that would remove soils impacted by Release #3.

On May 21, 2013, AES conducted confirmation sampling of the final excavation for Area B, which measured approximately 655 feet<sup>2</sup> by 3 feet in depth. Field screening results of the excavation extents showed that VOC and TPH concentrations were below applicable UMUT standards for all of the final four walls and the base of the excavation.

### AREA C: Release #4

On May 21, 2013, a release from the former drip tank was identified, and AES personnel recommended an area of excavation based on visual observations and consultation with CoP personnel. AES conducted confirmation sampling of the final excavation for Area C, which measured approximately 500 feet<sup>2</sup> by 2.5 feet in depth. Field screening results of the excavation extents showed that VOC and TPH concentrations were below applicable UMUT standards for all of the final four walls and the base of the excavation. In addition, a composite sample from the walls and base of the excavation (SC-21) was submitted for confirmation laboratory analysis. All parameters were below UMUT Standards, with the exception of sodium adsorption ratio and arsenic, which were consistent with levels typically observed in regional soils.

Based on visual observations, field screening and laboratory analytical results, CoP received approval to backfill the excavations (Areas A, B, and C) from Scott Clow of UMUT Environmental Programs Department and Ryan Joyner of Colorado Bureau of Land Management on May 23, 2013.

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

Sincerely,

Landrea Cupps

**Environmental Scientist** 

Elizabeth V McNolly

Landre R. Cupps

Elizabeth McNally, PE

### Attachments:

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map

Figure 3. Initial Assessment Sample Locations and Results, December 2012

Figure 4. Initial Assessment Sample Locations and Results, January 2013

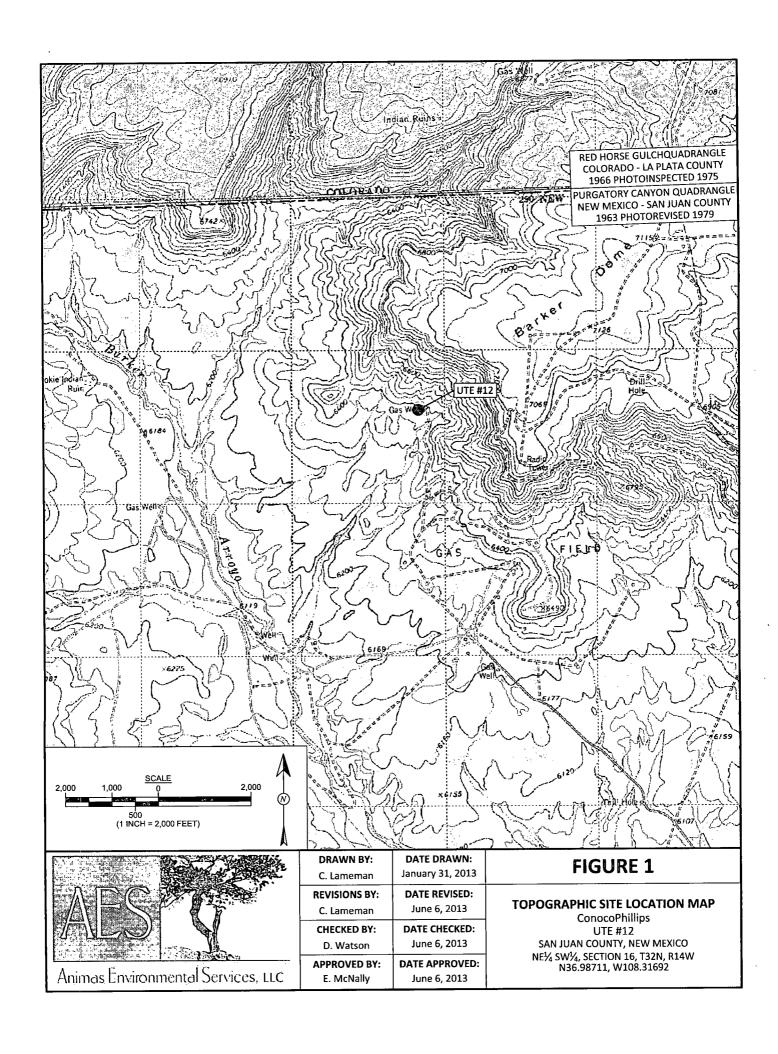
Figure 5. Initial Assessment Sample Locations and Results, March 2013

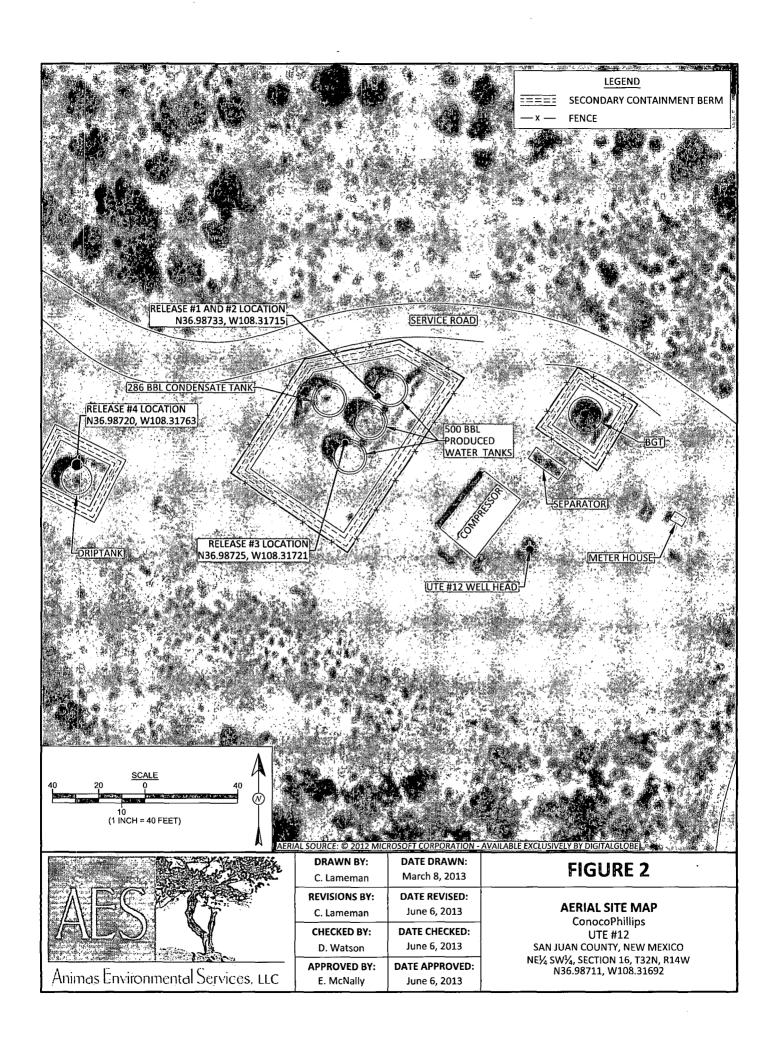
Figure 6. Final Excavation Sample Locations and Results, May 2013

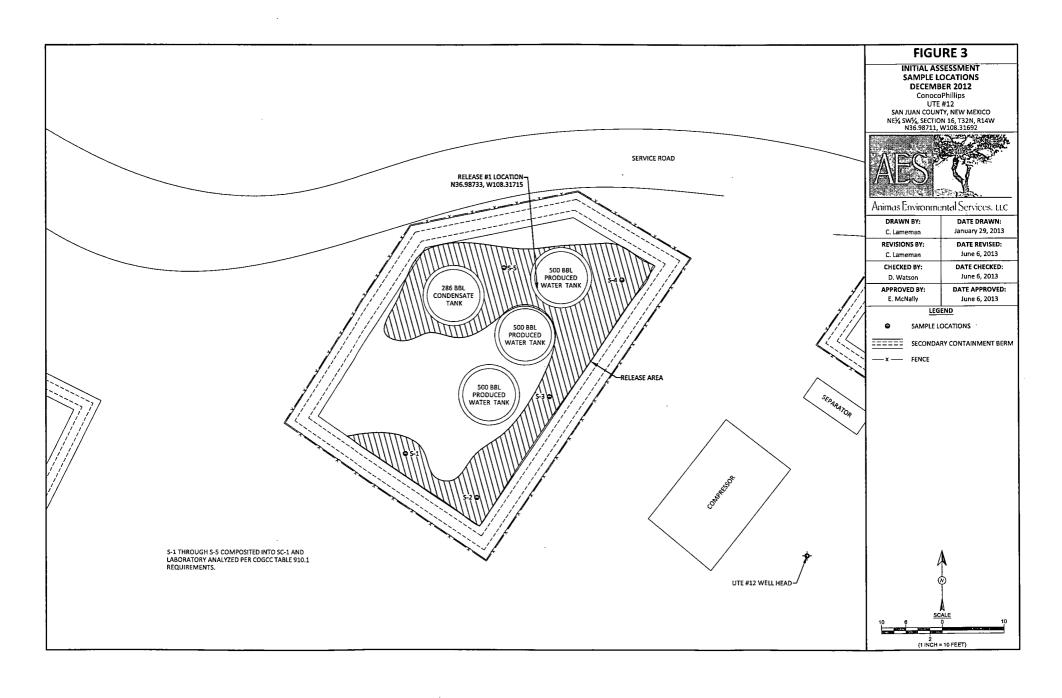
AES Field Screening Reports 012513, 030713, and 052113

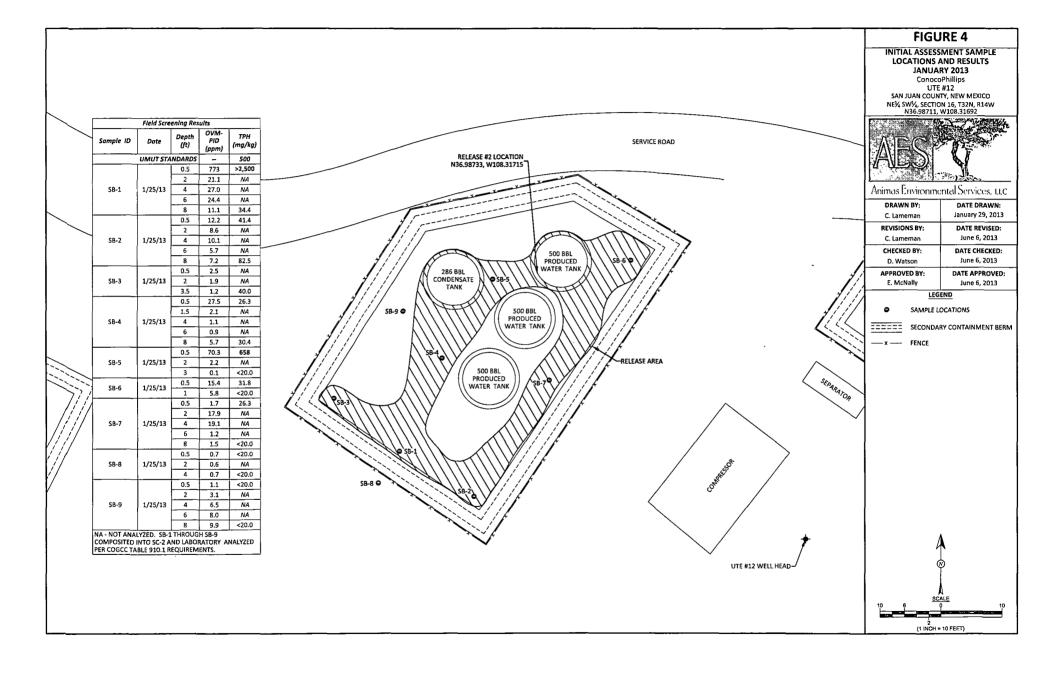
Hall Analytical Report 1212360, 1301920, 1303459, and 1305949

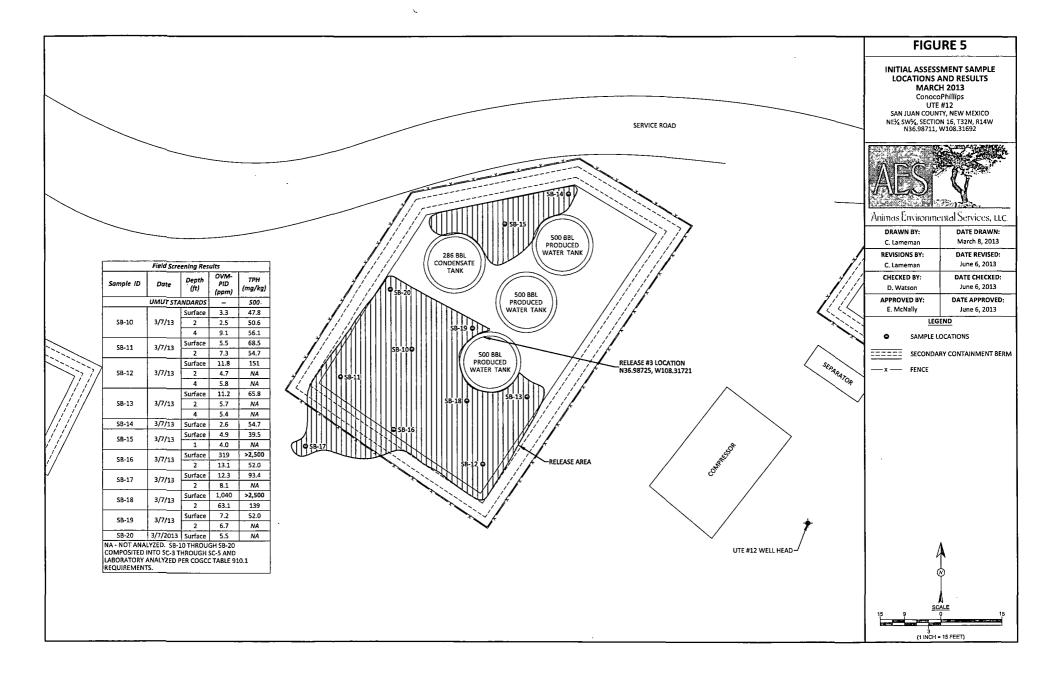
R:\Animas 2000\Dropbox\2013 Projects\ConocoPhillips\Ute 12\CoP Ute #12 Initial Release Assessments and Final Excavation Report 070213.docx

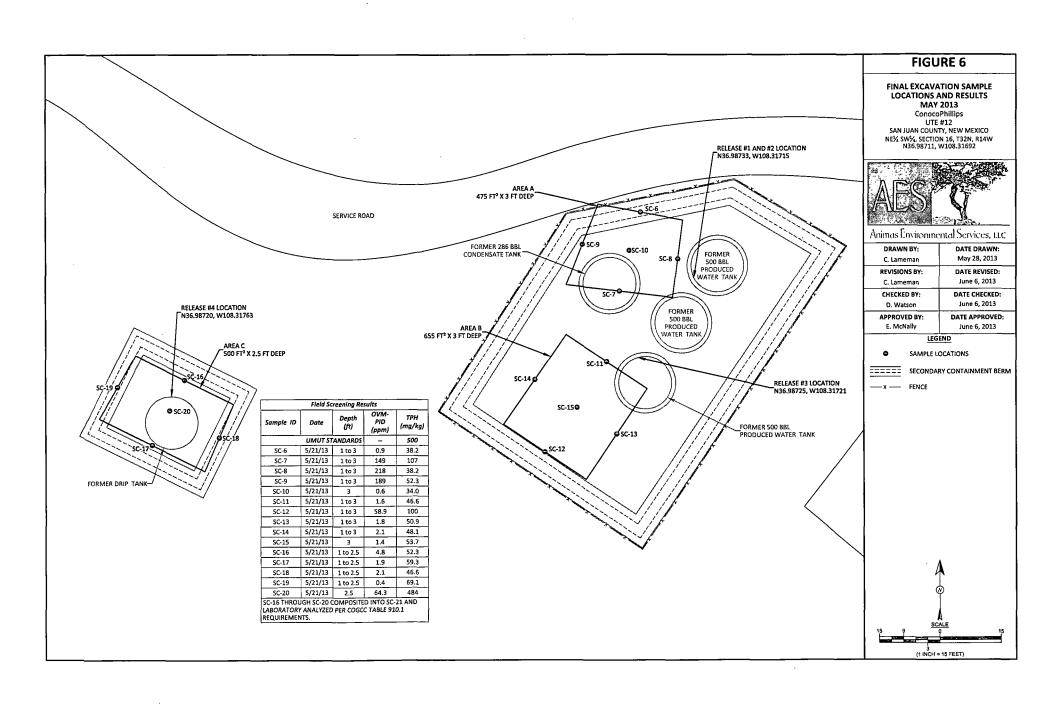












# **AES Field Screening Report**

AES

Animas Environmental Services, LLC

www.animasenvironmental.com

624 E. Comanche Farmington, NM 87401 505-564-2281

> Durango, Colorado 970-403-3084

Client: ConocoPhillips

Project Location: Ute #12

Date: 1/25/2013

Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials		
SB-1 @ 0.5'	1/25/2013	11:30	773	12:43	>2,500	20.0	1	KC		
SB-1 @ 2'	1/25/2013	11:33	21.1		Not A	nalyzed for T	ΡΗ			
SB-1 @ 4'	1/25/2013	11:37	27.0		Not A	nalyzed for T	PH			
SB-1 @ 6'	1/25/2013	11:41	24.4		Not A	nalyzed for T	PH .			
SB-1 @ 8'	1/25/2013	11:45	11.1	12:45	34.4	20.0	1	KC		
SB-2 @ 0.5'	1/25/2013	11:51	12.2	13:43	41.4	20.0	1	КС		
SB-2 @ 2'	1/25/2013	11:54	8.6		Not A	nalyzed for T	РН			
SB-2 @ 4'	1/25/2013	11:57	10.1		Not A	nalyzed for T	РН			
SB-2 @ 6'	1/25/2013	11:59	5.7	Not Analyzed for TPH						
SB-2 @ 8'	1/25/2013	12:04	7.2	13:46	82.5	20.0	1	КС		
SB-3 @ 0.5'	1/25/2013	12:07	2.5		Not A	nalyzed for T	<b>Р</b> Н	·		
SB-3 @ 2'	1/25/2013	12:11	1.9		Not A	nalyzed for T	РН			
SB-3 @ 3.5'	1/25/2013	12:15	1.2	13:48	40.0	20.0	1	KC		
SB-4 @ 0.5'	1/25/2013	12:20	27.5	14:58	26.3	20.0	1	КС		
SB-4 @ 1.5'	1/25/2013	12:24	2.1		Not A	nalyzed for T	РН			
SB-4 @ 4'	1/25/2013	12:28	1.1		Not A	nalyzed for T	РН			
SB-4 @ 6'	1/25/2013	12:31	0.9		Not A	nalyzed for T	PH	<u></u>		
SB-4 @ 8'	1/25/2013	12:35	5.7	15:02	30.4	20.0	1	кс		
SB-5 @ 0.5'	1/25/2013	12:40	70.3	15:06	658	20.0	1	КС		
SB-5 @ 2'	1/25/2013	12:44	2.2		Not A	nalyzed for 1	РН			
SB-5 @ 3'	1/25/2013	12:48	0.1	15:10	18.1	20.0	1	кс		
SB-6 @ 0.5'	1/25/2013	12:53	15.4	15:14	31.8	20.0	1	КС		

CoP Ute #12

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials	
SB-6 @ 1'	1/25/2013	12:57	5.8	15:18	19.4	20.0	1	КС	
SB-7 @ 0.5'	1/25/2013	13:02	1.7	15:21	26.3	20.0	1	КС	
SB-7 @ 2'	1/25/2013	13:06	17.9		Not A	nalyzed for T	РН		
SB-7 @ 4'	1/25/2013	13:10	19.1		Not A	nalyzed for T			
SB-7 @ 6'	1/25/2013	13:14	1.2	Not Analyzed for TPH .					
SB-7 @ 8'	1/25/2013	13:18	1.5	15:25	18.1	20.0	1	КС	
SB-8 @ 0.5'	1/25/2013	13:23	0.7	15:29	16.7	20.0	1	кс	
SB-8 @ 2'	1/25/2013	13:27	0.6		Not A	nalyzed for T			
SB-8 @ 4'	1/25/2013	13:31	0.7	15:32	18.1	20.0	1	кс	
SB-9 @ 0.5'	1/25/2013	13:35	1.1	15:36	15.3	20.0	1	КС	
SB-9 @ 2'	1/25/2013	13:39	3.1		Not A	nalyzed for T	 ГРН		
SB-9 @ 4'	1/25/2013	13:43	6.5		Not A	nalyzed for T			
SB-9 @ 6'	1/25/2013	13:47	8.0	Not Analyzed for TPH					
SB-9 @ 8'	1/25/2013	13:52	9.9	15:39	18.1	20.0	1	КС	

Total Petroleum Hydrocarbons - USEPA 418.1

PQL

**Practical Quantitation Limit** 

ND

Not Detected at the Reporting Limit

DF

**Dilution Factor** 

NA

Not Analyzed

Analyst:

Lelay Chrodian

# **AES Field Screening Report**



Animas Environmental Services, LLC

www.animasenvironmental.com

624 E. Comanche Farmington, NM 87401 505-564-2281

> Durango, Colorado 970-403-3084

Client: ConocoPhillips

Project Location: Ute #12

Date: 3/7/2013

Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials		
SB-10 @ Surface	3/7/2013	13:57	3.3	14:34	47.8	20.0	1	DAW		
SB-10 @ 2'	3/7/2013	14:02	2.5	14:37	50.6	20.0	1	DAW		
SB-10 @ 4'	3/7/2013	14:05	9.1	14:39	56.1	20.0	1	DAW		
SB-11 @ Surface	3/7/2013	14:08	5.5	14:42	68.5	20.0	1	DAW		
SB-11 @ 2'	3/7/2013	14:13	7.3	14:44	54.7	20.0	1	DAW		
SB-12 @ Surface	3/7/2013	14:17	11.8	15:15	151	20.0	1	DAW		
SB-12 @ 2'	3/7/2013	14:21	4.7		Not And	alyzed for TP	PH			
SB-12 @ 4'	3/7/2013	14:23	5.8	Not Analyzed for TPH						
SB-13 @ Surface	3/7/2013	14:26	11.2	15:17	65.8	20.0	1	DAW		
SB-13 @ 2'	3/7/2013	14:31	5.7		Not And	alyzed for TP	PH			
SB-13 @ 4'	3/7/2013	14:33	5.4		Not And	alyzed for TP	РH			
SB-14 @ Surface	3/7/2013	14:44	2.6	15:19	54.7	20.0	11	DAW		
SB-15 @ Surface	3/7/2013	14:54	4.9	15:21	39.5	20.0	1	DAW		
SB-15 @ 1'	3/7/2013	14:58	4.0		Not And	alyzed for TP	РН			
SB-16 @ Surface	3/7/2013	15:04	319	15:25	>2,500	20.0	11	DAW		
SB-16 @ 2'	3/7/2013	15:36	13.1	16:04	52.0	20.0	1	DAW		
SB-17 @ Surface	3/7/2013	15:11	12.3	15:53	93.4	20.0	11	DAW		
SB-17 @ 2'	3/7/2013	15:15	8.1		Not And	alyzed for TP	PH			
SB-18 @ Surface	3/7/2013	15:38	1,040	16:07	>2,500	20.0	1	DAW		
SB-18 @ 2'	3/7/2013	15:42	63.1	16:13	139	20.0	1	DAW		
SB-19 @ Surface	3/7/2013	15:44	7.2	16:11	52.0	20.0	1	DAW		
SB-19 @ 2'	3/7/2013	15:48	6.7		Not And	alyzed for TP	PH			

CoP Ute #12

Page 1

Report Finalized: 03/07/13

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-20 @ Surface	3/7/2013	15:53	5.5		Not And	alyzed for TP	PH	

Total Petroleum Hydrocarbons - USEPA 418.1

PQL

**Practical Quantitation Limit** 

Analyst:

Debrah Watn

ND

Not Detected at the Reporting Limit

DF

**Dilution Factor** 

NA

Not Analyzed

# **AES Field Screening Report**



Animas Environmental Services, LLC

www.animasenvironmental.com

624 E. Comanche Farmington, NM 87401 505-564-2281

> Durango, Colorado 970-403-3084

## Client: ConocoPhillips

Project Location: Ute #12

Date: 5/21/2013

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
SC-6	5/21/2013	11:48	Area A North Wall	0.9	11:55	38.2	20.0	1	КС
SC-7	5/21/2013	11:49	Area A South Wall	149	11:57	107	20.0	1	KC
SC-8	5/21/2013	11:50	Area A East Wall	218	12:00	38.2	20.0	1	KC
SC-9	5/21/2013	11:51	Area A West Wall	189	12:03	52.3	20.0	1	КС
SC-10	5/21/2013	11:52	Area A Base	0.6	12:05	34.0	20.0	1	KC
SC-11	5/21/2013	12:41	Area B North Wall	1.6	12:47	46.6	20.0	1	KC
SC-12	5/21/2013	12:43	Area B South Wall	58.9	12:50	100	20.0	1	КС
SC-13	5/21/2013	12:44	Area B East Wall	1.8	12:53	50.9	20.0	1	KC
SC-14	5/21/2013	12:45	Area B West Wall	2.1	12:55	48.1	20.0	1	KC
SC-15	5/21/2013	12:46	Area B Base	1.4	12:58	53.7	20.0	1	KC
SC-16	5/21/2013	13:40	Area C North Wall	4.8	14:51	52.3	20.0	1	KC
SC-17	5/21/2013	13:31	Area C South Wall	1.9	14:44	59.3	20.0	1	КС
SC-18	5/21/2013	13:20	Area C East Wall	2.1	13:53	46.6	20.0	1	КС
SC-19	5/21/2013	13:30	Area C West Wall	0.4	14:50	69.1	20.0	1	KC
SC-20	5/21/2013	13:23	Area C Base	64.3	14:14	484	20.0	1	кс

Analyst:

PQL

**Practical Quantitation Limit** 

ND

Not Detected at the Reporting Limit

DF

**Dilution Factor** 

NA

Not Analyzed

Lelang Christian



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

OrderNo.: 1212360

December 19, 2012

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

**FAX** 

RE: COP Ute #12

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/7/2012 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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

# Lab Order **1212360**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/19/2012

**CLIENT:** Animas Environmental Services

Client Sample ID: SC-1

Project: COP Ute #12

**Collection Date:** 12/6/2012 1:25:00 PM

**Lab ID:** 1212360-001 **Matrix:** SOIL

Received Date: 12/7/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE ORGANICS					Analyst: MMD
Diesel Range Organics (DRO)	11000	200		mg/Kg	20	12/11/2012 8:41:00 AM
Surr: DNOP	0	72.4-120	S	%REC	20	12/11/2012 8:41:00 AM
EPA METHOD 8015B: GASOLINE R	ANGE					Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	370	96		mg/Kg	20	12/11/2012 5:31:44 PM
Surr: BFB	178	84-116	s	%REC	20	12/11/2012 5:31:44 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.96		mg/Kg	20	12/11/2012 5:31:44 PM
Toluene	ND	0.96		mg/Kg	20	12/11/2012 5:31:44 PM
Ethylbenzene	1.1	0.96		mg/Kg	20	12/11/2012 5:31:44 PM
Xylenes, Total	15	1.9		mg/Kg	20	12/11/2012 5:31:44 PM
Surr: 4-Bromofluorobenzene	99.8	80-120		%REC	20	12/11/2012 5:31:44 PM
EPA METHOD 7471: MERCURY				•		Analyst: <b>TMG</b>
Mercury	ND	0.033		mg/kg	1	12/17/2012 10:00:03 AM
EPA METHOD 6010B: SOIL METALS	S					Analyst: ELS
Arsenic	7.1	2.5		mg/Kg	1	12/18/2012 9:09:22 AM
Barium	150	0.50		mg/Kg	5	12/18/2012 9:42:06 AM
Cadmium	ND	0.10		mg/Kg	1	12/18/2012 9:09:22 AM
Chromium	4.2	0.30		mg/Kg	1	12/18/2012 9:09:22 AM
Copper	8.5	0.30		mg/Kg	1	12/18/2012 9:09:22 AM
Lead	3.8	0.25		mg/Kg	1	12/18/2012 9:09:22 AM
Nickel	3.6	0.50		mg/Kg	1	12/18/2012 9:09:22 AM
Selenium	ND	2.5		mg/Kg	1	12/18/2012 9:09:22 AM
Silver	ND	0.25		mg/Kg	1	12/18/2012 9:09:22 AM
Zinc	24	2.5		mg/Kg	1	12/18/2012 9:09:22 AM
SAR SOLUBLE CATIONS						Analyst: <b>ELS</b>
Calcium	1900	1.0		mg/L	1	12/18/2012 7:43:00 AM
Magnesium	390	1.0		mg/L	1	12/18/2012 7:43:00 AM
Sodium	16000	1.0		mg/L	1	12/18/2012 7:43:00 AM
Sodium Adsorption Ratio	89	0			1	12/18/2012 7:43:00 AM
EPA METHOD 8270C: PAHS						Analyst: <b>JDC</b>
Naphthalene	4.1	0.40		mg/Kg	10	12/11/2012 12:41:09 PM
1-Methylnaphthalene	2.4	0.40		mg/Kg	10	12/11/2012 12:41:09 PM
2-Methylnaphthalene	11	0.40		mg/Kg	10	12/11/2012 12:41:09 PM
Acenaphthylene	ND	0.40	•	mg/Kg	10	12/11/2012 12:41:09 PM
Acenaphthene	ND	0.40		mg/Kg	10	12/11/2012 12:41:09 PM
Fluorene	0.54	0.40		mg/Kg	10	12/11/2012 12:41:09 PM
Phenanthrene	0.28	0.040		mg/Kg	1	12/11/2012 12:06:02 PM
Anthracene	ND	0.040		mg/Kg	1	12/11/2012 12:06:02 PM
Fluoranthene	ND	0.040		mg/Kg	1	12/11/2012 12:06:02 PM

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

### **Analytical Report**

Lab Order 1212360

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/19/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-1

**Project:** COP Ute #12

Collection Date: 12/6/2012 1:25:00 PM

Lab ID: 1212360-001

Matrix: SOIL Received Date: 12/7/2012 10:00:00 AM

Analyses	Result	RL (	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: PAHS						Analyst: JDC
Pyrene	ND	0.040		mg/Kg	1	12/11/2012 12:06:02 PM
Benz(a)anthracene	ND	0.040		mg/Kg	1	12/11/2012 12:06:02 PM
Chrysene	ND	0.040		mg/Kg	1	12/11/2012 12:06:02 PM
Benzo(b)fluoranthene	ND	0.040		mg/Kg	1	12/11/2012 12:06:02 PM
Benzo(k)fluoranthene	ND	0.040		mg/Kg	1	12/11/2012 12:06:02 PM
Benzo(a)pyrene	ND	0.040		mg/Kg	1	12/11/2012 12:06:02 PM
Dibenz(a,h)anthracene	ND	0.040		mg/Kg	1	12/11/2012 12:06:02 PM
Benzo(g,h,i)perylene	ND	0.040		mg/Kg	1	12/11/2012 12:06:02 PM
Indeno(1,2,3-cd)pyrene	ND	0.040		mg/Kg	1	12/11/2012 12:06:02 PM
Surr: Benzo(e)pyrene	48.9	44.9-129		%REC	1	12/11/2012 12:06:02 PM
Surr: N-hexadecane	0	45.4-126	s	%REC	10	12/11/2012 12:41:09 PM
CONDUCTANCE						Analyst: TAF
Specific Conductance	6900	1.0		µmhos/cm	1	12/19/2012 8:03:00 AM
SM4500-H+B: PH						Analyst: IDC
pH ·	8.12	1.68		pH Units	1	12/13/2012 5:15:00 PM

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits 2 of 11



### YOUR LABIOF CHOICE

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

December 17, 2012

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE Albuquerque, NM 87109

Date Received : Description

December 14, 2012

Sample ID

1212360-001B SC-1

Collected By : Collection Date :

12/06/12 13:25

ESC Sample # : L611141-01

Site ID : Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Di.l	
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/17/12	1	
ORP	200		wV	2580	12/15/12	1	
рн	8.1		su	9045D	12/17/12	1.	

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/17/12 15:29 Printed: 12/17/12 15:29 L611141-01 (PH) - 8.1622.4c



### YOUR CHOICE

Hall Environmental Analysis Laboratory

Anne Thorne 4901 Hawkins NE

Albuquerque, NM 87109

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L611141

December 17, 2012

new labo			aboratory	Blank % Red	_	Limit		Batch	Date Analyzed
Analyte	Result	<u> </u>	Units	15 Red		DIMIC			<del></del>
Chromium, Hexavalent	< 2		mg/kg					WG628065	12/17/12 13:35
Analyte	Units	Resul	Duplica t Dupl	ite icate	RPD	Limit		Ref Samp	Batch
ORP	mV	200.	190		3.62	20		L611054-	01 WG6282 <b>3</b> 2
Chromium, Hexavalent Chromium, Hexavalent	mg/kg mg/kg	0 0.400	0 0.92	20	0 78.8*	20 20		L610592- L610592-	
рН <b>р</b> Н	su _su	4.60 8.20	4.60 8.10		0.434 0.860	1 1		L611048- L611452-	
Analyte	Units		atory Cont n Val		ole sult	% Rec		Limit	Batch
ORP	mV	228		234.		103.		95.6-104.	WG628232
Chromium, Hexavalent	mg/kg	261		227.		87.0		80-120	WG628065
рН	su	6.03	3	6.01		99.7		98-101.6	WG628397
Analyte		Laboratory Result	Control S	Sample Du Rec	uplicate	Limit	RPD	Lim	it Batch
	Units								
ORP	mV	234.	234.	103.		95.6-104.	0	20	WG628232
Chromium, Hexavalent	mg/kg	233.	227.	89.0		80-120	2.61	20	WG628065
рН	ธน	6.03	6.01	100.		98-101.6	0.332	20	WG628397
Analyte	_Units	MS Res	Matrix Sp Ref Res		% Rec	Limit		Ref Samp	Batch
Chromium, Hexavalent	mg/kg	2.88	0	20	14.4*	75-125		L610592-0	2 WG628065
Analyte	Units	Matr MSD	ix Spike I Ref	Ouplicate Rec	e Limit	RPD	Limit	Ref Samp	Batch
Chromium, Hexavalent	mg/kg	1.24	2.88	5.20*	75-125	79.6*	20	L610592-0	2 WG628065

Batch number /Run number / Sample number cross reference

WG628232: R2479837: L611141-01 WG628065: R2480877: L611141-01 WG628397: R2481017: L611141-01

 $<sup>\</sup>star$   $\star$  Calculations are performed prior to rounding of reported values.

<sup>\*</sup> Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

# Hall Environmental Analysis Laboratory, Inc.

WO#: 12

1212360

. 19-Dec-12

Client:

Animas Environmental Services

Project:

COP Ute #12

Project: COP C	rte #12								
Sample ID IMB-5158	SampType: <b>MB</b>	LK	Tes	tCode: El	PA Method	8015B: Dies	el Range (	Organics	
Client ID: PBS	Batch ID: 515	8	F	RunNo: 7	361				
Prep Date: 12/7/2012	Analysis Date: 12	/7/2012	S	SeqNo: 2	13505	Units: mg/k	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10								
Surr: DNOP	9.7	10.00		96.9	72.4	120			
Sample ID LCS-5158	SampType: LC:	S	Tes	tCode: El	PA Method	8015B: Dies	el Range (	Organics	
Client ID: LCSS	Batch ID: 515	8	F	RunNo: <b>7</b> :	361				
Prep Date: 12/7/2012	Analysis Date: 12	/7/2012	S	SeqNo: 2	13516	Units: mg/k	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organi⇔ (DRO)	50 10	50.00	0	99.6	47.4	122			
Surr: DNOP	4.2	5.000		84.0	72.4	120			

### Qualifiers:

P Sample pH greater than 2

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

Page 3 of 11

<sup>\*</sup> Value exceeds Maximum Contaminant Level.

<sup>·</sup> E Value above quantitation range

J Analyte detected below quantitation limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1212360

19-Dec-12

Client:

Animas Environmental Services

Project:

COP Ute #12

Sample ID 1212385-001AMS	SampT	ype: <b>M</b> S	3	Tes	tCode: E	PA Method	8015B: Gaso	oline Rang	е	
Client ID: BatchQC	Batch	ID: <b>51</b>	86	R	RunNo: 7	465				
Prep Date: 12/10/2012	Analysis D	ate: 12	2/12/2012	S	SeqNo: 2	16508	Units: mg/h	<b>⟨</b> g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.7	23.74	0	101	70	130		-	
Surr: BFB	1500		949.7		159	84	116			S

Sample ID	1212385-001AMSE	SampTy	ре: М	SD	Tes	tCode: El	PA Method	8015B: Gaso	oline Rang	e	
Client ID:	BatchQC	Batch I	D: <b>51</b>	86	F	RunNo: 7	465				
Prep Date:	12/10/2012	Analysis Da	te: 1:	2/12/2012	S	SeqNo: 2	16509	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range	Organics (GRO)	25	4.7	23.67	0	105	70	130	3.67	22.1	
Surr: BFB		1900		947.0		197	84	116	0	0	S

### Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

Page 4 of 11

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1212360

19-Dec-12

Client:

Animas Environmental Services

Project:

COP Ute #12

Sample ID mb-5196	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8270C: PAH		<u>"</u>	
Client ID: PBS	Batcl	h ID: <b>51</b> !	96	F	RunNo: 7	422				
Prep Date: 12/10/2012	Analysis [	Date: 12	2/11/2012	8	SeqNo: 2	15077	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.020						_	****	****
1-Methylnaphthalene	ND	0.020								
2-Methylnaphthalene	ND	0.020								
Acenaphthylene	ND	0.020								
Acenaphthene	ND	0.020								
Fluorene	ND	0.020								
Phenanthrene	ND	0.020								
Anthracene	ND	0.020								
Fluoranthene	ND	0.020								
Pyrene	ND	0.020								
Benz(a)anthracene	ND	0.020								
Chrysene	ND	0.020								
Benzo(b)fluoranthene	ND	0.020								
Benzo(k)fluoranthene	ND	0.020								
Benzo(a)pyrene	ND	0.020								
Dibenz(a,h)anthracene	ND	0.020								
Benzo(g,h,i)perylene	· ND	0.020								
Indeno(1,2,3-cd)pyrene	ND	0.020								
Surr: Benzo(e)pyrene	0.27		0.3300		81.2	44.9	129			
Surr: N-hexadecane	1.1		1.460		72.3	45.4	126			

Sample ID Ics-5196	SampT	Гуре: <b>LC</b>	s	Test	Code: EF	PA Method	8270C: PAH	3		
Client ID: LCSS	Batch	h ID: <b>51</b> 9	96	R	RunNo: 74	122				
Prep Date: 12/10/2012	Analysis D	)ate: 12	2/11/2012	S	SeqNo: 2	15078	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	0.26	0.020	0.3300	0	77.4	52	107			
1-Methylnaphthalene	0.26	0.020	0.3300	0	78.6	54.7	112			
2-Methylnaphthalene	0.25	0.020	0.3300	0	76.7	50.2	112			
Acenaphthylene	0.30	0.020	0.3300	0	90.3	53.3	111			
Acenaphthene	0.31	0.020	0.3300	0	93.2	50	120			
Fluorene	0.30	0.020	0.3300	0	89.4	50.8	115			
Phenanthrene	0.30	0.020	0.3300	0	92.2	54.1	124			
Anthracene	0.30	0.020	0.3300	0	90.8	53.9	117			
Fluoranthene	0.30	0.020	0.3300	0	90.5	54.5	112			
Pyrene	0.28	0.020	0.3300	0	86.2	51.2	113			
Benz(a)anthracene	0.28	0.020	0.3300	0	86.0	54.9	109			
Chrysene	0.19	0.020	0.3300	0	58.3	49	112			
Benzo(b)fluoranthene	0.24	0.020	0.3300	0	73.9	58.2	118			
Benzo(k)fluoranthene	0.29	0.020	0.3300	0	87.5	53.5	118			
Benzo(a)pyrene	0.26	0.020	0.3300	0	79.5	50.1	118			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

Page 5 of 11

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1212360

19-Dec-12

Client:

Animas Environmental Services

Project:

COP Ute #12

Sample ID Ics-5196	Samp1	Гуре: <b>LC</b>	s	Tes	tCode: E	PA Method	8270C: PAH	5		
Client ID: LCSS	Batcl	Batch ID: 5196		F	RunNo: <b>7</b>	422				
Prep Date: 12/10/2012	Analysis E	Date: 12	2/11/2012	8	SeqNo: 2	15078	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	0.27	0.020	0.3300	0	82.3	59.5	113		***	
Benzo(g,h,i)perylene	0.29	0.020	0.3300	0	86.6	56.5	117			
Indeno(1,2,3-cd)pyrene	0.28	0.020	0.3300	0	83.9	58.5	114			
Surr: Benzo(e)pyrene	0.24		0.3300		72.9	44.9	129			
Surr: N-hexadecane	1.3		1.460		91.4	45.4	126			

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

Page 6 of 11

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1212360

19-Dec-12

Client:

Animas Environmental Services

Project:

COP Ute #12

Sample ID 1212360-001ADUP

SampType: DUP

TestCode: CONDUCTANCE

Client ID: SC-1

Batch ID: R7578

RunNo: 7578

Analysis Date: 12/19/2012

SeqNo: 219972

Units: µmhos/cm

%RPD

Prep Date: Analyte

PQL

Qual

Result

SPK value SPK Ref Val %REC LowLimit

HighLimit

**RPDLimit** 20

6900 Specific Conductance 1.0

Qualifiers:

Value exceeds Maximum Contaminant Level.

Value above quantitation range

Analyte detected below quantitation limits

P Sample pH greater than 2

Analyte detected in the associated Method Blank В

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

RPD outside accepted recovery limits

Page 7 of 11

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1212360

19-Dec-12

Client:

Animas Environmental Services

Result

Result

0.17

Project:

COP Ute #12

Sample ID MB-5289

SampType: MBLK

TestCode: EPA Method 7471: Mercury

PBS Client ID:

Batch ID: 5289

RunNo: 7527

HighLimit

Prep Date: 12/17/2012

Analysis Date: 12/17/2012 **PQL** 

SeqNo: 218472

Units: mg/kg

**RPDLimit** 

Analyte Mercury

ND 0.033

Sample ID LCS-5289

SampType: LCS

TestCode: EPA Method 7471: Mercury

%RPD

%RPD

Qual

Client ID: LCSS

Batch ID: 5289

RunNo: 7527 SeqNo: 218473

Units: mg/kg

Analyte

Prep Date: 12/17/2012

Analysis Date: 12/17/2012 PQL

SPK value SPK Ref Val

0.1667

%REC

LowLimit

HighLimit

**RPDLimit** 

Qual

Mercury

0.033

0

SPK value SPK Ref Val %REC LowLimit

103

120

Sample ID 1212360-001AMS SC-1

SampType: MS Batch ID: 5289

TestCode: EPA Method 7471: Mercury

80

RunNo: 7527

Units: mg/kg

Analyte

Client ID:

Prep Date: 12/17/2012

Analysis Date: 12/17/2012

SeqNo: 218475 LowLimit

HighLimit

%RPD

Mercury

0.18 0.033

**PQL** SPK value SPK Ref Val %REC 0.1643 0.008724

105

125

**RPDLimit** 

Qual

Qual

Sample ID 1212360-001AMSD Client ID: SC-1

SampType: MSD

0.18

Result

TestCode: EPA Method 7471: Mercury

RunNo: 7527

Units: mg/kg

**RPDLimit** 

Analyte

Prep Date: 12/17/2012

Batch ID: 5289

Analysis Date: 12/17/2012

SeaNo: 218476

LowLimit

HighLimit

%RPD

Mercury

Result

**PQL** 0.033

SPK value SPK Ref Val 0.1657 0.008724

%REC

106

75

125

1.27

20

Qualifiers:

Value exceeds Maximum Contaminant Level.

Е Value above quantitation range

Analyte detected below quantitation limits P Sample pH greater than 2

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit ND

Page 8 of 11

R

RPD outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1212360

19-Dec-12

Client:

Animas Environmental Services

Project:

COP Ute #12

Sample ID MB-5292	SampT	ype: ME	BLK	Tes	TestCode: EPA Method 6010B: Soil Metals						
Client ID: PBS	Batch	n <b>I</b> D: <b>52</b>	92	F	RunNo: 7	561					
Prep Date: 12/17/2012	Analysis D	ate: 12	2/18/2012	9	SeqNo: 2	19504	Units: mg/k	(g			
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									
Copper	ND	0.30									
Lead	ND	0.25									
Nickel	ND	0.50									
Selenium	ND	2.5									
Silver	ND	0.25									
Zinc	ND	2.5									

Sample ID LCS-5292	SampT	ype: LC	S	Test	stCode: EPA Method 6010B: Soil Metals							
Client ID: LCSS	Batch	n ID: <b>52</b> 9	92	R	tunNo: 7	561						
Prep Date: 12/17/2012	Analysis D	ate: 12	2/18/2012	S	SeqNo: 219505			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Arsenic	23	2.5	25.00	0	91.4	80	120					
Barium	22	0.10	25.00	0	89.4	80	120					
Cadmium	22	0.10	25.00	0	88.7	80	120					
Chromium	22	0.30	25.00	0	89.7	80	120					
Copper	23	0.30	25.00	0	90.8	80	120					
Lead	22	0.25	25.00	0	88.9	80	120					
Nickel	21	0.50	25.00	0	85.5	80	120					
Selenium	22	2.5	25.00	0	87.4	80	120					
Silver	4.9	0.25	5.000	0.1050	96.6	80	120					
Zinc	22	2.5	25.00	0	89.8	80	120					

Sample ID 1212338-001AMS	SampT	ype: MS	Metals								
Client ID: BatchQC	Batch	ID: <b>52</b>	92	F	RunNo: 7						
Prep Date: 12/17/2012	Analysis D	ate: 12	2/18/2012	\$	SeqNo: 2	19510	Units: mg/F	Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	19	2.5	24.91	0.8300	74.1	75	125			S	
Cadmium	18	0.10	24.91	0	73.0	75	125			s	
Chromium	20	0.30	24.91	1.446	72.6	75	125			S	
_ead	20	0.25	24.91	2.284	69.6	75	125			S	
Selenium	17	2.5	24.91	0	69.1	75	125			s	
Silver	3.7	0.25	4.982	0.05163	72.9	75	125			S	

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

Page 9 of 11

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1212360

19-Dec-12

Client:

Animas Environmental Services

Project:

COP Ute #12

Sample ID 1212338-001AN	ISD SampTy	ype: MS	SD	Tes						
Client ID: BatchQC	92	RunNo: <b>7561</b>								
rep Date: 12/17/2012 Analysis Date: 12/18/2012 SeqNo: 219511 Units: mg/Kg										
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	20	2.5	24.55	0.8300	78.1	75	125	3.62	20	
Cadmium	19	0.10	24.55	0	76.9	75	125	3.80	20	
Chromium	20	0.30	24.55	1.446	77.5	75	125	4.65	20	
ead	20	0.25	24.55	2.284	73.4	75	125	3.49	20	S
Selenium	18 <sup>.</sup>	2.5	24.55	0	73.2	75	125	4.32	20	S
Silver	3.9	0.25	4.911	0.05163	77.5	75	125	4.66	20	

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

Page 10 of 11

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1212360

19-Dec-12

Client:

Animas Environmental Services

Project:

COP Ute #12

Sample ID 1212360-001ADUP

SampType: **DUP** 

TestCode: SM4500-H+B: pH

LowLimit

Client ID: SC-1

Batch ID: R7490

1.68

RunNo: 7490

SPK value SPK Ref Val %REC

Prep Date:

Analysis Date: 12/13/2012

SeqNo: 217055

Units: pH Units

HighLimit

**RPDLimit** %RPD

Analyte pН

Result PQL 8.08

Qualifiers:

Value exceeds Maximum Contaminant Level.

Е Value above quantitation range

Analyte detected below quantitation limits

Sample pH greater than 2

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits

Page 11 of 11



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-410;

Website: www.hallenvironmental.com

# Sample Log-In Check List

The state of the s		_
Client Name: Anima Environmental Wo	ork Order Number: 1212360	
Received by/date: 12 07 12	<del></del>	
Logged By: Lindsay Mangin 12/7/2012 10:00:00 AM	Joseph Holleger	
Completed By: Lindsay Mangin 12/7/2012 12:04:34 PM	Joseph Mago	
Reviewed By: 12/07/12		-
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	
<u>Log In</u>		
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 ☐ # of preserved bottles checked for pH:	
14. Are matrices correctly identified on Chain of Custody?	Yes ✓ No ☐ (<2 or >12 unless noted)	
15. Is it clear what analyses were requested?	Yes ✓ No ☐ Adjusted?	
16. Were all holding times able to be met?  (If no, notify customer for authorization.)	Yes ✓ No ☐ 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 Se	eal Date Signed By	
1 1.0 Good Yes		

C	hain	of-Cu	stody Record	Turn-Around				•	15	1	A		E	AS LA	TE	• <b>^</b>			NT	'A I	
Client:	Anim	as En	vironmental	☐ Standard	Rush	5 day TAT	    -												TC		
	Se.	VVICE 9	5	Project Name	); 1.1 <b>生</b> 10	,		www.hallenvironmental.com													
Mailing	Address	624	E Comanche		Standard X Rush 5 day TAT Project Name:  CoP Ute #12				4901 Hawkins NE - Albuquerque, NM 87109												
Fav	MING	bon 1	Ju 87401	Project #:			Tel. 505-345-3975 Fax 505-345-4107														
Phone #	<u> </u>	5 5b	4 2281					Analysis Request													
email or				Project Mana	ger:		(8021)	Ju S	ese		- [	ľ		ŠO <sub>4</sub> )	က္ခ			affacted)	İ		
QA/QC F			☐ Level 4 (Full Validation)	D. Wa	Watson			(Gas	(Gas/Diesel)		Ì			,PO4,	2 PCB			$\sim$ 1			
Accredi		□ Othei	T	Sampler: D	Watson Dyes	e no	+ TMB	+ TPH (Gas only)		18.1)	04.1)	AH)		D <sub>3</sub> ,NO <sub>2</sub>	, / 808		<b>A</b>	Table			S I
□ EDD	(Type)			Sample Tem	rerature 💝 🏣		HE	빎	08 p	pd 4	od 5	P P	stals	, <u>;</u>	ides	€	9	꽃		-	ž
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + MTBE	BTEX + MTBE	TPH Method 8015B	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	ut who ut			Air Bubbles (Y or N)
12-6-12	1325	Soil	SC-I	3-802		-001												X			
				-			_				_		_	_					_	_	$\perp$
													_								
						:	ļ	<u> </u>												1	
			<u> </u>				<u> </u>	_				_							_	1	
																		_		$\perp$	_
							ـــــ						_						_	_	_
			·				<u> </u>	ļ						_						$\perp$	_
							ļ	ļ	·				_							$\perp$	_ _
													_							_	
		_			·		_	_	-				_	_					_	1	_
Date:	Time:	Retinquishe	d hv.	Received by:		Date Time	Ren	nark			<u></u>			<u> </u>	-04						
12/6/12 Date:	1647 Time:	Reinquishe	ih Watu	Mustus Walter Park Time  Received by: Date Time				; 9: ea: 1	s: 12 344	ner 655	. <b>10</b> 1	Con	المحال	orde Suc	ved ved	p by:	Cry	shul uurd	Tafi Lope	oya Z	<b></b>
12/0/12	1715	Mes	tre Wallen				wo: 9344655 orderedby: Crystal Tafoya.  Area: 1 supernsor: Richard Lope 2  User 10: GARRECD														

# Standards for Spill Clean-up and Reclamation Ute Mountain Ute Tribe Based on Colorado Oil and Gas Commission Standards

Note: Samples must be collected by a qualified professional and samples analyzed by a qualified laboratory (EPA certification recommended). At a minimum sufficient quality assurance/quality control data should be provided with analyses. These should be sent to Scott Clow, Environmental Programs Director, PO Box 448, Towaoc, CO 81334, or delivered to 520 Sunset Blvd. Towaoc, CO during regular business hours of 8 am to 4:30 pm, Monday through Friday. Other contact information: (970) 564-5432; FAX (970) 565-2651; cellular phone (970) 749-3508.

The Ute Mountain Ute Environmental Programs Department can do sampling on behalf of the Operator/Leasee with the understanding that analytical costs will be reimbursed to the Tribe.

Pollutant Concentrations in Soil and Water

I Ollutarit Ooricentrations	··
CONCENTRATION LEVELS Contaminant of Concern	Concentrations
@@@rganic@ompounds.li	
TPH (total volatile and extractable petroleum hydrocarbons)	500 mg/kg
Benzene	0.17 mg/kg <sub>2</sub>
Toluene	85 mg/kg2
Ethylbenzene	100 mg/kg2
Xylenes (total	175 mg/kg2
Acenaphthene	1,000 mg/kg2
Anthracene	1,000 mg/kg2
Benzo(A)anthracene	0.22 mg/kg2
Benzo(B)fluoranthene	0.22 mg/kg2
Benzo(K)fluoranthene	2.2 mg/kg2
Benzo(A)pyrene	0.022 mg/kg2
Chrysene	22 mg/kg2
Dibenzo(A,H)anthracene	0.022 mg/kg2
Fluoranthene	1,000 mg/kg2
Fluorene	1,000 mg/kg2
Indeno(1,2,3,C,D)pyrene	0.22 mg/kg2
Napthalene	23 mg/kg2

202 pt 200 25 pt 15 pt 1

Pyrene	1,000 mg/kg2
Organic Compounds in Gro	und Water
Benżene	5 µg/l3
Toluene	560 to 1,000 μg/l <sub>3</sub>
Ethylbenzens	700 µg/l <sub>3</sub>
Xylenes (Total)	1,400 to 10,000 µg/ls,4
/ Inorganics in Soils	7
Electrical Conductivity (EC)	<4 mmhos/cm or 2x background
Sodium Adsorption Ratio (SAR)	<125
pH	6-9
Inorganics in Ground V	Vater
Total Dissolved Solids (TDS)	<1.25 x background3
Chlorides	<1.25 x background3
Sulfates	<1.25 x background₃
Metals in Soils	
Arsenic	0.39 mg/kg <sub>2</sub>
Barium (LDNR True Total Barium)	15,000 mg/kg <sub>2</sub>
Boron (Hot Water Soluble)	2 mg/l <sub>3</sub>
Cadmium	70 mg/kg3,8
Chromium (III)	120,000 mg/kg <sup>2</sup>
Chromium (VI)	23 mg/kg <sub>2,6</sub>
Copper	3,100 mg/kg <sub>2</sub>
Lead (inorganic)	400 mg/kg <sub>2</sub>
Mercury	23 mg/kg <sub>2</sub>
Nickel (soluble salts)	1,600 mg/kg <sub>2,6</sub>
Selenium	390 mg/kg <sub>2,8</sub>
Silver	390 mg/kg <sub>2</sub>
Zinc	23,000 mg/kg <sub>2,6</sub>
Liquid Hydrocarbons in Soils and	I Ground Water
Liquid hydrocarbons including condensate and oil	Below detection level

\* Single



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

February 04, 2013

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

**FAX** 

RE: COP Ute #12 OrderNo.: 1301920

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/29/2013 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued February 04, 2013.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 2/4/2013

**CLIENT:** Animas Environmental Services

P Sample pH greater than 2

RL Reporting Detection Limit

Client Sample ID: SC-1 SC-2 Irc

Project: COP Ute #12 Collection Date: 1/25/2013 4:45:00 PM

RPD outside accepted recovery limits

Spike Recovery outside accepted recovery limits Page 1 of 9

Lab ID: 1301920-001 Matrix: SOIL Received Date: 1/29/2013 10:20:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	
EPA METHOD 8015B: DIESEL RANGE O	RGANICS		<del></del>				Analyst: MMD	
Diesel Range Organics (DRO)	2200	61.77645	100		mg/Kg	· 10	1/31/2013 11:15:20 AM	
Motor Oil Range Organics (MRO)	ND	499.00200	500		mg/Kg	10	1/31/2013 11:15:20 AM	
Surr: DNOP	0	0.00000	72.4-120	S	%REC	10	1/31/2013 11:15:20 AM	
PA METHOD 8015B: GASOLINE RANG	E					•	Analyst: NSB	
Gasoline Range Organics (GRO)	44	4.25846	19		mg/Kg	4	1/31/2013 12:15:32 PM	
Surr: BFB	148	0.00000	84-116	s	%REC	4	1/31/2013 12:15:32 PM	
PA METHOD 8021B: VOLATILES							Analyst: NSB	
Benzene	ND	0.01192	0.19		mg/Kg	4	1/31/2013 12:15:32 PM	
Toluene	0.021	0.01231	0.19	J	mg/Kg	4	1/31/2013 12:15:32 PM	
Ethylbenzene	0.079	0.01346	0.19	J	mg/Kg	4	1/31/2013 12:15:32 PM	
Xylenes, Total	0.32	0.04346	0.38	J	mg/Kg	4	1/31/2013 12:15:32 PM	
Surr: 4-Bromofluorobenzene	103	0.00000	80-120	-	%REC	4	1/31/2013 12:15:32 PM	
EPA METHOD 7471: MERCURY	100	0.00000	00 120		791120	,	Analyst: TMG	
Mercury	0.020	0.00164	0.033	J	mg/kg	1	1/31/2013 8:07:12 AM	
EPA METHOD 6010B: SOIL METALS	0.020	0.00101	0.000	ŭ	9/1.9	·	Analyst: ELS	
Arsenic	1.9	0.62632	2.5	J	mg/Kg	1	1/31/2013 7:43:31 AM	
Barium	160	0.30451	0.50	3	mg/Kg	5	1/31/2013 7:45:51 AM	
Cadmium	0.037	0.02710	0.10	J	mg/Kg	1	1/31/2013 7:43:31 AM	
Chromium	4.9	0.11840	0.30	0	mg/Kg	1	1/31/2013 7:43:31 AM	
Copper	9.0	0.23231	0.30		mg/Kg	1	1/31/2013 7:43:31 AM	
Lead	3.5	0.23231	0.35		mg/Kg	1	1/31/2013 7:43:31 AM	
Nickel	3.7	0.21941	0.50		mg/Kg	1	1/31/2013 7:43:31 AM	
Selenium	ND	1.40255	2.5			1	1/31/2013 7:43:31 AM	
Silver	ND	0.03540	0.25		mg/Kg mg/Kg	1	1/31/2013 7:43:31 AM	
Zinc	24	1.00664	2.5			1	1/31/2013 7:43:31 AM	
SAR SOLUBLE CATIONS	24	1.00004	2.5		mg/Kg	'		
Calcium	1600	0.48650	1.0		ma/l	1	Analyst: JLF	
Magnesium	380	0.34400	1.0		mg/L mg/L	1	1/31/2013 9:58:00 AM 1/31/2013 9:58:00 AM	
Sodium	11000	0.87900	1.0		-	1	1/31/2013 9:58:00 AM	
Sodium Adsorption Ratio	63	0.00000	0		mg/L	1	1/31/2013 9:58:00 AM	
EPA METHOD 8270C: PAHS	03	0.00000	U			'	Analyst: JDC	
,	0.40	0.00101	0.000				•	
Naphthalene .	0.46	0.00434	0.020		mg/Kg	1	1/31/2013 3:17:05 PM	
1-Methylnaphthalene	0.53	0.00395	0.020		mg/Kg	1	1/31/2013 3:17:05 PM	
2-Methylnaphthalene	4.3	0.03997	0.20		mg/Kg	10	2/1/2013 11:27:55 AM	
Acenaphthylene	ND	0.02405	0.10		mg/Kg	5	1/31/2013 4:29:18 PM	
Acenaphthene	ND	0.02881	0.10		mg/Kg	5	1/31/2013 4:29:18 PM	
Fluorene	ND	0.02053	0.10		mg/Kg	5	1/31/2013 4:29:18 PM	
Phenanthrene	0.11	0.00324	0.020		mg/Kg	1	1/31/2013 3:17:05 PM	
Anthracene	ND _	0.00316	0.020		mg/Kg	1	1/31/2013 3:17:05 PM	
Qualifiers: * Value exceeds Maximum Co	ontaminant Le	vel.	В	Analyte detected in the associated Method Blank				
E Value above quantitation rar	ige		Н				alysis exceeded	
J Analyte detected below quan	titation limits		ND		ted at the Rep			

# Analytical Report

#### Lab Order 1301920

Date Reported: 2/4/2013

## Hall Environmental Analysis Laboratory, Inc.

Matrix: SOIL

**CLIENT:** Animas Environmental Services

Project: COP Ute #12

**Lab ID:** 1301920-001

Client Sample ID: SC-1 SC-2 lrc

Collection Date: 1/25/2013 4:45:00 PM

Received Date: 1/29/2013 10:20:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: PAHS	<u> </u>				<u> </u>		Analyst: JDC
Fluoranthene	ND	0.00355	0.020		mg/Kg	1	1/31/2013 3:17:05 PM
Pyrene	ND	0.00485	0.020		mg/Kg	1	1/31/2013 3:17:05 PM
Benz(a)anthracene	ND	0.00568	0.020		mg/Kg	1	1/31/2013 3:17:05 PM
Chrysene	ND	0.00376	0.020		mg/Kg	1	1/31/2013 3:17:05 PM
Benzo(b)fluoranthene	0.0050	0.00474	0.020	J	mg/Kg	1	1/31/2013 3:17:05 PM
Benzo(k)fluoranthene	ND	0.00581	0.020		mg/Kg	1	1/31/2013 3:17:05 PM
Benzo(a)pyrene	ND	0.00391	0.020		mg/Kg	1	1/31/2013 3:17:05 PM
Dibenz(a,h)anthracene	ND	0.00389	0.020		mg/Kg	1	1/31/2013 3:17:05 PM
Benzo(g,h,i)perylene	ND	0.00506	0.020		mg/Kg	1	1/31/2013 3:17:05 PM
Indeno(1,2,3-cd)pyrene	ND	0.00783	0.020		mg/Kg	1	1/31/2013 3:17:05 PM
Surr: Benzo(e)pyrene	105	0.00000	44.9-129		%REC	1	1/31/2013 3:17:05 PM
Surr: N-hexadecane	0	0.00000	45.4-126	S	%REC	5	1/31/2013 4:29:18 PM
CONDUCTANCE							Analyst: TAF
Specific Conductance	5200	0.00000	1.0		µmhos/cm	1	1/31/2013 7:02:00 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits



MOUR LAB OF CHOICE

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE Albuquerque, NM 87109

February 01, 2013

Date Received :

January 30, 2013

ESC Sample # : L617639-01

Description

Site ID :

Sample ID

: 1301920-001c sc-1 SC-2 lrc

Project # :

Collected By : Collection Date : 01/25/13 16:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.	
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/01/13	1	
ORP	58.		mV	2580 B-2011	01/31/13	1	
Нq	8.2		su	9045D	01/31/13	1	

BDL - Below Detection Limit Dot. Limit - Practical Quantitation Limit(PQL) Note:

The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 02/01/13 15:31 Frinted: 02/01/13 15:40 L617639-01 (PH) - 8.2020.3c



Y,OUR, MARYOF YOUR OF CE

Hall Environmental Analysis Laboratory

Anne Thorne 4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report Level II

L617639

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 01, 2013

	<del></del>									
Analyte	Result		Laboratory Units	Blank	c	Limit		Batch	Date	Analyzed
Chromium, Hexavalent	< 2		mg/kg					WG634626	02/0	1/13 13:44
Analyte	Units	Resu.	Duplic lt Dup	ate licate	RPD	Limit		Ref Sam	ip	Batch
ORP ORP	Vm Vm	240. 57.0	230 58.		3.42 1.74	20 20		L617129 L617639		WG634580 WG634580
рH	su	8.20	8.2	0	0	1		L617639	-01	WG634633
Chromium, Hexavalent	mg/kg	0	0		0	20		L61 <u>76</u> 39	-01	WG634626
Analyte	Units		ratory Con vn Val		ple sult	% Rec		Limit		Batch
ORP	m <b>V</b>	228		226.		99.1		95.6-104		WG634580
рн	su	5.7		5.72		100.		98.25-10	1.75	WG634633
Chromium, Hexavalent	mg/kg	261		214.	<u> </u>	82.0		80-120		<u>WG6</u> 34626
Analyte	Units		y Control Ref	Sample D		Limit	RPD	Li	mit	Batch
ORP	νm	227.	226.	100.		95.6-104.	0.442	20	ļ	WG634580
рН	su	5.73	5.72	100.		98.25-101.75	0.175	20	+	WG634633
Chromium, Hexavalent	mg/kg	215.	214.	82.0	 	80-120	0.466	20	<b>)</b>	WG634626
Analyte	Units	MS Res	Matrix S Ref Re		% Rec	Limit		Ref Samp	<b>)</b>	Batch
Chromium, Hexavalent	mg/kg	19.6	0	20	98.0	75-125		L617645-	-02	WG634626
Analyte	Units	Mat:	rix Spike Ref	Duplicat %Rec	e Limit	RPD	Limit	Ref Samp	)	Batch
Chromium, Hexavalent	mg/kg	19.8	19.6	99.0	75–125	1.02	20	L617645-	-02	WG634626

Batch number /Run number / Sample number cross reference

WG634580: R2525258: L617639-01 WG634633: R2525299: L617639-01 WG634626: R2525957: L617639-01

<sup>\* \*</sup> Calculations are performed prior to rounding of reported values.
\* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1301920

04-Feb-13

Client:

Animas Environmental Services

Result

48

4.9

10

Project:

Analyte

Surr: DNOP

Diesel Range Organics (DRO)

COP Ute #12

Sample ID MB-5902	SampT	ype: M	BLK	Tes	Code: El	PA Method	8015B: Dies	el Range (	Organics	
Client ID: PBS	Batch	1D: <b>59</b>	02	F	tunNo: 8	358				
Prep Date: 1/30/2013	Analysis D	ate: 1	/31/2013	S	eqNo: 2	41455	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10		<u></u>						
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		99.1	72.4	120			
Sample ID LCS-5902	SampT	ype: LC	s	Tes	Code: El	PA Method	8015B: Dies	el Range (	Organics	
Client ID: LCSS	Batch	n ID: <b>59</b>	02	F	tunNo: 8	358				
Prep Date: 1/30/2013	Analysis D	ate: 1	/31/2013	S	eqNo: 2	41456	Units: mg/k	ξg		

0

%REC

96.1

98.1

LowLimit

47.4

72.4

HighLimit

122

120

**RPDLimit** 

Qual

SPK value SPK Ref Val

50.00

5.000

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

Page 3 of 9

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1301920

04-Feb-13

Client:

Animas Environmental Services

1100

1000

Project:

COP Ute #12

Project: COP Ute	#12								
Sample ID MB-5894	SampType: M	BLK	Test	Code: El	PA Method	8015B: Gaso	line Rang	e	
Client ID: PBS	Batch ID: 58	394	F	tunNo: 8	360				
Prep Date: 1/29/2013	Analysis Date: 1	/30/2013	S	SeqNo: 24	41161	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND 5.0								
Surr: BFB	990	1000		99.5	84	116			
Sample ID LCS-5894	SampType: Lo	cs	Test	Code: El	PA Method	8015B: Gaso	line Rang	e	
Client ID: LCSS	Batch ID: 58	394	F	lunNo: 8	360				
Prep Date: 1/29/2013	Analysis Date: 1	/30/2013	S	SeqNo: 24	41162	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26 5.0	25.00	0	104	74	117			
Surr: BFB	1000	1000		104	84	116			
Sample ID 5ML RB	SampType: M	BLK	Tes	tCode: El	PA Method	8015B: Gaso	line Rang	e	
Client ID: PBS	Batch ID: R	8391	R	tunNo: 8	391				
Prep Date:	Analysis Date: 1	/31/2013	S	SeqNo: 24	41924	Units: %RE	С		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000	1000		102	84	116			
Sample ID 2.5UG GRO LCSE	SampType: L0	cs	Tes	Code: EF	PA Method	8015B: Gaso	line Rang	e	
Client ID: LCSS	Batch ID: R	8391	R	tunNo: 8	391				
Prep Date:	Analysis Date: 1	/31/2013	S	SeqNo: 24	41925	Units: %RE	С		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

#### Qualifiers:

Surr: BFB

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

108

84

116

R RPD outside accepted recovery limits

Page 4 of 9

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1301920

04-Feb-13

Client:

Animas Environmental Services

Project:

COP Ute #12

Sample ID MB-5894	Samp	Гуре: <b>МЕ</b>	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batc	h ID: <b>58</b> 9	94	F	RunNo: 8	360				
Prep Date: 1/29/2013	Analysis [	Date: <b>1/</b>	30/2013	S	SeqNo: 2	41166	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit '	Qual
Benzene	ND	0.050			,					-
Toluene	ND	0.050								
Ethylbenzene	0.0055	0.050								J
Xylenes, Total	0.019	0.10								J
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID LCS-5894	Samp	Гуре: <b>LC</b>	s	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: <b>58</b>	94	F	RunNo: 8	360				
Prep Date: 1/29/2013	Analysis E	Date: 1/	30/2013	S	41167	Units: mg/F	(g	,		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	104	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		114	80	120			

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

Page 5 of 9

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1301920

04-Feb-13

Client:

Animas Environmental Services

Project:

COP Ute #12

Sample ID mb-5906	Samp1	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	8270C: PAH	s		· ·
Client ID: PBS	Batcl	h ID: <b>59</b>	06	F	RunNo: 8	390				
Prep Date: 1/30/2013	Analysis [	Date: 1/	31/2013	5	SeqNo: 2	41908	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.020								
1-Methylnaphthalene	ND	0.020								
2-Methylnaphthalene	ND	0.020								
Acenaphthylene	ND	0.020								
Acenaphthene	ND	0.020								
Fluorene	ND	0.020								
Phenanthrene	ND	0.020								
Anthracene	ND	0.020								
Fluoranthene	ND	0.020								
Pyrene	ND	0.020								
Benz(a)anthracene	ND	0.020								
Chrysene	ND	0.020								
Benzo(b)fluoranthene	ND	0.020								
Benzo(k)fluoranthene	0.0063	0.020								J
Benzo(a)pyrene	ND	0.020								
Dibenz(a,h)anthracene	ND	0.020								
Benzo(g,h,i)perylene	ND	0.020								
Indeno(1,2,3-cd)pyrene	ND	0.020								
Surr: Benzo(e)pyrene	0.35		0.3300		106	44.9	129			
Surr: N-hexadecane	1.4		1.460		94.2	45.4	126			

Sample ID Ics-5906	SampT	Гуре: <b>LC</b>	s	Test	Code: EF	A Method	8270C: PAHs	•		
Client ID: LCSS	Batch	h ID: <b>59</b> (	<b>76</b>	R	RunNo: 83	390				
Prep Date: 1/30/2013	Analysis D	)ate: 1/	31/2013	s	SeqNo: 24	41910	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	0.35	0.020	0.3300	0	105	52	107			
1-Methylnaphthalene	0.35	0.020	0.3300	0	106	54.7	112			
2-Methylnaphthalene	0.35	0.020	0.3300	0	107	50.2	112			
Acenaphthylene	0.37	0.020	0.3300	0	112	53.3	111			S
Acenaphthene	0.38	0.020	0.3300	0	114	50	120			
Fluorene	0.37	0.020	0.3300	0	112	50.8	115			
Phenanthrene	0.39	0.020	0.3300	0	119	54.1	124			
Anthracene	0.38	0.020	0.3300	0	116	53.9	117			
Fluoranthene	0.40	0.020	0.3300	0	120	54.5	112			S
Pyrene	0.39	0.020	0.3300	0	117	51.2	113			S
Benz(a)anthracene	0.39	0.020	0.3300	0	118	54.9	109			S
Chrysene	0.36	0.020	0.3300	0	110	49	112			
Benzo(b)fluoranthene	0.37	0.020	0.3300	0	113	58.2	118		•	
Benzo(k)fluoranthene	0.37	0.020	0.3300	0	112	53.5	118			
Benzo(a)pyrene	0.36	0.020	0.3300	0	109	50.1	118			

#### Qualifiers:

\* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

Page 6 of 9

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1301920

04-Feb-13

Client:

Animas Environmental Services

Project:

COP Ute #12

Sample ID Ics-5906	Samp1	Гуре: <b>LC</b>	s	Tes	tCode: E	PA Method	8270C: PAH:	5		
Client ID: LCSS	Batc	h ID: 59	06	F	RunNo: 8	390				
Prep Date: 1/30/2013	Analysis [	Date: 1/	31/2013	S	SeqNo: 2	41910	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	0.37	0.020	0.3300	0	113	59.5	113			S
Benzo(g,h,i)perylene	0.39	0.020	0.3300	0	118	56.5	117			S
Indeno(1,2,3-cd)pyrene	0.36	0.020	0.3300	0	110	58.5	114			
Surr: Benzo(e)pyrene	0.54		0.6600		81.7	44.9	129			
Surr: N-hexadecane	2.4		2.920		81.3	45.4	126			

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

Page 7 of 9

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1301920 04-Feb-13

Client:

Animas Environmental Services

Project:

COP Ute #12

Sample ID MB-5905

SampType: MBLK

TestCode: EPA Method 7471: Mercury

Client ID:

PBS

Batch ID: 5905

RunNo: 8362

Prep Date: 1/30/2013

Analysis Date: 1/31/2013

SeqNo: 241248

Units: mg/kg

Analyte

Result

SPK value SPK Ref Val %REC LowLimit

HighLimit

**RPDLimit** 

Qual

Qual

Mercury

PQL ND 0.033

**PQL** 

Sample ID LCS-5905

SampType: LCS

TestCode: EPA Method 7471: Mercury RunNo: 8362

Client ID:

Prep Date: 1/30/2013

LCSS

Batch ID: 5905

SeqNo: 241249

Units: mg/kg

Analyte

Analysis Date: 1/31/2013

SPK value SPK Ref Val

%REC LowLimit

%RPD

%RPD

**RPDLimit** 

Mercury

0.17

0.033 0.1667

99.1

HighLimit 120

Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

P Sample pH greater than 2 В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

Page 8 of 9

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1301920

04-Feb-13

Client:

Animas Environmental Services

Project:

**COP Ute #12** 

Sample ID MB-5899	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	6010B: Soil	Metals		
Client ID: PBS	Batch	1D: <b>58</b>	99	F	RunNo: 8	364				
Prep Date: 1/30/2013	Analysis D	ate: 1/	31/2013	S	SeqNo: 2	41288	Units: mg/F	(g		
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								
Copper	ND	0.30								
Lead	ND	0.25								
Nickel	ND	0.50								
Selenium	ND	2.5								
Silver	ND	0.25					•			
Zinc	ND	2.5								

Sample ID LCS-5899	SampT	ype: LC	S	Test	Code: E	PA Method	6010B: Soil I	Vietals		
Client ID: LCSS	Batch	1D: <b>58</b> 9	99	R	tunNo: 8	364				
Prep Date: 1/30/2013	Analysis D	ate: 1/	31/2013	S	eqNo: 2	41289	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD_	RPDLimit	Qual
Arsenic	26	2.5	25.00	0	104	80	120	<u>.</u>		
Barium	27	0.10	25.00	0	107	. 80	120			
Cadmium	26	0.10	25.00	0	104	80	120			
Chromium	26	0.30	25.00	0	105	80	120			
Copper	27	0.30	25.00	0	110	80	120			
Lead	26	0.25	25.00	0	104	80	120			
Nickel	25	0.50	25.00	0	101	80	120			
Selenium	25	2.5	25.00	0	99.9	80	120			
Silver	5.1	0.25	5.000	0	103	80	120			
Zinc	26	2.5	25.00	0	105	80	120			

#### Qualifiers:

P Sample pH greater than 2

R RPD outside accepted recovery limits

Page 9 of 9

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

I Analyte detected below quantitation limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.con

# Sample Log-In Check List

Clien	t Name:	Animas Env	vironmental			Work Ord	ler Num	nber: 1	301920				
Rece	eived by/date	-MG	- 01/2	9/13									İ
Logg	ed By:	Anne Thorr	ne	1/29/201:	3 10:20:00 A	M		an	. A-				
Com	pleted By:	Anne Thorr	ne .	1/29/2013	3			am	Am				
Revie	ewed By:	TO		01/20	1/201	3							
Chai	in of Cust	<u>ody</u>		ŧ	′								
1.	Were seals in	ntact?				Yes	☐ No		Not Pr	esent 🗹			
2.	ls Chain of C	ustody comp	lete?			Yes	<b>✓</b> No	<b>□</b>	Not Pr	esent 🗌			
3. 1	How was the	sample deliv	rered?		1	Couri	<u>er</u>						
Log	<u>In</u> .												
4.	Coolers are p	oresent? (see	e 19. for cooler	specific infon	mation)	Yes	<b>☑</b> No	<b>□</b>		NA 🗆			
5.	Was an atter	mpt made to	cool the samp	les?		Yes	<b>✓</b> No	<b>.</b> 🗆		NA 🗆			
6. 1	Were all sam	iples receive	d at a tempera	ture of >0° C	to 6.0°C	Yes	<b>✓</b> No	<b>□</b>		NA 🗆			
7.	Sample(s) in	proper conta	niner(s)?			Yes	<b>✓</b> No	, <b></b>					
8.	Sufficient sar	mple volume	for indicated to	est(s)?		Yes	✓ No	· 🗆					
9.	Are samples	(except VOA	and ONG) pr	operly preserv	red?	Yes	✓ No	<b>,</b> $\Box$					
10.	Was preserv	ative added t	o bottles?			Yes	☐ No	✓		NA 🗌			
11. '	VOA vials ha	ve zero head	Ispace?			Yes	□ No	· 🗆	No VOA	Vials 🗹			
12.	Were any sa	mple contain	ers received b	roken?		Yes		· 🔽		-6			$\neg$
	Does paperw (Note discrep		ottle labels? nain of custody	<i>ı</i> )		Yes	<b>☑</b> No	· 🗆	b	of preserved ottles checked or pH:			
14.	Are matrices	correctly ide	ntified on Cha	in of Custody?	,	Yes	✓ No			•	2 or >12 u	unless noted)	
15.	ls it clear wh	at analyses v	vere requested	1?			✓ No			Adjusted?			
			le to be met?			Yes	✓ No	<b>,</b> $\Box$					
			authorization.)	)						Checked by	:		
	<u>cial Handl</u>		<i>IICa<u>DIE)</u></i> Iiscrepancies v	with this and ar	9	Voo	□ No			NA 🗹			
17.			iiscreparicies v	with this order	,								
		Notified:			Date	,				<b>-</b>			
	By Who				Via:	eMai	<u>                                   </u>	Phone	☐ Fax	In Person			
	Regardi Client Ir	ng: nstructions:											
18. 4	Additional re	marks:								<del></del>			
19.	Cooler Infor	mation											
	Cooler No		Condition	Seal Intact	Seal No	Seal Dal	e	Signe	ed By	]			
	1	1.0	Good	Yes		ſ				]			

C	hain-	of-Cu	stody Record	Turn-Around	Time:	mo2	) Kesult Ul113	5		₩ <sup>®</sup> Ç.		AB		E R		T E	<i>e</i> 1	ri R	a e i	NT	AI	
Client:	•		hvironmental	☐ Standard Project Name	Rush	on oil	<del>J</del>	2.			A	NA	<b>AL</b>	YS	IS	L	AB	80			al Ry	7
	Address:	es L 624	E Comanche	COP U	te#12	-			490	)1 Ha					ique				109			
Phone :			JM 87401 p4 2281	Project #:						l. 50					ax 5							
email or	Fax#:			Project Mana	ger:			=	nly)	RO (S)			T		O <sub>4</sub> )	"						
QA/QC F	_		□ Level 4 (Full Validation)		atson			TMB's (8021)	(Gas o	RO/M			SIMS)		S,PO <sub>4,S</sub>	2 PCB's		į	410-1			
Accredi	AP	□ Othe	er	On Ice:		E No.		+	+ TPH	RO/D	118.1)	504.1)	r 8270	s	ON'EO	808 / sa		(A)	Coffe			or N)
□ EDD	(Type)_		Γ -	Sample Tem	oerature 🧓 🦠			置	TBE	9)	po l	poc	100	letal	S	icide	8	)-i-	3			\ <u>\</u>
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL 13019	No. 3.0	BTEX + MTBE	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Colorado			Air Bubbles (Y or N)
1-25-13	1645	Soil	Sc-1_	3-802			-001												N			
						-													\			
													$\downarrow$		_			_				_
		7.44										_	_		_				$\rightarrow$	$\bot$		$\perp$
										_			4	_	_				$\dashv$	$\dashv$	$\bot$	4_
				<u> </u>				_				-	_	_	$\dashv$	_			$\dashv$	$\dashv$	$\dashv$	_
							· · · · · · · · · · · · · · · · · · ·		_			$\perp$	$\dashv$		_			_	$\dashv$	+	$\dashv$	+
		<del></del> -						-	_	+		$\dashv$	4	_					$\dashv$	+	+	+
						<del></del>				$\dashv$			+	+		$\dashv$	_		$\dashv$	+	+	+
											+	$\dashv$	+	十	-	-				+	+	+
											1	_		$\dashv$							+	$\dagger$
Date:	Time: 1456 Time:	Relinquish	ed by: The Watters	Received by:  Received by:  Received by:	Whele	Date 128/13 Date 01/29/1	Time  1656  Time	ivo; Ave Sup	a:1 erus	û/.	Pici	raid	Lo	pez	;	l	18cr rde			Eci rysh Taf	$\sim$ 0	·
, - 1	f necessary,	samples sub	mitted to Hail Environmental may be subc	contracted to other a	ccredited laboratori	es. This serves	as notice of this	possik	oility.	Any sul	b-contr	acted	data w	vill be	clearly	y notat	ted on	the a	nalytica	I report		



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

March 29, 2013

Debbie Watson
Animas Environmental Services
624 East Comanche
Farmington, NM 87401

TEL: (505) 486-4071

FAX

RE: CoP Ute #12 March 2013

OrderNo.: 1303459

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 3/12/2013 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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

Date Reported: 3/29/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

Project: CoP Ute #12 March 2013

**Lab ID:** 1303459-001

Matrix: SOIL

Client Sample ID: SC-1 SC-3 lrc

Collection Date: 3/8/2013 2:25:00 PM Received Date: 3/12/2013 9:53:00 AM

Analyses Result MDL RLOual Units DF **Date Analyzed EPA METHOD 8015B: DIESEL RANGE ORGANICS** Analyst: MMD Diesel Range Organics (DRO) 3/22/2013 11:40:14 PM 53 6.4 10 mg/Kg 1 Motor Oil Range Organics (MRO) ND 52 52 mg/Kg 1 3/22/2013 11:40:14 PM Surr: DNOP 96.6 0 72.4-120 %REC 1 3/22/2013 11:40:14 PM **EPA METHOD 300.0: ANIONS** Analyst: JRR Chloride 2100 7.8 75 mg/Kg 3/15/2013 12:06:57 PM 50 **EPA METHOD 7471: MERCURY** Analyst: TMG Mercury 0.0079 0.0016 0.033 J mg/kg 1 3/18/2013 10:35:17 AM **EPA METHOD 6010B: SOIL METALS** Analyst: ELS Arsenic ND 3/14/2013 10:03:29 AM 3.1 12 mg/Kg 5 Barium 190 0.30 0.50 mg/Kg 5 3/14/2013 10:03:29 AM Cadmium ND 0.14 0.50 mg/Kg 5 3/14/2013 10:03:29 AM Chromium 5 6.4 0.59 1.5 mg/Kg 3/14/2013 10:03:29 AM Copper 5 10 1.2 1.5 mg/Kg 3/14/2013 10:03:29 AM Lead 5 3/14/2013 10:03:29 AM 4.4 1.1 1.2 mg/Kg Nickel 5.0 0.83 2.5 mg/Kg 5 3/14/2013 10:03:29 AM Selenium ND 7.0 12 mg/Kg 5 3/18/2013 11:46:30 AM Silver ND 0.18 1.2 5 mg/Kg 3/14/2013 10:03:29 AM Zinc 5 37 5.0 12 mg/Kg 3/14/2013 10:03:29 AM SAR SOLUBLE CATIONS Analyst: JLF Calcium 330 0.49 1.0 mg/L 1 3/25/2013 9:28:00 AM Magnesium 0.34 1.0 1 50 mg/L 3/25/2013 9:28:00 AM Sodium 6700 0.88 1.0 1 3/25/2013 9:28:00 AM mg/L Sodium Adsorption Ratio 91 n 0 1 3/25/2013 9:28:00 AM **EPA METHOD 8270C: PAHS** Analyst: JDC mg/Kg Naphthalene 0.0047 0.0044 0.020 J 1 3/14/2013 4:32:16 PM Acenaphthene 0.0058 0.020 1 ND mg/Kg 3/14/2013 4:32:16 PM 3/14/2013 4:32:16 PM Fluorene ND 0.0041 0.020 ma/Ka 1 Anthracene ND 0.0032 0.020 mg/Kg 3/14/2013 4:32:16 PM 1 0.0043 Fluoranthene 0.0036 0.020 J mg/Kg 1 3/14/2013 4:32:16 PM Pyrene ND 0.0049 0.020 mg/Kg 1 3/14/2013 4:32:16 PM Benz(a)anthracene ND 0.0057 0.020 mg/Kg 1 3/14/2013 4:32:16 PM Chrysene ND 0.0038 0.020 mg/Kg 1 3/14/2013 4:32:16 PM Benzo(b)fluoranthene ND 0.0048 0.020 mg/Kg 1 3/14/2013 4:32:16 PM Benzo(k)fluoranthene ND 0.0058 0.020 mg/Kg 1 3/14/2013 4:32:16 PM Benzo(a)pyrene ND 0.0039 0.020 mg/Kg 3/14/2013 4:32:16 PM 1 ND 0.0039 0.020 3/14/2013 4:32:16 PM Dibenz(a,h)anthracene mg/Kg 1 0.0079 Indeno(1,2,3-cd)pyrene ND 0.020 mg/Kg 1 3/14/2013 4:32:16 PM Surr: Benzo(e)pyrene 106 0 44.9-129 %REC 1 3/14/2013 4:32:16 PM Surr: N-hexadecane 204 0 45.4-126 S %REC 1 3/14/2013 4:32:16 PM

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits 1 of 17

## Analytical Report

#### Lab Order 1303459

Date Reported: 3/29/2013

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

Project: CoP Ute #12 March 2013

Lab ID: 1303459-001

Matrix: SOIL

**Collection Date:** 3/8/2013 2:25:00 PM **Received Date:** 3/12/2013 9:53:00 AM

Client Sample ID: SC-1 SC-3 lrc

Analyses	Result	MDL	RL	Qual Units		DF Date Analyzed
EPA METHOD 8260B: VOLATILES S	HORT LIST					Analyst: <b>RAA</b>
Benzene	ND	0.0019	0.047	mg/Kg	1	3/15/2013 2:33:16 PM
Toluene	ND	0.0023	0.047	mg/Kg	1	3/15/2013 2:33:16 PM
Ethylbenzene	ND	0.0019	0.047	mg/Kg	1	3/15/2013 2:33:16 PM
Xylenes, Total	ND	0.024	0.093	mg/Kg	1	3/15/2013 2:33:16 PM
Surr: 1,2-Dichloroethane-d4	85.7	0	70-130	%REC	1	3/15/2013 2:33:16 PM
Surr: 4-Bromofluorobenzene	83.6	0	70-130	%REC	1	3/15/2013 2:33:16 PM
Surr: Dibromofluoromethane	91.2	0	70-130	%REC	1	3/15/2013 2:33:16 PM
Surr: Toluene-d8	104	0	70-130	%REC	1	3/15/2013 2:33:16 PM
EPA METHOD 8015B MOD: GASOLI	NE RANGE					Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	0.82	4.7	mg/Kg	1	3/15/2013 2:33:16 PM
Surr: BFB	83.6	0	70-130	%REC	1	3/15/2013 2:33:16 PM
CONDUCTANCE						Analyst: <b>TAF</b>
Specific Conductance	5000	0	1.0	μmhos/c	1	3/15/2013 7:16:00 PM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits 2 of 17

Lab Order 1303459 Date Reported: 3/29/2013

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

CoP Ute #12 March 2013 Project:

Lab ID: 1303459-002 Matrix: SOIL

Client Sample ID: SC-2 SC-4 Irc

Collection Date: 3/8/2013 2:29:00 PM Received Date: 3/12/2013 9:53:00 AM

Analyses	Result	MDL	RL	Qual	Units		DF Date Analyzed	
EPA METHOD 8015B: DIESEL RANGE	ORGANICS						Analyst: <b>MMD</b>	110 00 00 00 00 00 00
Diesel Range Organics (DRO)	ND	6.3	10		mg/Kg	1	3/23/2013 1:02:07 AM	
Motor Oil Range Organics (MRO)	ND	51	51		mg/Kg	1	3/23/2013 1:02:07 AM	
Surr: DNOP	99.7	0	72.4-120		%REC	1	3/23/2013 1:02:07 AM	
EPA METHOD 300.0: ANIONS							Analyst: JRR	
Chloride	130	3.1	30		mg/Kg	20	3/14/2013 12:35:18 PM	
EPA METHOD 7471: MERCURY							Analyst: <b>TMG</b>	
Mercury	0.043	0.0016	0.033		mg/kg	1	3/18/2013 10:37:08 AM	
EPA METHOD 6010B: SOIL METALS							Analyst: <b>JLF</b>	
Arsenic	ND	3.1	12		mg/Kg	5	3/18/2013 11:48:51 AM	
Barium	130	0.30	0.50		mg/Kg	5	3/14/2013 10:20:11 AM	
Cadmium	ND	0.14	0.50		mg/Kg	5	3/14/2013 10:20:11 AM	
Chromium	7.7	0.59	1.5		mg/Kg	5	3/14/2013 10:20:11 AM	
Copper	9.5	1.2	1.5		mg/Kg	5	3/14/2013 10:20:11 AM	
Lead	9.1	1.1	1.2		mg/Kg	5	3/18/2013 11:48:51 AM	
Nickel	7.6	0.83	2.5		mg/Kg	5	3/14/2013 10:20:11 AM	
Selenium	ND	7.0	12		mg/Kg	5	3/18/2013 11:48:51 AM	
Silver	ND	0.18	1.2		mg/Kg	5	3/14/2013 10:20:11 AM	
Zinc	44	5.0	12		mg/Kg	5	3/18/2013 11:48:51 AM	
SAR SOLUBLE CATIONS							Analyst: JLF	
Calcium	540	0.49	1.0		mg/L	1	3/25/2013 9:28:00 AM	
Magnesium	330	0.34	1.0		mg/L	1	3/25/2013 9:28:00 AM	
Sodium	370	0.88	1.0		mg/L	1	3/25/2013 9:28:00 AM	
Sodium Adsorption Ratio	3.0	. 0	0			1	3/25/2013 9:28:00 AM	
EPA METHOD 8270C: PAHS							Analyst: JDC	
Naphthalene	0.0047	0.0044	0.020	J	mg/Kg	1	3/14/2013 5:42:06 PM	
Acenaphthene	ND	0.0058	0.020		mg/Kg	1	3/14/2013 5:42:06 PM	
Fluorene	ND	0.0041	0.020		mg/Kg	1	3/14/2013 5:42:06 PM	
Anthracene	ND	0.0032	0.020		mg/Kg	1	3/14/2013 5:42:06 PM	
Fluoranthene	0.0037	0.0036	0.020	J	mg/Kg	1	3/14/2013 5:42:06 PM	
Pyrene	ND	0.0049	0.020		mg/Kg	1	3/14/2013 5:42:06 PM	
Benz(a)anthracene	ND	0.0057	0.020		mg/Kg	1	3/14/2013 5:42:06 PM	
Chrysene	ND	0.0038	0.020		mg/Kg	1	3/14/2013 5:42:06 PM	
Benzo(b)fluoranthene	0.0084	0.0048	0.020	J	mg/Kg	1	3/14/2013 5:42:06 PM	
Benzo(k)fluoranthene	ND	0.0058	0.020		mg/Kg	1	3/14/2013 5:42:06 PM	
Benzo(a)pyrene	' ND	0.0039	0.020		mg/Kg	1	3/14/2013 5:42:06 PM	
Dibenz(a,h)anthracene	ND	0.0039	0.020		mg/Kg	1	3/14/2013 5:42:06 PM	
Indeno(1,2,3-cd)pyrene	ND	0.0079	0.020		mg/Kg	1	3/14/2013 5:42:06 PM	
Surr: Benzo(e)pyrene	123	0	44.9-129		%REC	1	3/14/2013 5:42:06 PM	
Surr: N-hexadecane	124	0	45.4-126		%REC	1 .	3/14/2013 5:42:06 PM	,

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits Page 3 of 17

#### Analytical Report Lab Order 1303459

Date Reported: 3/29/2013

## Hall Environmental Analysis Laboratory, Inc.

Matrix: SOIL

**CLIENT:** Animas Environmental Services

**Project:** CoP Ute #12 March 2013

**Lab ID:** 1303459-002

Client Sample ID: SC-2 SC-4 Irc

Collection Date: 3/8/2013 2:29:00 PM

Received Date: 3/12/2013 9:53:00 AM

Analyses	Result	MDL	RL	Qual Units		DF	Date Analyzed	
EPA METHOD 8260B: VOLATILES S	HORT LIST						Analyst: RAA	
Benzene	ND	0.0019	0.047	mg/Kg	1	3/1	5/2013 5:40:09 AM	
Toluene	ND	0.0023	0.047	mg/Kg	1	3/1	5/2013 5:40:09 AM	
Ethylbenzene	ND	0.0020	0.047	mg/Kg	1	3/1	5/2013 5:40:09 AM	
Xylenes, Total	ND	0.024	0.093	mg/Kg	1	3/1	5/2013 5:40:09 AM	
Surr: 1,2-Dichloroethane-d4	85.2	0	70-130	%REC	1	3/1	5/2013 5:40:09 AM	
Surr: 4-Bromofluorobenzene	91.9	0	70-130	%REC	1	3/1	5/2013 5:40:09 AM	
Surr: Dibromofluoromethane	93.7	0	70-130	%REC	1	3/1	5/2013 5:40:09 AM	
Surr: Toluene-d8	99.6	0	70-130	%REC	1	3/1	5/2013 5:40:09 AM	
EPA METHOD 8015B MOD: GAŠOLII	NE RANGE						Analyst: RAA	
Gasoline Range Organics (GRO)	ND	0.82	4.7	mg/Kg	1	3/1	5/2013 5:40:09 AM	
Surr: BFB	91.9	0	70-130	%REC	1	3/1	5/2013 5:40:09 AM	
CONDUCTANCE							Analyst: TAF	
Specific Conductance	1900	0	1.0	μmhos/c	1	3/1	5/2013 7:16:00 PM	

#### Qualifiers:

RL Reporting Detection Limit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits 4 of 17

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 3/29/2013

**CLIENT:** Animas Environmental Services

**Project:** CoP Ute #12 March 2013

**Lab ID:** 1303459-003

Matrix: SOIL

Collection Date: 3/8/2013 2:35:00 PM Received Date: 3/12/2013 9:53:00 AM

Client Sample ID: SC-3 SC-5 Irc

Analyses	Result	MDL	RL	Qual	Units	]	DF Date Analyze
EPA METHOD 8015B: DIESEL RANGE	ORGANICS						Analyst: <b>MMD</b>
Diesel Range Organics (DRO)	850	6.3	10		mg/Kg	1	3/23/2013 1:29:21 AM
Motor Oil Range Organics (MRO)	ND	51	51		mg/Kg	1	3/23/2013 1:29:21 AM
Surr: DNOP	113	0	72.4-120		%REC	1	3/23/2013 1:29:21 AM
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	1900	7.8	75		mg/Kg	50	3/15/2013 12:19:21 PM
EPA METHOD 7471: MERCURY							Analyst: <b>TMG</b>
Mercury	0.0063	0.0016	0.033	J	mg/kg	1	3/18/2013 10:38:51 AM
EPA METHOD 6010B: SOIL METALS							Analyst: <b>JLF</b>
Arsenic	ND	3.1	12		mg/Kg	5	3/18/2013 11:58:13 AM
Barium	130	0.30	0.50		mg/Kg	5	3/14/2013 10:32:11 AM
Cadmium	ND	0.14	0.50		mg/Kg	5	3/14/2013 10:32:11 AM
Chromium	5.2	0.59	1.5		mg/Kg	5	3/14/2013 10:32:11 AM
Copper	9.7	1.2	1.5		mg/Kg	5	3/14/2013 10:32:11 AM
Lead	5.4	1.1	1.2		mg/Kg	5	3/18/2013 11:58:13 AM
Nickel	4.4	0.83	2.5		mg/Kg	5	3/14/2013 10:32:11 AM
Selenium	ND	7.0	12		mg/Kg	5	3/18/2013 11:58:13 AM
Silver	ND	0.18	1.3		mg/Kg	5	3/14/2013 10:32:11 AM
Zinc	28	5.0	12		mg/Kg	5	3/18/2013 11:58:13 AM
AR SOLUBLE CATIONS							Analyst: JLF
Calcium	580	0.49	1.0		mg/L	1	3/25/2013 9:28:00 AM
Magnesium	67	0.34	1.0		mg/L	1	3/25/2013 9:28:00 AM
Sodium	5700	0.88	1.0		mg/L	1	3/25/2013 9:28:00 AM
Sodium Adsorption Ratio	60	0	0			1	3/25/2013 9:28:00 AM
PA METHOD 8270C: PAHS			•				Analyst: JDC
Naphthalene	0.56	0.043	0.20		mg/Kg	10	3/15/2013 11:33:06 PM
Acenaphthene	0.31	0.058	0.20		mg/Kg	10	3/15/2013 11:33:06 PM
Fluorene	0.65	0.041	0.20		mg/Kg	10	3/15/2013 11:33:06 PM
Anthracene	ND	0.0032	0.020		mg/Kg	1	3/14/2013 6:05:21 PM
Fluoranthene	0.051	0.0036	0.020		mg/Kg	1	3/14/2013 6:05:21 PM
Pyrene	0.054	0.0049	0.020		mg/Kg	1	3/14/2013 6:05:21 PM
Benz(a)anthracene	0.023	0.0057	0.020		mg/Kg	1	3/14/2013 6:05:21 PM
Chrysene	0.023	0.0038	0.020		mg/Kg	1	3/14/2013 6:05:21 PM
Benzo(b)fluoranthene	0.037	0.0047	0.020		mg/Kg	1	3/14/2013 6:05:21 PM
Benzo(k)fluoranthene	0.010	0.0058	0.020	J	mg/Kg	1	3/14/2013 6:05:21 PM
Benzo(a)pyrene	0.021	0.0039	0.020		mg/Kg	1	3/14/2013 6:05:21 PM
Dibenz(a,h)anthracene	ND	0.0039	0.020		mg/Kg	1	3/14/2013 6:05:21 PM
Indeno(1,2,3-cd)pyrene	ND	0.0078	0.020		mg/Kg	1	3/14/2013 6:05:21 PM
Surr: Benzo(e)pyrene	102	0	44.9-129		%REC	1	3/14/2013 6:05:21 PM
Surr: N-hexadecane	0	0	45.4-126	S	%REC	10	3/15/2013 11:33:06 PM

- \* Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits Page 5 of 17

#### **Analytical Report**

#### Lab Order 1303459

Date Reported: 3/29/2013

## Hall Environmental Analysis Laboratory, Inc.

Matrix: SOIL

**CLIENT:** Animas Environmental Services

Project: CoP Ute #12 March 2013

Lab ID: 1303459-003 Client Sample ID: SC-3 SC-5 lrc

Collection Date: 3/8/2013 2:35:00 PM

Received Date: 3/12/2013 9:53:00 AM

Analyses	Result	MDL	RL	Qual	Units		DF Date Analyzed
EPA METHOD 8260B: VOLATILES S	HORT LIST				· · · · · · · · · · · · · · · · · · ·		Analyst: <b>RAA</b>
Benzene	ND	0.019	0.47		mg/Kg	10	3/15/2013 6:08:02 AM
Toluene	ND	0.023	0.47		mg/Kg	10	3/15/2013 6:08:02 AM
Ethylbenzene	0.14	0.020	0.47	J	mg/Kg	10	3/15/2013 6:08:02 AM
Xylenes, Total	5.7	0.24	0.94		mg/Kg	10	3/15/2013 6:08:02 AM
Surr: 1,2-Dichloroethane-d4	90.7	0	70-130		%REC	10	3/15/2013 6:08:02 AM
Surr: 4-Bromofluorobenzene	119	0	70-130		%REC	10	3/15/2013 6:08:02 AM
Surr: Dibromofluoromethane	93.9	0	70-130		%REC	10	3/15/2013 6:08:02 AM
Surr: Toluene-d8	91.8	0	70-130		%REC	10	3/15/2013 6:08:02 AM
EPA METHOD 8015B MOD: GASOLII	NE RANGE						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	580	8.2	47		mg/Kg	10	3/15/2013 6:08:02 AM
Surr: BFB	119	0	70-130		%REC	10	3/15/2013 6:08:02 AM
CONDUCTANCE							Analyst: <b>TAF</b>
Specific Conductance	4200	0	1.0		µmhos/c	1	3/15/2013 7:16:00 PM

^	•••	ı:	c	_	 ٠.

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits 6 of 17



#### YOUR LABOF CHOICE

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne Hall Environmental Analysis Laborat

4901 Hawkins NE

Albuquerque, NM 87109

March 20, 2013

ESC Sample # :

L624607-01

Date Received

March

Description

13, 2013

Site ID :

Sample ID

1303459-001B SC-1 SC-3 Irc

Project # :

Collected By : Collection Date :

03/08/13 14:25

Parameter	Result	Det. Lim <u>it</u>	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	03/15/13	1
ORP	140		mV	2580 B-2011	03/15/13	1
ρH	8.7		su	9045D	03/20/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/20/13 16:36 Printed: 03/20/13 16:37 L624607-01 (PH) - 8.7023.9c



#### YOUR LABOR CHOICE

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne

Hall Environmental Analysis Laborat

4901 Hawkins NE

Albuquerque, NM 87109

March 20, 2013

ESC Sample # : L624607-02

Date Received

13, 2013

Description

1303459-002B SC-2 SC-4 Irc

Site ID : Project # :

Sample ID

Collected By :
Collection Date :

03/08/13 14:29

March

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	50.	mg/kg	3060A/7196A	03/15/13	25
ORP	140		mV	2580 B-2011	03/15/13	1.
рн	7.9		su	9045D	03/20/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/20/13 16:36 Printed: 03/20/13 16:37 L624607-02 (PH) - 7.9022.6c L624607-02 (CR6) - diluted due to sample color



#### YOUR LABOF CHOICE

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne Hall Environmental Analysis Laborat

4901 Hawkins NE Albuquerque, NM 87109

March 20, 2013

ESC Sample # :

March

13, 2013

Date Received Description

Site ID :

L624607-03

Sample ID

1303459-003B sc-3 SC-5 lrc

Project # :

Collected By : Collection Date :

03/08/13 14:35

Parameter		Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	•	BDL	2.0	mg/kg	3060A/7196A	03/15/13	1
ORP		140		mV	2580 B-2011	03/15/13	1
рн		8.4		su	9045D	03/20/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/20/13 16:36 Printed: 03/20/13 16:37 L624607-03 (PH) - 8.4022.1c



YOUR LAB OF CHOICE

Hall Environmental Analysis Laboratory

Anne Thorne 4901 Hawkins NE

Albuquerque, NM 87109

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L624607

March 20, 2013

Analyte	Result	Ļabora Units	tory Blank	Rec	Limit	Batch Date	Analyzed
Chromium, Hexavalent	< 2	mg/kg		7 J. 194		WG650764 03/15	<del></del>
- Liver Control of the Control of th				·			<u></u>
Analyte	Units	Du <sub>l</sub> Result	plicate Duplicate	RPD	Limit	Ref Samp	Batch
Chromium, Hexavalent Chromium, Hexavalent	mg/kg mg/kg	0 ·	0	0.01.	20	L624154-06 L624323-06	WG650764 WG650764
ORP	mV mV	0.	0 110.	0 0.913	20 20	L624261-01 L624670-01	WG650793 WG650793
рн	su su	5.30 8.70	7.70 8.70	36.4* 0.115	$\frac{1}{1}$	L624682-01 L625356-02	WG651729 WG651729
	<del></del>	Laboratory	Control Sa	unple			
Analyte	Units	Known Val		Result	% Rec	Limit	Batch
Chromium, Hexavalent	mg/kg	218	225	Santa est	103.	80-120	WG650764
ORP	mV	228	225	·	98.7	95.6-104.	WG650793
pH	_su	5.7	5.	70	100.	98.25-101.75	WG651729
		aboratory Cont	col Sample	Duplicate			
Analyte	Units	Result Ref	%Re	ec	Limit	RPD Limit	Batch
Chromium, Hexavalent	mg/kg	220. 225	. 10		80-120	2.25 20	WG650764
ORP	mV	226. 225	. 99	.0	95.6-104.	0.443 20	WG650793
PH	_su	5.69 5.7	100	).	98.25-101.75	0.176 20	WG651729
		Matr	ix Spike				
Analyte	Units		f Res T	7 % Rec	Limit	Ref Samp	Batch
Chromium, Hexavalent	mg/kg	17.8		89.0	75-125	L624320-06	₩G650764
Analyte	Units	Matrix Sp MSD Ref	ike Duplica %Rec	ite Limit	RPD	Limit Ref Samp	Batch
Chromium, Hexavalent	mg/kg	17.1 17.8	85.5	75-12	5 4.01	20 L624320-06	WG650764

Batch number /Run number / Sample number cross reference

WG650764: R2582297: L624607-01 02 03 WG650793: R2582518: L624607-01 02 03 WG651729: R2589617: L624607-01 02 03

<sup>\* \*</sup> Calculations are performed prior to rounding of reported values.

<sup>\*</sup> Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1303459

29-Mar-13

Client:

Animas Environmental Services

Project:

CoP Ute #12 March 2013

Sample ID MB-6485

Sample ID LCS-6485

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 6485

RunNo: 9186

Prep Date: 3/14/2013 Analyte

Analysis Date: 3/14/2013

SeqNo: 261163

Units: mg/Kg

HighLimit

**RPDLimit** 

Qual

Chloride

SPK value SPK Ref Val %REC LowLimit Result PQL ND

1.5

TestCode: EPA Method 300.0: Anions

%RPD

SampType: LCS

PQL

RunNo: 9186

Client ID: Prep Date: 3/14/2013

LCSS

Batch ID: 6485

SeqNo: 261164

Units: mg/Kg

%RPD

Analyte

Analysis Date: 3/14/2013

SPK value SPK Ref Val %REC LowLimit

HighLimit

**RPDLimit** Qual

110

Chloride

0 92.1 14 1.5 15.00

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit RL

- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit

R

Spike Recovery outside accepted recovery limits

Page 7 of 17

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1303459

29-Mar-13

Client:

Animas Environmental Services

Project:

CoP Ute #12 March 2013

Project: CoP Ute	#12 March 2013		
Sample ID MB-6604	SampType: MBLK	TestCode: EPA Method	8015B: Diesel Range Organics
Client ID: PBS	Batch ID: 6604	RunNo: 9311	
Prep Date: 3/21/2013	Analysis Date: 3/21/2013	SeqNo: 265889	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10		
Motor Oil Range Organics (MRO)	ND 50	400 704	400
Surr: DNOP	12 10.00	122 72.4	120 S
Sample ID LCS-6604	SampType: <b>LCS</b>	TestCode: EPA Method	8015B: Diesel Range Organics
Client ID: LCSS	Batch ID: 6604	RunNo: 9311	
Prep Date: 3/21/2013	Analysis Date: 3/21/2013	SeqNo: <b>265890</b>	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	49 10 50.00	0 97.2 47.4	122
Surr: DNOP	5.0 5.000	101 72.4	120
Sample ID MB-6604	SampType: MBLK	TestCode: EPA Method	8015B: Diesel Range Organics
Client ID: PBS	Batch ID: 6604	RunNo: 9345	
Prep Date: 3/21/2013	Analysis Date: 3/22/2013	SeqNo: 267512	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10		, <u> </u>
Motor Oil Range Organics (MRO)	ND 50		
Surr: DNOP	9.7 10.00	96.8 72.4	120
Sample ID LCS-6604	SampType: LCS	TestCode: EPA Method	8015B: Diesel Range Organics
Client ID: LCSS	Batch ID: 6604	RunNo: <b>9345</b>	
Prep Date: 3/21/2013	Analysis Date: 3/22/2013	SeqNo: 267513	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	54 10 50.00	0 107 47.4	122
Surr: DNOP	5.2 5.000	104 72.4	120
Sample ID 1303459-001AMS	SampType: MS	TestCode: EPA Method	8015B: Diesel Range Organics
Client ID: SC-1	Batch ID: 6604	RunNo: 9345	
Prep Date: 3/21/2013	Analysis Date: 3/23/2013	SeqNo: 267554	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	100 10 51.98	53.38 90.1 12.6	148
Surr: DNOP	5.2 5.198	99.8 72.4	120

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 8 of 17

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1303459

29-Mar-13

Client:

Animas Environmental Services

Project:

CoP Ute #12 March 2013

Sample ID 1303459-001AMSD

SampType: MSD

TestCode: EPA Method 8015B: Diesel Range Organics

Client ID: SC-1

Batch ID: 6604

RunNo: 9345

Prep Date: 3/21/2013	Analysis D	ate: 3/	23/2013	S	eqNo: 26	67557	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	120	10	50.10	53.38	134	12.6	148	18.4	22.5	
Surr; DNOP	5.6		5.010		112	72.4	120	0	0	

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- RPD outside accepted recovery limits R Spike Recovery outside accepted recovery limits

Page 9 of 17

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1303459

29-Mar-13

Client:

Animas Environmental Services

0.45

0.45

0.46

0.51

0.5000

0.5000

0.5000

0.5000

Project:

CoP Ute #12 March 2013

Sample ID mb-6438	Samp1	Гуре: МЕ	BLK	Tes	TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: PBS	Batcl	h ID: <b>64</b> :	38	F	RunNo: 9						
Prep Date: 3/12/2013	Analysis E	Date: <b>3/</b>	14/2013	\$	SegNo: 2	61864	Units: mg/K	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.0046	0.050								J	
Toluene ·	0.0051	0.050								J	
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		86.3	70	130		•		
Surr: 4-Bromofluorobenzene	0.45		0.5000		90.3	70	130				
Surr: Dibromofluoromethane	0.47		0.5000		93.1	70	130				
Surr: Toluene-d8	0.51		0.5000		101	70	130				
Sample ID Ics-6438	Samp1	Гуре: LC	s	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List		
Client ID: LCSS	Batcl	h ID: <b>64</b> :	38	F	RunNo: 9	181					
Prep Date: 3/12/2013	Analysis E	Date: 3/	14/2013	5	SeqNo: 20	61865	Units: mg/K	ζg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.96	0.050	1.000	0	96.3	70	130		·		
Toluene	1.0	0.050	1.000	0	101	80	120				

89.7

89.4

92.2

101

70

70

70

70

130

130

130

130

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Surr: Toluene-d8

RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 10 of 17

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1303459

29-Mar-13

Client:

Animas Environmental Services

Project:

CoP Ute #12 March 2013

Sample ID mb-6463	Samp	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	8270C: PAH:	5		
Client ID: PBS	Batc	h ID: <b>64</b>	63	F	RunNo: 9	179				
Prep Date: 3/13/2013	Analysis [	Date: 3/	14/2013	S	SeqNo: 2	61627	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.020								
1-Methylnaphthalene	ND	0.020								
2-Methylnaphthalene	ND	0.020								
Acenaphthylene	ND	0.020								
Acenaphthene	ND	0.020								
Fluorene	ND	0.020								
Phenanthrene	0.0037	0.020								J
Anthracene	ND	0.020								
Fluoranthene	ND	0.020								
Pyrene	ND	0.020								
Benz(a)anthracene	ND	0.020								
Chrysene	ND	0.020								
Benzo(b)fluoranthene	ND	0.020								
Benzo(k)fluoranthene	ND	0.020								
Benzo(a)pyrene	ND	0.020								
Dibenz(a,h)anthracene	ND	0.020								
Benzo(g,h,i)perylene	ND	0.020					•			
Indeno(1,2,3-cd)pyrene	ND	0.020								
Surr: Benzo(e)pyrene	0.36		0.3300		110	44.9	129			
Surr: N-hexadecane	1.5		1.460		100	45.4	126			

Sample ID Ics-6463	SampType: LCS TestCode: EPA Meth						8270C: PAH:	·		
Client ID: LCSS	Batcl	n ID: 64	63	· F	RunNo: 9	179				
Prep Date: 3/13/2013	Analysis [	Date: 3/	14/2013	S	SeqNo: 2	61628	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	0.29	0.020	0.3300	0	87.0	52	107	-		
1-Methylnaphthalene	0.31	0.020	0.3300	. 0	93.8	54.7	112			
2-Methylnaphthalene	0.32	0.020	0.3300	0	97.5	50.2	112			
Acenaphthylene	0.30	0.020	0.3300	0	91.9	53.3	111			
Acenaphthene	0.28	0.020	0.3300	0	83.8	50	120			
Fluorene	0.29.	0.020	0.3300	0	89.2	50.8	115			
Phenanthrene	0.29	0.020	0.3300	0	86.7	54.1	124			
Anthracene	0.31	0.020	0.3300	0	93.6	53.9	117			
Fluoranthene	0.27	0.020	0.3300	0	81.9	54.5	112			
Pyrene	0.29	0.020	0.3300	0	88.8	51.2	113			
Benz(a)anthracene	0.31	0.020	0.3300	0	92.5	54.9	109			
Chrysene	0.28	0.020	0.3300	0	83.8	49	112			
Benzo(b)fluoranthene	0.32	0.020	0.3300	0	98.0	58.2	118			
Benzo(k)fluoranthene	0.29	0.020	0.3300	0	87.2	53.5	118			

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 11 of 17

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1303459

29-Mar-13

Client:

Animas Environmental Services

**Project:** 

CoP Ute #12 March 2013

Sample ID Ics-6463	SampType: LCS			Tes						
Client ID: LCSS	Batcl	Batch ID: 6463			RunNo: 9	179				
Prep Date: 3/13/2013	Analysis D	Date: 3/	14/2013	S	SeqNo: 2	61628	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(a)pyrene	0.29	0.020	0.3300	0	89.1	50.1	118			
Dibenz(a,h)anthracene	0.33	0.020	0.3300	0	101	59.5	113			
Benzo(g,h,i)perylene	0.32	0.020	0.3300	0	95.8	56.5	117			
Indeno(1,2,3-cd)pyrene	0.32	0.020	0.3300	0	97.8	58.5	114			
Surr: Benzo(e)pyrene	0.33		0.3300		98.7	44.9	129			
Surr: N-hexadecane	1.5		1.460		102	45.4	126			

Sample ID 1303459-001Ams	SampT	ype: <b>MS</b>	3	Tes	tCode: El	PA Method	8270C: PAH:	3		
Client ID: SC-1	Batch	n ID: <b>64</b> 6	63	F	RunNo: 9	179				
Prep Date: 3/13/2013	Analysis E	)ate: 3/	14/2013	S	SeqNo: 2	61633	Units: mg/F	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	0.31	0.020	0.3290	0.004664	91.6	55.7	95.1			- <b>-</b> -
1-Methylnaphthalene	0.34	0.020	0.3290	0	104	60.8	100			S
2-Methylnaphthalene	0.35	0.020	0.3290	0.006662	105	58.1	98.5			S
Acenaphthylene	0.30	0.020	0.3290	0	92.4	56.5	101			
Acenaphthene	0.31	0.020	0.3290	0	93.4	57	107			
Fluorene	0.30	0.020	0.3290	0	91.3	61.6	100		-	
Phenanthrene	0.33	0.020	0.3290	0	102	68.5	115			
Anthracene	0.33	0.020	0.3290	0	100	62.5	117			
Fluoranthene	0.33	0.020	0.3290	0.004330	99.9	59.5	112			
Pyrene	0.33	0.020	0.3290	0	101	55.3	109			
Benz(a)anthracene	0.34	0.020	0.3290	0	103	52.3	115			
Chrysene	0.30	0.020	0.3290	0	91.5	52.3	113			
Benzo(b)fluoranthene	0.36	0.020	0.3290	0	109	47.1	125			
Benzo(k)fluoranthene	0.29	0.020	0.3290	0	89.6	46.9	125			
Benzo(a)pyrene	0.31	0.020	0.3290	0	93.9	55.9	115			
Dibenz(a,h)anthracene	0.37	0.020	0.3290	0	112	59.4	112			
Benzo(g,h,i)perylene	0.34	0.020	0.3290	0	103	50.2	120			•
Indeno(1,2,3-cd)pyrene	0.35	0.020	0.3290	0	106	54.2	118			
Surr: Benzo(e)pyrene	0.37		0.3290		112	44.9	129			
Surr: N-hexadecane	3.7		1.456		256	45.4	126			S

Sample ID 1303459-001Amsd	SampT	ype: <b>MS</b>	SD	Test	tCode: El	PA Method	8270C: PAH:	5		
Client ID: SC-1	Batch	ID: <b>64</b> 6	63	R	RunNo: 9	179				
Prep Date: 3/13/2013	Analysis D	ate: 3/	14/2013	S	SeqNo: 2	61634	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	0.30	0.020	0.3306	0.004664	88.6	55.7	95.1	2.85	20	
1-Methylnaphthalene	0.33	0.020	0.3306	0	101	60.8	100	3.18	20.	S

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 12 of 17

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1303459

29-Mar-13

Client:

Animas Environmental Services

Project:

CoP Ute #12 March 2013

Sample ID 1303459-001Amsd	TestCode: EPA Method 8270C: PAHs									
Client ID: SC-1	Batch	n ID: <b>64</b> 0	63	F	RunNo: 9	179				
Prep Date: 3/13/2013	Analysis D	ate: 3/	14/2013	8	SeqNo: 20	61634	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylnaphthalene	0.35	0.020	0.3306	0.006662	105	58.1	98.5	0.655	20	S
Acenaphthylene	0.33	0.020	0.3306	0	99.3	56.5	101	7.63	20	
Acenaphthene	0.32	0.020	0.3306	0	96.6	57	107	3.76	20	
Fluorene	0.33	0.020	0.3306	0	99.5	61.6	100	9.04	20	
Phenanthrene	0.33	0.020	0.3306	0	98.8	68.5	115	2.55	20	
Anthracene	0.33	0.020	0.3306	0	98.7	62.5	117	1.26	20	
Fluoranthene	0.33	0.020	0.3306	0.004330	98.7	59.5	112	0.738	20	
Pyrene	0.33	0.020	0.3306	0	98.5	55.3	109	2.36	20	
Benz(a)anthracene	0.34	0.020	0.3306	0	102	52.3	115	0.619	20	
Chrysene	0.30	0.020	0.3306	0	89.6	52.3	113	1.65	20	
Benzo(b)fluoranthene	0.34	0.020	0.3306	0	104	47.1	125	3.99	20	
Benzo(k)fluoranthene	0.29	0.020	0.3306	0	88.6	46.9	125	0.667	20	
Benzo(a)pyrene	0.32	0.020	0.3306	0	95.7	55.9	115	2.28	20	
Dibenz(a,h)anthracene	0.36	0.020	0.3306	0	108	59.4	112	3.40	20	
Benzo(g,h,i)perylene	0.33	0.020	0.3306	0	99.8	50.2	120	2.33	20	
Indeno(1,2,3-cd)pyrene	0.34	0.020	0.3306	0	104	54.2	118	1.45	20	
Surr: Benzo(e)pyrene	0.37		0.3306		112	44.9	129	0	0	
Surr: N-hexadecane	4.2		1.462		287	45.4	126	0	0	S

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 13 of 17

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1303459

29-Mar-13

Client:

Animas Environmental Services

Project:

CoP Ute #12 March 2013

Sample ID 1303551-001ADUP

SampType: DUP

TestCode: CONDUCTANCE

Client ID:

**BatchQC** 

Batch ID: R9219

RunNo: 9219

Prep Date:

Analysis Date: 3/15/2013

SeqNo: 262182

Units: µmhos/cm

Analyte

Result

Qual

Specific Conductance

**PQL** 

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD **RPDLimit** 11.1 20

1300

TestCode: CONDUCTANCE

Client ID:

Sample ID 1303459-001ADUP SC-1

Batch ID: R9219

1.0

RunNo: 9219

Units: µmhos/cm

Prep Date: Analyte

Analysis Date: 3/15/2013

SampType: DUP

SeqNo: 262208

Qual

SPK value SPK Ref Val %REC LowLimit

%RPD

**RPDLimit** 

**PQL** 

HighLimit

Specific Conductance

5000

1.0

0

Qualifiers:

Value exceeds Maximum Contaminant Level.

Value above quantitation range Е

Analyte detected below quantitation limits

P Sample pH greater than 2

Reporting Detection Limit

В Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

Spike Recovery outside accepted recovery limits

Page 14 of 17

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1303459

29-Mar-13

Client:

Animas Environmental Services

Project:

CoP Ute #12 March 2013

Sample ID MB-6458 Client ID: PBS Prep Date: 3/13/2013	SampType: MBLK  Batch ID: 6458  Analysis Date: 3/14/2013			F	tCode: El RunNo: 9	189	6010B: Soil I			
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5	SFK Value	SFR Rei Vai	/// // // // // // // // // // // // //	LUVVLIIIII	TuguLinin	70KFD	REDLIMIL	Quai
Barium	ND	0.10								
Cadmium	ND	0.10								•
Chromium	ND	0.10								
	ND	0.30								
Copper										
Lead	ND	0.25								
Nickel	ND	0.50								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID LCS-6458	SampT	ype: LC	:S	Tes	tCode: E	PA Method	6010B: Soil	Metals		
Client ID: LCSS	Batcl	n ID: <b>64</b>	58	F	RunNo: 9	189	•			
Prep Date: 3/13/2013	Analysis D	ate: 3/	14/2013	S	SeqNo: 2	61279	Units: mg/k	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	26	2.5	25.00	0	105	80	120			
Barium	25	0.10	25.00	0	101	80	120			
Cadmium	25	0.10	25.00	0	101	80	120			
Chromium	26	0.30	25.00	0	102	80	120			
Copper	26	0.30	25.00	0	104	80	120			
Lead	25	0.25	25.00	0	98.9	80	120			
Nickel	, 24	0.50	25.00	0	97.9	80	120			
Silver	5.1	0.25	5.000	0	102	80	120			
Zinc	26	2.5	25.00	0 ·	102	80	120			

Sample ID 1303459-003AMS	SampTy	SampType: MS			TestCode: EPA Method 6010B: Soil Metals							
Client ID: SC-3	Batch	Batch ID: 6458			RunNo: 9							
Prep Date: 3/13/2013	Analysis Da	ate: <b>3/</b>	14/2013	5	SeqNo: 2	61310	Units: mg/F	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Barium	170	0.50	23.95	129.8	187	75	125		•	S		
Cadmium	24	0.50	23.95	0	102	75	125					
Chromium	33	1.5	23.95	5.195	114	75	125					
Copper	32	1.5	23.95	9.731	93.4	75	125					
lickel	28	2.5	23.95	4.415	100	75	125					
Silver	4.9	1.2	4.790	0	102	75	125					

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 15 of 17

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1303459

29-Mar-13

Client:

Animas Environmental Services

Sample ID	1303459-003AMSE	) Samn	Гуре: М	SD	Tes	tCode: F	PA Method	6010B: Soil	Metals		
Client ID:		•	h ID: <b>64</b>			RunNo: 9		00100.0011	wictais		
Prep Date:	-	Analysis [				SeqNo: 2		Units: mg/k	<b>⟨</b> g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium		210	0.50	23.90	129.8	325	75	125	17.2	20	S
Cadmium		25	0.50	23.90	0	103	75	125	1.03	20	
Chromium		32	1.5	23.90	5.195	111	75	125	3.02	20	
Copper		32	1.5	23.90	9.731	93.6	75	125	0.0322	20	
Nickel		29	2.5	23.90	4.415	101	75	125	0.422	20	
Silver		4.8	1.2	4.781	0	100	75	125	2.61	20	
Sample ID	MB-6458	Samp <sup>1</sup>	Гуре: М	BLK	Tes	tCode: E	PA Method	6010B: Soil	Metals		
Client ID:	PBS	Batc	h ID: 64	58	F	RunNo: 9	239				
Prep Date:	3/13/2013	Analysis [	Date: 3/	18/2013	8	SeqNo: 2	63002	Units: mg/h	<b>(</b> g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium		ND	2.5								
Sample ID	LCS-6458	Samp	Гуре: LC	s .	Tes	tCode: E	PA Method	6010B: Soil	Metals		
Client ID:	LCSS	Batc	h ID: 64	58	F	RunNo: 9	239				
Prep Date:	3/13/2013	Analysis [	Date: 3/	18/2013	9	SeqNo: 2	63003	Units: mg/k	ζg		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium		24	2.5	25.00	0	94.1	80	120		_	
Sample ID	1303459-003AMS	Samp <sup>1</sup>	Гуре: М	<del></del>	Tes	tCode: E	PA Method	6010B: Soil	Metals		
Client ID:	SC-3	Batc	n ID: <b>64</b>	58	F	RunNo: 9	239				
Prep Date:	3/13/2013	Analysis [	Date: 3/	18/2013	5	SeqNo: 2	63561	Units: mg/h	<b>(</b> g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		31	12	23.95	0	131	75	125			S
Lead		29	1.2	23.95	0	123	. 75	125			
Selenium		23	12	23.95	0	98.1	75	125	•		
Zinc		63	12	23.95	0	261	75	125			S
Sample ID	1303459-003AMSE	) Samp	Гуре: М	SD	Tes	tCode: E	PA Method	6010B: Soil	Metals		
Client ID:	SC-3	Batc	h ID: <b>64</b>	58	F	RunNo: 9	239				
Prep Date:	3/13/2013	Analysis [	Date: 3/	18/2013	\$	SeqNo: 2	63562	Units: mg/h	<b>(</b> g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		26	12	23.90	0	107	75	125	20.3	20	R
Lead		30	1.2	23.90	0	125	75	125	1.68	20	S
Selenium		21	12	23.90	0	87.6	75	125	11.4	20	

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 16 of 17

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1303459

29-Mar-13

Client:

Animas Environmental Services

420

483.1

Project: CoP Ute	#12 Marcl	2013								
Sample ID mb-6438	SampT	уре: МЕ	BLK	Tes	Code: El	PA Method	8015B Mod:	Gasoline	Range	
Client ID: PB\$	Batch	1D: <b>64</b>	38	F	lunNo: 9	181				
Prep Date: 3/12/2013	Analysis D	ate: 3/	14/2013	\$	SeqNo: 2	61843	Units: mg/l	<b>K</b> g	•	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	1.1	5.0								J
Surr: BFB	450		500.0		90.3	70	130		<u> </u>	
Sample ID LCS-6438	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015B Mod:	Gasoline	Range	
Client ID: LCSS	Batch	ID: <b>64</b>	38	F	tunNo: 9	181				
Prep Date: 3/12/2013	Analysis D	ate: 3/	14/2013	8	SeqNo: 2	61844	Units: mg/k	<b>(</b> g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.9	74.6	137		_	
Surr: BFB	440		500.0		87.2	70	130			
Sample ID 1303408-005AMS	SampT	уре: М	 }	Tes	tCode: El	PA Method	8015B Mod:	Gasoline	Range	<u>-</u>
Client ID: BatchQC	Batch	ID: <b>64</b>	38	F	tunNo: 9	181				
Prep Date: 3/12/2013	Analysis D	ate: 3/	15/2013	S	SeqNo: 2	61857	Units: mg/k	<b>(</b> g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	24.13	1.017	90.7	50.3	148			
Surr: BFB	420		482.6		86.3		130			
Sample ID 1303408-005AMS	<b>D</b> SampT	уре: М.	SD	Tes	tCode: El	PA Method	8015B Mod:	Gasoline	Range	
Client ID: BatchQC	Batch	ID: <b>64</b>	38	F	lunNo: 9	181				
Prep Date: 3/12/2013	Analysis D	ate: 3/	15/2013	\$	SeqNo: 2	61858	Units: mg/l	<b>(</b> g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	24.15	1.017	89.5	50.3	148	1.22	20	

#### Qualifiers:

Surr: BFB

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

86.6

70

130

0

- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 17 of 17



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

TEL: 505-345-3975 FAX: 505-345-410; Website: www.hallenvironmental.com

# Sample Log-In Check List

	All the state of t		The state of the s
Clie	=( / =	Vork Order Number: 130	3459
Rec	eived by/date: <u>AG 03/12/13</u>		
Logg	ged By: Michelle Garcia 3/12/2013 9:53:00 AM	-тінш 1 -тіни	Consid
Com	npleted By: Michelle Garcla 3/12/2013 11:47:33 AN	1 Minu	Comia
Revi	iewed By: 03/12/13		
Cha	in of Custody X		
		Yes No No	Not Present
, ,	Were seals intact?		<u> </u>
2.	Is Chain of Custody complete?	Yes 🗹 No 🗌 N	Not Present 🔲
3.	How was the sample delivered?	Courier	
<u>Log</u>	<u>In</u>		
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 🗌	
	Are samples (except VOA and ONG) properly preserved?	Yes 🗹 No 🗌	·
	Was preservative added to bottles?	Yes No 🗹	NA 🗆
11	VOA vials have zero headspace?	Yes 🗌 No 🗌 No	VOA Vials 🗹
	Were any sample containers received broken?	Yes No 🗸	
		Yes 🗹 No 🗌	# of preserved
	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	ies 🖭 iio 🗆	bottles checked for pH:
14.	Are matrices correctly identified on Chain of Custody?	Yes 🗹 No 🖳	(<2 or >12 unless noted)
15.	Is it clear what analyses were requested?	Yes 🗹 No 🗌	Adjusted?
	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹 No 🗌	Checked by:
Spe	cial 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 TIn Person
	Regarding:		Taxmr cison
	Client Instructions:	i 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMOUNT OF THE PROPERTY OF THE
18.	Additional remarks:		
10	Cooler Information		
19.		Seal Date   Signed E	av 1 −
	1 1.0 Good Yes	Julia Date 1 - Olgileu E	<del>"</del>
	1,000		·

C	hain-	of-Cu	stody Record	Turn-Around	Time:		£.	Ě	1	-	AI		=NI	WT	96	M	MF	N7	ra.	4	
Client:	Animas	s Enul	ronmental Services		□ Rush	1												AT			
				Project Name	e:							halle									
Mailing	Address	1024	E. Comanche	COP Ute	#12 Marc	ch 2013		490	O1 Ha	wkin	s NE	≣ - /	Albuq	uerq	ue, N	IM 87	7109	i			
		NM		Project #:				Τe	ı. 50	5-345	-397	75	Fax	505	5-345	-410	7				
	71	-564-										"Α'n	alysi	s Re	ques	<b>i</b> 🥎		•	20		
email o				Project Mana	iger:			TPH (Gas only)	sel)								Sail				
QA/QC I	Package:						(8021)	as o	/Die				0.	PCB's			1		.	,	
Ծ Stan			☐ Level 4 (Full Validation)	D. Watso			lσl	9	Gas		-		Įά	2 2			916		Ì		
Accredi		□ Othe	er	Sampler: H.	Woods /	D. Watson	TMB	Į.	5B (	<del>2</del>	<del>[</del> ]	Ī		88			1 9				ŝ
© EDD				Sample Tem	nerature:		± Щ	Щ +	TPH Method 8015B (Gas/Diesel)	41	22	or PAH)		des		Q	Table				ا_ ا_
	(///-/-			- And the Control of			MTBE	+ MTBE	poq	tho(	ğ	إ إ≽	ı Mer		\Q	im	ں ا				les (
Date	Time	Matrix	Sample Request ID	Container	Preservative	NA CHEAL NO.	+	*	Med	ğ  Ş	<u> </u>		N 0	B	) B(		.0G.C.C			:	qqn
				Type and #	Туре	1303459 H	втех	BTEX	핕	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA	Anions (F.C.)NO. PO. SO.)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	ပ္ပ				Air Bubbles (Y or N)
3/8/13	1425	Soil	5C-1	3-4.62		-001							)	$\overline{}$			Χ				
3/8/13			sc-2	3-402		-002							1				X				
3/8/13		t e	Sc-3	3-402		-603							Ϋ́				X				
																		П			
						·					1										
			·																		
				_																	
Date: 3/////// Date:	Time:   しるし   Time:	Relinquish Aua Relinquish	the M. Woods	Received by: Received by:	Daela	Date Time  3/11/13 / 636  Date Time	Sup	rrnr i dr	5: B 1798 367: 1 31: GA	loy kid∞	nd L	-ape:		hilli Ord	ps ered	by:	Cry	stal	Ta	ન્બિ	٤
3/11/13	1730	Chur	try Wasters		> 02/12	D 130953	Are		J. 4	1 K K	د دا	IJ									
		samples subi	mitted to Hall Environmental may be subc	contracted to other a		es. This serves as notice of this	possib	ility.	Any sub	-contra	cted c	data wil	l be cle	arly no	tated o	n the a	nalytic	al repo	irt.		



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

May 31, 2013

Debbie Watson Animas Environmental 624 East Comanche Farmington, NM 87401

TEL: (505) 486-4071

**FAX** 

RE: COP Ute #12

OrderNo.: 1305949

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/23/2013 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. 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

## Date Reported: 5/31/2013

### Hall Environmental Analysis Laboratory, Inc.

Matrix: SOIL

**CLIENT:** Animas Environmental

**Project:** COP Ute #12

Lab ID: 1305949-001

Client Sample ID: SC-1 SC-21 Irc

Collection Date: 5/22/2013 9:35:00 AM

Received Date: 5/23/2013 10:00:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: DIESEL RANGE	ORGANICS			_			Analyst: <b>JME</b>	
Diesel Range Organics (DRO)	22	6.2	10		mg/Kg	1	5/24/2013 3:21:28 PM	7579
Motor Oil Range Organics (MRO)	ND	50	50		mg/Kg	1	5/24/2013 3:21:28 PM	7579
Surr: DNOP	92.3	0	63-147		%REC	1	5/24/2013 3:21:28 PM	7579
EPA METHOD 8015D: GASOLINE RANG	GE						Analyst: <b>DAM</b>	
Gasoline Range Organics (GRO)	ND	0.91	4.7		mg/Kg	1	5/24/2013 10:07:18 PM	7587
Surr: BFB	95.7	0	80-120		%REC	1	5/24/2013 10:07:18 PM	7587
EPA METHOD 8021B: VOLATILES							Analyst: <b>DAM</b>	
Benzene	ND	0.0029	0.047		mg/Kg	1	5/24/2013 10:07:18 PM	7587
Toluene	ND	0.0030	0.047		mg/Kg	1	5/24/2013 10:07:18 PM	7587
Ethylbenzene	ND	0.0033	0.047		mg/Kg	1	5/24/2013 10:07:18 PM	7587
Xylenes, Total	0.014	0.011	0.094	J	mg/Kg	1	5/24/2013 10:07:18 PM	7587
Surr: 4-Bromofluorobenzene	101	0	80-120		%REC	1	5/24/2013 10:07:18 PM	7587
EPA METHOD 7471: MERCURY		•					Analyst: IDC	
Mercury	0.036	0.0016	0.033		mg/kg	1	5/29/2013 11:45:42 AM	7635
PA METHOD 6010B: SOIL METALS							Analyst: ELS	
Arsenic	4.0	1.3	5.0	J	mg/Kg	2	5/29/2013 7:45:22 AM	7618
Barium	200	0.30	0.49		mg/Kg	5	5/29/2013 8:28:20 AM	7618
Cadmium	ND	0.054	0.20		mg/Kg	2	5/29/2013 7:45:22 AM	7618
Chromium	8.5	0.24	0.60		mg/Kg	2	5/29/2013 7:45:22 AM	7618
Copper	11	0.46	0.60		mg/Kg	2	5/29/2013 7:45:22 AM	7618
Lead	7.7	0.44	0.50		mg/Kg	2	5/29/2013 7:45:22 AM	7618
Nickel	9.1	0.33	1.0		mg/Kg	2	5/29/2013 7:45:22 AM	7618
Selenium	ND	2.8	5.0		mg/Kg	2	5/29/2013 7:45:22 AM	7618
Silver	ND	0.071	0.50		mg/Kg	2	5/29/2013 7:45:22 AM	7618
Zinc	47	2.0	5.0		mg/Kg	2	5/29/2013 7:45:22 AM	7618
SAR SOLUBLE CATIONS							Analyst: JLF	
Calcium	190	0.49	1.0		mg/L	1	5/29/2013 12:56:00 PM	7628
Magnesium	64	0.34	1.0		mg/L	1	5/29/2013 12:56:00 PM	7628
Sodium	2100	0.88	1.0		mg/L	1	5/29/2013 12:56:00 PM	7628
Sodium Adsorption Ratio	34	0	0		-	1	5/29/2013 12:56:00 PM	7628
EPA METHOD 8270C: PAHS							Analyst: JDC	
Naphthalene	ND	0.0043	0.020		mg/Kg	1	5/28/2013 9:13:43 PM	7613
Acenaphthene	ND	0.0057	0.020		mg/Kg	1	5/28/2013 9:13:43 PM	7613
Fluorene	ND	0.0041	0.020		mg/Kg	1	5/28/2013 9:13:43 PM	7613
Anthracene	ND	0.0031	0.020		mg/Kg	1	5/28/2013 9:13:43 PM	7613
Fluoranthene	ND	0.0035	0.020		mg/Kg	1	5/28/2013 9:13:43 PM	7613
Pyrene	ND	0.0048	0.020		mg/Kg	1	5/28/2013 9:13:43 PM	7613

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 1 of 10

#### **Analytical Report**

### Lab Order 1305949

Date Reported: 5/31/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental

Project:

Lab ID:

COP Ute #12

1305949-001

Matrix: SOIL

Client Sample ID: SC-1 SC-21 lrc

**Collection Date:** 5/22/2013 9:35:00 AM

Received Date: 5/23/2013 10:00:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: PAHS							Analyst: JDC	
Benz(a)anthracene	ND	0.0057	0.020		mg/Kg	1	5/28/2013 9:13:43 PM	7613
Chrysene	ND	0.0038	0.020		mg/Kg	1	5/28/2013 9:13:43 PM	7613
Benzo(b)fluoranthene	0.012	0.0047	0.020	J	mg/Kg	1	5/28/2013 9:13:43 PM	7613
Benzo(k)fluoranthene	0.0083	0.0058	0.020	J	mg/Kg	1	5/28/2013 9:13:43 PM	7613
Benzo(a)pyrene	ND	0.0039	0.020		mg/Kg	1	5/28/2013 9:13:43 PM	7613
Dibenz(a,h)anthracene	ND	0.0039	0.020		mg/Kg	1	5/28/2013 9:13:43 PM	7613
Indeno(1,2,3-cd)pyrene	ND	0.0078	0.020		mg/Kg	1	5/28/2013 9:13:43 PM	7613
Surr: Benzo(e)pyrene	86.0	0	54.9-125		%REC	1	5/28/2013 9:13:43 PM	7613
Surr: N-hexadecane	84.6	0	54.7-111		%REC	1	5/28/2013 9:13:43 PM	7613
CONDUCTANCE							Analyst: <b>JM</b> L	
Specific Conductance	2400	0	1.0		µmhos/c	1	5/30/2013 4:41:00 PM	R10980

#### Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 2 of 10



#### YOUR LABORSCHOICE

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE Albuquerque, NM 87109

May 30, 2013

ESC Sample # : L637642-01

Date Received : Description :

May

24, 2013

1305949-001B SC-1 SC-21 Irc

Site ID :

Project # :

Collected By : Collection Date :

Sample ID

05/22/13 09:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	10.	mg/kg	3060A/7196A	05/28/13	5
ORP	230		mV	2580 B-2011	05/28/13	1
pН	8.8		su	9045D	05/29/13	1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL)

The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 05/30/13 10:11 Printed: 05/30/13 10:12 L637642-01 (CR6) - diluted due to sample color L637642-01 (PH) - 8.8021.6c



YOUR LAB OF CHOICE

Hall Environmental Analysis Laboratory

Anne Thorne 4901 Hawkins NE

Albuquerque, NM 87109

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L637642

May 30, 2013

Analyte	Result		boratory	Blank % Rec		Limit	Dotah	Daka Basilisad
				· · · · · · · · · · · · · · · · · · ·	an a box on the		Batch	Date Analyzed
Chromium, Hexavalent	< 2	<u>. And Andread States and Andrea</u>			April Galery	<u>en des Barca (fil)</u>	WG663011	05/28/13 13:5
Analyte	Units	Result	Duplica Dupl	te: icate	RPD	Limit	Ref Sam	p Batch
Chromium, Hexavalent Chromium, Hexavalent	mg/kg mg/kg	16.0 5.80	13.0 7.30	ARREL	18.2 22.2*	20 20	L637431 L636947	accomment to a second
ORP OR SECURITION OF THE ORDER	Vm Vm	180. 440.	160. 440.		11.8 0	20 20	L637268 L637431	
pH	su su	8.00 7.50	7.90 7.50	/ / / / / / / / / / / / / / / / / / /	0.757 0.133	1	L637174 L637174	a distance on the section of the same
The Late			tory Cont					
Analyte	Units	Known	Val	Rest	11t	% Rec	Limit	Batch
Chromium, Hexavalent	mg/kg	146		148.	rijas gredijas ir Tahariza ir iras	101.	80-120	WG66301
ORP	mV	228		223.		97.8	95.6-104	18581
рн	នប	5.79		5.80		100.	98.3-101	.7 WG66355
Analyte	Units	Laboratory Result	Control S Ref	mple Dur %Rec	olicate	Limit	RPD Lin	mit Batch
Chromium, Hexavalent	mg/kg	140.	148.	96.0		80-120	5.56 20	WG66301
ORP	Vm	221.	223.	97.0	- १९८८ वर्गाः स्टब्स्ट्रस्य <b>स</b>	95.6-104.	0.901 20	WG66295
рН	su	5.80	5.80	100.		98.3-101.7	G 20	WG66355
			Matrix Sp.					
Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Chromium, Hexavalent	mg/kg	5.20	0.,	20	- 5.20*	75-125	L637164÷	01 WG66301
			x Spike D					*
Analyte	Units	MSD R	ef %	Rec	Limit	RPD	Limit Ref Samp	Batch
Chromium, Hexavalent	mg/kg	6.12 5	.20 6	12*	75-125	16.3	20 L637164-	01 WG66301

Batch number /Run number / Sample number cross reference

WG663011: R2685421: L637642-01 WG662957: R2685740: L637642-01 WG663557: R2687740: L637642-01

<sup>\* \*</sup> Calculations are performed prior to rounding of reported values.
\* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Client:

#### Hall Environmental Analysis Laboratory, Inc.

Animas Environmental

WO#:

1305949

31-May-13

COP Ute #12 Project: Sample ID MB-7579 SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics Client ID: PBS Batch ID: 7579 RunNo: 10810 SeqNo: 306110 Prep Date: 5/23/2013 Analysis Date: 5/23/2013 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Diesel Range Organics (DRO) 10 ND Motor Oil Range Organics (MRO) ND 50 Surr: DNOP 10.00 102 63 147 10 Sample ID LCS-7579 TestCode: EPA Method 8015D: Diesel Range Organics SampType: LCS Client ID: LCSS RunNo: 10810 Batch ID: 7579 Analysis Date: 5/23/2013 Prep Date: 5/23/2013 SeqNo: 306204 Units: mg/Kg Analyte SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Result **PQL** Qual Diesel Range Organics (DRO) 10 44 50.00 87.1 77 1 128 Surr: DNOF 5.9 5.000 119 63 147 Sample ID 1305873-001AMS TestCode: EPA Method 8015D: Diesel Range Organics SampType: MS Client ID: **BatchQC** Batch ID: 7560 RunNo: 10862 Prep Date: 5/22/2013 Analysis Date: 5/24/2013 SeqNo: 307309 Units: %REC SPK value SPK Ref Val %RPD **RPDLimit** Analyte Result PQL %REC LowLimit HighLimit Qual Surr: DNOP 63 5.1 4.965 103 147 Sample ID 1305873-001AMSD SampType: MSD TestCode: EPA Method 8015D: Diesel Range Organics Client ID: **BatchQC** Batch ID: 7560 RunNo: 10862 Prep Date: 5/22/2013 SeqNo: 307310 Analysis Date: 5/24/2013 Units: %REC SPK value SPK Ref Val Analyte Result **PQL** %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: DNOP 5.2 5.030 103 63 147 0 0 Sample ID 1305918-001AMS TestCode: EPA Method 8015D: Diesel Range Organics SampType: MS Client ID: **BatchQC** Batch ID: 7579 RunNo: 10884 Prep Date: SeqNo: 307884 5/23/2013 Analysis Date: 5/28/2013 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 42 83.6 61.3 20 49.85 138

#### Qualifiers:

Analyte

Surr: DNOP

Surr: DNOP

Client ID:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range

Sample ID 1305918-001AMSD

Prep Date: 5/23/2013

Diesel Range Organics (DRO)

**BatchQC** 

- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.

6.6

Result

44

6.5

SampType: MSD

Batch ID: 7579

Analysis Date: 5/28/2013

PQL

20

4.985

49.70

4.970

SPK value SPK Ref Val

0

RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

LowLimit

61.3

63

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

132

RunNo: 10884

SeqNo: 307885

%REC

89.4

130

63

147

Units: mg/Kg

138

147

HighLimit

TestCode: EPA Method 8015D: Diesel Range Organics

S Spike Recovery outside accepted recovery limits

Page 3 of 10

**RPDLimit** 

20

0

%RPD

6.38

0

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1305949

31-May-13

Client:

Animas Environmental

Project:	COP Ute	#12				_				_	
Sample ID	MB-7587	SampT	ype: ME	3LK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	PBS	Batch	1D: <b>75</b>	87	F	RunNo: 1	0880				
Prep Date:	5/23/2013	Analysis D	ate: 5/	24/2013	8	SeqNo: 3	07514	Units: mg/k	<b>〈</b> g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	ND	5.0								
Surr: BFB		960		1000		96.0	80	120		T	
Sample ID	LCS-7587	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	LCSS	Batch	1D: <b>75</b>	87	F	RunNo: 1	0880				
Prep Date:	5/23/2013	Analysis D	ate: 5/	24/2013	5	SegNo: 3	07516	Units: mg/l	<b>(</b> g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit.	Qual
Gasoline Rang	e Organics (GRO)	27	5.0	25.00	0	109	62.6	136			<u> </u>
Surr: BFB		1000		1000		101	80	120			
Sample ID	1305949-001AMS	SampT	уре: М	3	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	SC-1	Batch	ID: <b>75</b>	87	F	RunNo: 1	0880				
Prep Date:	5/23/2013	Analysis D	ate: 5/	24/2013	S	SeqNo: 3	07518	Units: mg/h	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	34	4.6	23.23	0	148	70	130			S
Surr: BFB		1100		929.4		122	80	120			S
Sample ID	1305949-001AMS	<b>)</b> SampT	ype: MS	SD	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	· · · · ·
Client ID:	SC-1	Batch	ID: <b>75</b>	87	F	RunNo: 1	0880				
Prep Date:	5/23/2013	Analysis D	ate: 5/	24/2013	S	SeqNo: 3	07519	Units: mg/h	<b>(</b> g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	e Organics (GRO)	30	4.6	23.21	0	129	70	130	14.2	22.1	
Surr: BFB		1100		928.5		117	80	120	0	0	

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 4 of 10

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1305949

31-May-13

Client:

Animas Environmental

Project:

COP Ute #12

Sample ID MB-7587	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batcl	h ID: <b>75</b>	87	F	RunNo: 1	0880				
Prep Date: 5/23/2013	Analysis [	Date: <b>5/</b>	24/2013	S	SeqNo: 3	07478	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	0.0087	0.050								J
Ethylbenzene	ND	0.050								
Xylenes, Total	0.015	0.10								J
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			
Sample ID LCS-7587	Samp	Type: LC	s	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Sample ID LCS-7587 Client ID: LCSS	•	Type: <b>LC</b>			tCode: El		8021B: Vola	tiles		
•	•	h ID: <b>75</b>	87	F		0880	8021B: Volat			
Client ID: LCSS	Batc	h ID: <b>75</b>	87 24/2013	F	RunNo: 1	0880			RPDLimit	Qual
Client ID: LCSS Prep Date: 5/23/2013 Analyte	Batci Analysis E	h ID: <b>75</b> Date: <b>5</b> /	87 24/2013	F	RunNo: 1 SeqNo: 3	0880 07480	Units: mg/k	(g	RPDLimit	Qual
Client ID: LCSS Prep Date: 5/23/2013 Analyte Benzene	Batci Analysis E Result	h ID: <b>75</b> Date: <b>5</b> /	87 24/2013 SPK value	SPK Ref Val	RunNo: 1 SeqNo: 3 %REC	0880 07480 LowLimit	Units: <b>mg/K</b> HighLimit	(g	RPDLimit	Qual
Client ID: LCSS Prep Date: 5/23/2013 Analyte Benzene Toluene	Batch Analysis E Result 1.1	h ID: <b>75</b> Date: <b>5/</b> PQL 0.050	87 24/2013 SPK value 1.000	SPK Ref Val	RunNo: 1 SeqNo: 3 %REC 110	0880 07480 LowLimit 80	Units: mg/K HighLimit 120	(g	RPDLimit	Qual
Client ID: LCSS Prep Date: 5/23/2013	Batci Analysis E Result 1.1	PQL 0.050 0.050	87 24/2013 SPK value 1.000 1.000	SPK Ref Val	RunNo: 1 SeqNo: 3 %REC 110 109	0880 07480 LowLimit 80 80	Units: mg/K HighLimit 120 120	(g	RPDLimit	Qual

Sample ID 1305949-001AMS	Samp1	Гуре: МЗ	3	Tes	tCode: E	PA Method	8021B: Volat	tiles		
Client ID: SC-1	Batcl	h ID: <b>75</b>	87	F	RunNo: 1	0880				
Prep Date: 5/23/2013	Analysis E	Date: <b>5/</b>	24/2013	S	SeqNo: 3	07481	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.046	0.9294	0	125	67.2	113			S
Toluene	1.1	0.046	0.9294	0	123	62.1	116			S
Ethylbenzene	1.2	0.046	0.9294	0	127	67.9	127			
Xylenes, Total	3.5	0.093	2.788	0.01401	126	60.6	134			
Surr: 4-Bromofluorobenzene	0.98		0.9294		105	80	120			

Sample ID 1305949-001AM	<b>SD</b> SampT	ype: <b>MS</b>	SD	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID: SC-1	Batch	n ID: 75	87	F	RunNo: 1	0880				
Prep Date: 5/23/2013	Analysis D	ate: 5/	24/2013	S	SeqNo: 3	07482	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.046	0.9285	0	123	67.2	113	2.14	14.3	S
Toluene	1.1	0.046	0.9285	0	120	62.1	116	2.57	15.9	S
Ethylbenzene	1.1	0.046	0.9285	0	123	67.9	127	3.05	14.4	
Xylenes, Total	3.5	0.093	2.786	0.01401	124	60.6	134	2.14	12.6	
Surr: 4-Bromofluorobenzene	0.98		0.9285		105	80	120	0	0	

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 5 of 10

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1305949

31-May-13

Client:

Animas Environmental

Project:

COP Ute #12

Sample ID mb-7613	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8270C: PAHs	;		
Client ID: PBS	Batch	n ID: <b>76</b>	13	F	RunNo: 1	0909				
Prep Date: 5/27/2013	Analysis D	ate: <b>5/</b>	28/2013	8	SeqNo: 3	08398	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.020			-					
Acenaphthene	ND	0.020								
Fluorene	ND	0.020								
Anthracene	ND	0.020								
Fluoranthene	ND	0.020								
Pyrene	ND	0.020								
Benz(a)anthracene	ND	0.020								
Chrysene	ND	0.020								
Benzo(b)fluoranthene	ND	0.020								
Benzo(k)fluoranthene	ND	0.020								
Benzo(a)pyrene	ND	0.020								
Dibenz(a,h)anthracene	ND	0.020								
Indeno(1,2,3-cd)pyrene	ND	0.020								
Surr: Benzo(e)pyrene	0.33		0.3300		99.6	54.9	125			
Surr: N-hexadecane	1.4		1.460		93.7	54.7	111			

Sample ID Ics-7613	Samp	ype: LC	s	Tes	Code: El	PA Method	8270C: PAH	s			
Client ID: LCSS	Batcl	h ID: <b>76</b>	13	F	lunNo: 1	0909					
Prep Date: 5/27/2013	Analysis E	Date: <b>5/</b>	28/2013	S	SeqNo: 3	08399	Units: mg/h	<b>(</b> g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Naphthalene	0.31	0.020	0.3300	0	93.8	42.5	118				
Acenaphthene	0.31	0.020	0.3300	0	92.9	47.5	125				
Fluorene	0.31	0.020	0.3300	0	93.4	49.1	120				
Anthracene	0.31	0.020	0.3300	0	94.4	42.9	130				
Fluoranthene	0.30	0.020	0.3300	0	91.5	37	134				
Pyrene	0.31	0.020	0.3300	0	94.4	46.4	126				
Benz(a)anthracene	0.32	0.020	0.3300	0	97.9	50.6	126				
Chrysene	0.30	0.020	0.3300	0	90.3	36.8	123				
Benzo(b)fluoranthene	0.33	0.020	0.3300	0	101	47.2	130				
Benzo(k)fluoranthene	0.29	0.020	0.3300	0	87.0	40	122				
Benzo(a)pyrene	0.29	0.020	0.3300	0	86.5	44	118				
Dibenz(a,h)anthracene	0.34	0.020	0.3300	0	102	53.3	131				
Indeno(1,2,3-cd)pyrene	0.33	0.020	0.3300	0	99.8	52	126				
Surr: Benzo(e)pyrene	0.32		0.3300		95.6	54.9	125				
Surr: N-hexadecane	1.3		1.460		91.7	54.7	111				

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 6 of 10

### Hall Environmental Analysis Laboratory, Inc.

WO#: 1305949

31-May-13

Client:

Animas Environmental

Project:

COP Ute #12

Sample ID 1305572-012Ams	SampT	ype: MS	3	Tes	tCode: El	PA Method	8270C: PAH:	s		
Client ID: BatchQC	Batch	1D: <b>76</b>	13	F	RunNo: 1	0909				
Prep Date: 5/27/2013	Analysis D	ate: 5/	28/2013	S	SeqNo: 3	08410	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	0.27	0.020	0.3314	0	82.2	50.2	114			
Fluorene	0.32	0.020	0.3314	0.06576	76.7	55.3	107			
Anthracene	0.26	0.020	0.3314	0	79.8	54.9	116			
Fluoranthene	0.28	0.020	0.3314	0.01694	79.6	55.2	119			
Pyrene	0.35	0.020	0.3314	0.03122	95.1	60.2	115			
Benz(a)anthracene	0.30	0.020	0.3314	0.006310	88.6	61.9	120			
Chrysene	0.30	0.020	0.3314	0.007307	87.7	42.5	117			
Benzo(b)fluoranthene	0.35	0.020	0.3314	0.007971	102	57.4	124			
Benzo(k)fluoranthene	0.29	0.020	0.3314	0.006642	86.9	52.6	107			
Benzo(a)pyrene	0.26	0.020	0.3314	0	78.5	55.7	106			
Dibenz(a,h)anthracene	0.34	0.020	0.3314	0.	102	51.8	130			
Indeno(1,2,3-cd)pyrene	0.32	0.020	0.3314	0	96.3	56.8	120			
Surr: Benzo(e)pyrene	0.34		0.3314		103	54.9	125			
Surr: N-hexadecane	1.4		1.466		92.4	54.7	111			

Sample ID 1305572-012Amsd	I SampT	ype: MS	SD	TestCode: EPA Method 8270C: PAHs									
Client ID: BatchQC	Batch	1D: <b>76</b>	13	F	RunNo: 1								
Prep Date: 5/27/2013	Analysis Date: 5/28/2013			S	SeqNo: 3	08411	Units: mg/K	g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Acenaphthene	0.32	0.020	0.3310	0	96.4	50.2	114	15.7	20.5				
Fluorene	0.37	0.020	0.3310	0.06576	92.8	55.3	107	15.2	20				
Anthracene	0.33	0.020	0.3310	0	98.4	54.9	116	20.7	26.6				
Fluoranthene	0.36	0.020	0.3310	0.01694	103	55.2	119	24.2	23.7	R			
Pyrene	0.38	0.020	0.3310	0.03122	104	60.2	115	8.38	29.3				
Benz(a)anthracene	0.35	0.020	0.3310	0.006310	104	61.9	120	15.6	25.4				
Chrysene	0.32	0.020	0.3310	0.007307	95.5	42.5	117	8.16	27.6				
Benzo(b)fluoranthene	0.44	0.020	0.3310	0.007971	130	57.4	124	23.1	20	SR			
Benzo(k)fluoranthene	0.34	0.020	0.3310	0.006642	102	52.6	107	15.5	31.3				
Benzo(a)pyrene	0.33	0.020	0.3310	0	99.3	55.7	106	23.3	22.1	R			
Dibenz(a,h)anthracene	0.42	0.020	0.3310	0	127	51.8	130	21.7	21.2	R			
Indeno(1,2,3-cd)pyrene	0.41	0.020	0.3310	0	123	56.8	120	24.5	20.4	SR			
Surr: Benzo(e)pyrene	0.40		0.3310		121	54.9	125	0	0				
Surr: N-hexadecane	1.6		1.464		106	54.7	111	0	0				

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 7 of 10

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1305949

31-May-13

Client:

Animas Environmental

Project:

COP Ute #12

Sample ID 1305A05-003ADUP

SampType: DUP

TestCode: CONDUCTANCE

Client ID: **BatchQC**  Batch ID: R10980

RunNo: 10980

Prep Date:

Analysis Date: 5/30/2013

SeqNo: 310454

Units: µmhos/cm

Analyte

SPK value SPK Ref Val %REC LowLimit

**RPDLimit** 

Qual

HighLimit

2.94

**PQL** 1.0

%RPD

20

Specific Conductance

5000

Qualifiers:

Value exceeds Maximum Contaminant Level.

È Value above quantitation range

Analyte detected below quantitation limits

Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit RL

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits Spike Recovery outside accepted recovery limits Page 8 of 10

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1305949

31-May-13

Client:

Animas Environmental

Project:

COP Ute #12

Sample ID	MB-7635
-----------	---------

SampType: MBLK

TestCode: EPA Method 7471: Mercury

Client ID:

PBS

Batch ID: 7635

RunNo: 10928

Prep Date: 5/28/2013 Analysis Date: 5/29/2013

PQL

SeaNo: 309005

Units: mg/kg

HighLimit

Analyte

Result

SPK value SPK Ref Val %REC

%RPD

%RPD

Qual

Mercury

ND 0.033

Sample ID LCS-7635

SampType: LCS

TestCode: EPA Method 7471: Mercury

LowLimit

Client ID: LCSS Batch ID: 7635

RunNo: 10928

Prep Date: 5/28/2013

120

Analysis Date: 5/29/2013

SeqNo: 309006 LowLimit Units: mg/kg

Analyte

Result PQL

SPK value SPK Ref Val

%REC

HighLimit

**RPDLimit** 

Qual

Mercury

0.17 0.033

0.1667

0 104 80

**RPDLimit** 

Qual

Sample ID 1305837-011AMS Client ID:

SampType: ms

TestCode: EPA Method 7471: Mercury

Prep Date: 5/28/2013

**BatchQC** 

Batch ID: 7635

RunNo: 10928

Units: mg/kg

Analyte

Analysis Date: 5/29/2013

0.033

SeqNo: 309020

Result 0.17

Result

0.17

PQL

SPK value SPK Ref Val %REC LowLimit 0.002587 0.1658

100

HighLimit 125 **RPDLimit** Qual

Mercury

SampType: msd

TestCode: EPA Method 7471: Mercury

Client ID: Prep Date:

Sample ID 1305837-011AMSD **BatchQC** 

Batch ID: 7635

RunNo: 10928

Analyte

5/28/2013

Analysis Date: 5/29/2013

SeqNo: 309021

LowLimit

Units: mg/kg

%RPD

Mercury

**PQL** 0.033

0.1649

SPK value SPK Ref Val 0.002587

ND

%REC

102

75

HighLimit 125 %RPD 1.34

**RPDLimit** 

**Qualifiers:** 

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits J

P Sample pH greater than 2 for VOA and TOC only. Reporting Detection Limit RL

В Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits Page 9 of 10

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1305949

31-May-13

Client:

Animas Environmental

Project:

COP Ute #12

Sample ID LCS-7618 SampType: LCS TestCode: EPA Method 6010B: Soil Metals										
Sample ID LCS-7618										
Client ID: LCSS	Batch	1 ID: <b>76</b> ′	18	F	RunNo: 1					
Prep Date: 5/28/2013	Analysis Date: 5/29/2013			S	SeqNo: 3	08671	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0	99.7	80	120			
Barium	24	0.10	25.00	0	95.2	80	120			
Cadmium	23	0.10	25.00	0	93.8	80	120			
Chromium	24	0.30	25.00	0	95.6	80	120			
Copper	25	0.30	25.00	0	98.6	80	120			
Lead	23	0.25	25.00	0	93.9	80	120			
Nickel	23	0.50	25.00	0	91.2	80	120			
Selenium	. 22	2.5	25.00	0	87.3	80	120			
Silver	5.0	0.25	5.000	0	99.2	80	120			
Zinc	23	2.5	25.00	0	93.5	80	120			
Sample ID MB-7618	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	6010B: Soil I	Vietals		
Sample ID MB-7618 Client ID: PBS		ype: <b>ME</b>			tCode: <b>El</b> RunNo: <b>1</b> 0		6010B: Soil I	Metals		,
·		iD: 76	18	F		0919	6010B: Soil I			,
Client ID: PBS	Batch	iD: 76	18 29/2013	F	RunNo: 10 GeqNo: 30	0919	•		RPDLimit	Qual
Client ID: PBS Prep Date: 5/28/2013	Batch Analysis D	n ID: <b>76</b> ′	18 29/2013	F S	RunNo: 10 GeqNo: 30	0919 08678	Units: mg/K	g	RPDLimit	Qual
Client ID: PBS Prep Date: 5/28/2013 Analyte	Batch Analysis D Result	n ID: <b>76</b> 1 ate: <b>5</b> 13	18 29/2013	F S	RunNo: 10 GeqNo: 30	0919 08678	Units: mg/K	g	RPDLimit	Qual
Client ID: PBS Prep Date: 5/28/2013 Analyte Arsenic	Batch Analysis D Result ND	PQL 2.5	18 29/2013	F S	RunNo: 10 GeqNo: 30	0919 08678	Units: mg/K	g	RPDLimit	Qual
Client ID: PBS Prep Date: 5/28/2013 Analyte Arsenic Barium	Batch Analysis D Result ND ND	PQL 2.5 0.10	18 29/2013	F S	RunNo: 10 GeqNo: 30	0919 08678	Units: mg/K	g	RPDLimit	Qual
Client ID: PBS Prep Date: 5/28/2013 Analyte Arsenic Barium Cadmium	Batch Analysis D Result ND ND ND	PQL 2.5 0.10 0.10	18 29/2013	F S	RunNo: 10 GeqNo: 30	0919 08678	Units: mg/K	g	RPDLimit	Qual
Client ID: PBS Prep Date: 5/28/2013 Analyte Arsenic Barium Cadmium Chromium	Batch Analysis D Result ND ND ND ND ND ND	PQL 2.5 0.10 0.30	18 29/2013	F S	RunNo: 10 GeqNo: 30	0919 08678	Units: mg/K	g	RPDLimit	Qual
Client ID: PBS Prep Date: 5/28/2013 Analyte Arsenic Barium Cadmium Chromium Copper	Batch Analysis D Result ND ND ND ND ND ND ND ND	PQL 2.5 0.10 0.30 0.30	18 29/2013	F S	RunNo: 10 GeqNo: 30	0919 08678	Units: mg/K	g	RPDLimit	Qual
Client ID: PBS Prep Date: 5/28/2013 Analyte Arsenic Barium Cadmium Chromium Copper Lead	Batch Analysis D Result ND ND ND ND ND ND ND ND ND ND ND	PQL 2.5 0.10 0.30 0.30 0.25	18 29/2013	F S	RunNo: 10 GeqNo: 30	0919 08678	Units: mg/K	g	RPDLimit	Qual
Client ID: PBS Prep Date: 5/28/2013 Analyte Arsenic Barium Cadmium Chromium Copper Lead Nickel	Batch Analysis D Result ND ND ND ND ND ND ND ND ND ND ND ND ND	PQL 2.5 0.10 0.30 0.30 0.25 0.50	18 29/2013	F S	RunNo: 10 GeqNo: 30	0919 08678	Units: mg/K	g	RPDLimit	Qual
Client ID: PBS Prep Date: 5/28/2013 Analyte Arsenic Barium Cadmium Chromium Copper Lead Nickel Selenium	Batch Analysis D Result ND ND ND ND ND ND ND ND ND ND ND ND ND	PQL 2.5 0.10 0.10 0.30 0.25 0.50 2.5	18 29/2013	F S	RunNo: 10 GeqNo: 30	0919 08678	Units: mg/K	g	RPDLimit	Qual

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Page 10 of 10



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-410;

Sample Log-In Check List

Website: www.hallenvironmental.com RcptNo: 1 Animas Environmental Work Order Number: 1305949 Client Name: Received by/date: 5/23/2013 10:00:00 AM Logged By: 5/23/2013 10:38:57 AM Completed By: Lindsay Mangin Reviewed By: Chain of Custody Not Present Yes 🗍 No 🗌 1 Custody seals intact on sample bottles? Yes 🗹 No 🗀 Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In NA 🗌 No 🗌 Yes 🗹 4. Was an attempt made to cool the samples? NA 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C Yes 🗸 No 🗔 No 🗍 6. Sample(s) in proper container(s)? Yes 🔽 No 🗌 7. Sufficient sample volume for indicated test(s)? No 🗆 8. Are samples (except VOA and ONG) properly preserved? NA 🗌 No 🗹 Yes  $\square$ 9. Was preservative added to bottles? No VOA Vials 🗹 No 🗀 Yes 🗌 10.VOA vials have zero headspace? Yes  $\square$ No 🗹 11. Were any sample containers received broken? # of preserved bottles checked No 🗌 for pH: Yes 🗹 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 🗆 Yes 🗹 13. Are matrices correctly identified on Chain of Custody? No 🗌 Yes 🔽 14. Is it clear what analyses were requested? No 🗌 Checked by Yes 🗹 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes 🗌 NA 🗹 No 🗆 16. Was client notified of all discrepancies with this order? Person Notified: Date: Phone Fax In Person By Whom: Via: eMail Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information

Condition | Seal Intact | Seal No | Seal Date

Signed By

Cooler No Temp °C

Good

Chain-of-Custody Record		Turn-Around Time:						ed.		AI	W	E R		T ES	<i>a</i> ~	a i r	4 E I	ait.	A. I			
Client: Animas Environmental			Standard X Rush 5 day +A+ Project Name:				HALL ENVIRONMENTAL ANALYSIS LABORATORY											,				
Services			Project Name	e:			www.hallenvironmental.com															
Mailing Address: 624 E. Comanche		CoP Ute# 12					490	)1 Ha														
OZI C. CIPPICAL							4901 Hawkins NE - Albuquerque, NM 87 Tel. 505-345-3975 Fax 505-345-410															
Phone #: 505-564-228\			· ·				Analysis Request															
email or Fax#:			Project Mana	-			=	(y	8					3	,,			Table				
QA/QC Package:			D. Watson				TMB's (8021)	TPH (Gas only)	30 / M			SIMS)		PO4,S	PCB's			Soils To				
Accreditation  □ NELAP  □ Other			Sampler: On ice Z Yes INO				+ TMB	+	30 / DI	18.1)	34.1)	8270		)3,NO <sub>2</sub>	1 8082		<b>(</b> F)				or N)	
□ EDD (Type)			Sample Temperature: / .				띪	H	9	4 bc	od 5	0 0	stals	ž	ides	<b>a</b>	3	9			ک	
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEA	No. 22/01	BTEX + MTBE	BTEX + MTBE	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides	8260B (VOA)	~ 1	5 72503			Air Bubbles (Y or N)
5/22/13	9:35	Soil	SC-1	3-802 yors	200	-6	01												X			П
																					$\top$	
					·																1	
														_	$\downarrow$							<u> </u>
				·	,	ļ						_	_		_					_	$\bot$	igspace
	<u> </u>					<del> </del>	·					$\dashv$	_	_	_	_		_	-	$\dashv$	+	╁
		-	·		-				_		-+			_			$\dashv$			$\dashv$	+	┼
	<del> </del>	<u> </u>							_		$\dashv$	-	$\dashv$		_					+	+	$\vdash$
5/23/13	Time:	Kel	led by:	Received by:	Weete	Date 5/23/13	Time	1	_	_	الغ	to	Co		- पि	hil	lip	 S_				
Date: 5/23/13	Time:	Relinquish	ethe Whele	Received by:	1 OF	Date 5/23/13/0	Time	140	ea:\	l												
•	lf necessary	samples sub	omitted to Hall Environmental may be sub-	contracted to other a	ccredited laboratori	ies. This serves	as notice of this	possil	bility.	Any su	b-cont	racted	data w	vill be	clearly	y notat	ted on	the a	nalytica	l report.		