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 Department Oil Conservation Division 1220 South St. Francis Dr.

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Santa Fe, NM 87505 provide a copy to the District Office.

Pit, Closed-Loop System, Below-Grade Tank, or

Proposed Alternative Method Permit or Closure Plan Application
Type of action:  Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method  Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method  Modification to an existing permit  Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method  Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: BP AMERICA PRODUCTION COMPANY OGRID #:778
Address: 200 Energy Court, Farmington, NM 87401
Facility or well name: GALLEGOS CANYON UNIT COM 094
API Number: 3004508057 OCD Permit Number:
U/L or Qtr/Qtr F Section 23.0 Township 29.0N Range 13W County: San Juan County
Center of Proposed Design: Latitude 36.71379 Longitude -108.17786 NAD: ☐1927 ▼ 1983
Surface Owner: ☐ Federal ☐ State ☑ Private ☐ Tribal Trust or Indian Allotment
Pit: Subsection F or G of 19.15.17.11 NMAC   RCVD JAN 7'14     Temporary:   Drilling   Workover   OIL CONS. DIV.     Permanent   Emergency   Cavitation   P&A   DIST. 3     Lincd   Unlined Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other     String-Reinforced     Liner Seams:   Welded   Factory   Other   Volume:   bbl Dimensions: L   x W   x D     3
4.
Secondary containment with leak detection   Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
□ Visible sidewalls and liner       □ Visible sidewalls only       □ Other         Liner type:       Thickness
5.
Alternative Method:
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

6. Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks) Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, institution or church) Four foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify	, hospital,
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)  Screen Netting Other  Monthly inspections (If netting or screening is not physically feasible)	
8. Signs: Subsection C of 19.15.17.11 NMAC  12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers  Signed in compliance with 19.15.16.8 NMAC	
9. Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.  Please check a box if one or more of the following is requested, if not leave blank:  Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau consideration of approval.  Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	office for
Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acces material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry above-grade tanks associated with a closed-loop system.	opriate district approval.
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.  - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  (Applies to temporary, emergency, or cavitation pits and below-grade tanks)  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  (Applies to permanent pits)  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.  NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine.  - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS, NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain FEMA map	☐ Yes ☐ No

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC  Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  Previously Approved Design (attach copy of design) API Number:  or Permit Number:
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC   Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.    Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9   Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC   Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC   Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC   Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API Number:
☐ Previously Approved Operating and Maintenance Plan API Number: (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)
13.
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Climatological Factors Assessment Certified Engineering Design Planser - based upon the appropriate requirements of 19.15.17.11 NMAC Climatological Factors Assessment Certified Engineering Design Planser - based upon the appropriate requirements of 19.15.17.11 NMAC Climatological Factors Assessment Certified Engineering Design Planser - based upon the appropriate requirements of 19.15.17.11 NMAC Climatological Factors Assessment Certified Engineering Design Planser - based upon the appropriate requirements of 19.15.17.11 NMAC Climatological Factors Assessment Certified Engineering Design Planser - based upon the appropriate requirements of 19.15.17.11 NMAC Climatological Factors Assessment Certified Engineering Design Planser - based upon the appropriate requirements of 19.15.17.11 NMAC Climatological Factors Assessment Climatological Factors Assessment Certified Engineering Design Planser - based upon the appropriate requirements of 19.15.17.11 NMAC Climatological Factors Assessment Certified Engineering Design Planser - based upon the appropriate requirements of 19.15.17.11 NMAC Climatological Factors Assessment Certified Engine
Proposed Closure: 19.15.17.13 NMAC
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.  Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Closed-loop System Alternative  Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.  ■ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  □ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  □ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)  ■ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  ■ Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Instructions: Please indentify the facility or facilities for the disposal of liquids, facilities are required.		
Disposal Facility Name:	Disposal Facility Permit Number:	
Disposal Facility Name:	Disposal Facility Permit Number:	
Will any of the proposed closed-loop system operations and associated activities o  Yes (If yes, please provide the information below)  No		vice and operations?
Required for impacted areas which will not be used for future service and operation  Soil Backfill and Cover Design Specifications based upon the appropriate Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	te requirements of Subsection H of 19.15.17.13 NMA( n I of 19.15.17.13 NMAC	С
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the provided below. Requests regarding changes to certain siting criteria may required considered an exception which must be submitted to the Santa Fe Environmental demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC	ire administrative approval from the appropriate dist al Bureau office for consideration of approval. Just	rict office or may be
Ground water is less than 50 feet below the bottom of the buried waste NM Office of the State Engineer - iWATERS database search; USGS; Database search; USGS	ta obtained from nearby wells	Yes No
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; USGS; Database s	ta obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste.  - NM Office of the State Engineer - iWATERS database search; USGS; Database search; US	ta obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other siglake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	gnificant watercourse or lakebed, sinkhole, or playa	Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or church - Visual inspection (certification) of the proposed site; Aerial photo; Satellit		☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that les watering purposes, or within 1000 horizontal feet of any other fresh water well or - NM Office of the State Engineer - iWATERS database; Visual inspection	spring, in existence at the time of initial application.	Yes No
Within incorporated municipal boundaries or within a defined municipal fresh wat adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approx		Yes No
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visu	nal inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine.  - Written confirmation or verification or map from the NM EMNRD-Mining	g and Mineral Division	☐ Yes ☐ No
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Geolog Society; Topographic map	gy & Mineral Resources; USGS; NM Geological	☐ Yes ☐ No
Within a 100-year floodplain FEMA map		☐ Yes ☐ No
18.  On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the by a check mark in the box, that the documents are attached.  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Construction/Design Plan of Burial Trench (if applicable) based upon the a Construction/Design Plan of Temporary Pit (for in-place burial of a drying protocols and Procedures - based upon the appropriate requirements of 19.1 Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Disposal Facility Name and Permit Number (for liquids, drilling fluids and Soil Cover Design - based upon the appropriate requirements of Subsection Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	quirements of 19.15.17.10 NMAC  If Subsection F of 19.15.17.13 NMAC  ppropriate requirements of 19.15.17.11 NMAC  pad) - based upon the appropriate requirements of 19.15.17.13 NMAC  quirements of Subsection F of 19.15.17.13 NMAC  If Subsection F of 19.15.17.13 NMAC  drill cuttings or in case on-site closure standards cannot H of 19.15.17.13 NMAC  1 of 19.15.17.13 NMAC	15.17.11 NMAC

Operator Application Certification:  I hereby certify that the information submitted with this application is true, acc	urate and complete to the best of my knowledge and belief.
Name (Print): Jeffrey Peace	Title: Field Environmental Advisor
Signature: They H. Reace	Date: <u>06/14/2010</u>
e-mail address: Peace.Jeffrey@bp.com	Telephone: _505-326-9479
20.  OCD Approval: Permit Application (including closure plant) Closure	Plan (only) OCD Conditions (see attachment)
OCD Representative Signature	- County Clely Approvar Date: 5/10/11
Title: Frirance La Engreer	ODD Permit Number:
21. Closure Report (required within 60 days of closure completion): Subsection Instructions: Operators are required to obtain an approved closure plan prion The closure report is required to be submitted to the division within 60 days of section of the form until an approved closure plan has been obtained and the	r to implementing any closure activities and submitting the closure report. If the completion of the closure activities. Please do not complete this
22.  Closure Method:  Waste Excavation and Removal On-Site Closure Method Alter  If different from approved plan, please explain.	native Closure Method   Waste Removal (Closed-loop systems only)
23. Closure Report Regarding Waste Removal Closure For Closed-loop System Instructions: Please indentify the facility or facilities for where the liquids, di two facilities were utilized.	
Disposal Facility Name:	Disposal Facility Permit Number:
Disposal Facility Name:	Disposal Facility Permit Number:
Were the closed-loop system operations and associated activities performed on a Yes (If yes, please demonstrate compliance to the items below) No	or in areas that will not be used for future service and operations?
Required for impacted areas which will not be used for future service and operation.  Site Reclamation (Photo Documentation)  Soil Backfilling and Cover Installation.  Re-vegetation Application Rates and Seeding Technique.	ations:
Closure Report Attachment Checklist: Instructions: Each of the following mark in the box, that the documents are attached.  Proof of Closure Notice (surface owner and division)  Proof of Deed Notice (required for on-site closure)  Plot Plan (for on-site closures and temporary pits)  Confirmation Sampling Analytical Results (if applicable)  Waste Material Sampling Analytical Results (required for on-site closure)  Disposal Facility Name and Permit Number  Soil Backfilling and Cover Installation  Re-vegetation Application Rates and Seeding Technique  Site Reclamation (Photo Documentation)  On-site Closure Location: Latitude 36.7/379  Long	
Operator Closure Certification:  I hereby certify that the information and attachments submitted with this closure	report is true, accurate and complete to the best of my knowledge and
belief. I also certify that the closure complies with all applicable closure require	ments and conditions specified in the approved closure plan.
Name (Print): Jeff Peace	Date: January 6, 2014
Signature:	Date: January 6, 2014
e-mail address: peace-je-ffrey@bp.com	Telephone: (505) 326-9479

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Road, Aztec, NM 87410
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1220 S. St. Francis Dr., Santa Fe, NM 87505

#### State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

			Rele	ase Notific	atior	and Co	rrective A	ction						
						<b>OPERA</b>	ror		☐ Initia	l Report	$\boxtimes$	Final Report		
							176							
Facility Nar	ne: Galleg	os Canyon L	Init Com	94		Facility Typ	e: Natural gas v	vell						
Surface Ow	Name of Company: BP Address: 200 Energy Court, Farmington, NM 87401 Facility Name: Gallegos Canyon Unit Com 94  Surface Owner: Private    Miner				wner:	Federal			API No	. 30045080	)57			
				LOCA	TIOI	N OF REI	LEASE							
Unit Letter	Section	Township	Range	Feet from the			Feet from the	East/V	Vest Line	County: S	an Juar	1		
F	23	29N		1,850	North		1,850	West		-				
		Lati	tude3	6.71379		Longitud	e108.17786							
				NAT	URE	OF RELI	EASE							
Type of Rele	ase: none								Volume R	ecovered: N	I/A			
Source of Re	lease: belov		95 bbl Ta	nk "B"				e:	Date and	Hour of Dis	covery	:		
Was Immedia	ate Notice (		Yes	No 🛭 Not Re	quired	If YES, To	Whom?							
Name of Company: BP														
Was a Water	course Reac		Yes ⊠	] No		If YES, Vo	lume Impacting t	the Wate	ercourse.					
If a Watercou	irse was Im	pacted, Descr	ibe Fully.*	# · · · · · · · · · · · · · · · · · · ·		1								
the BGT. So	il analysis r	esulted in TP	H, BTEX a											
					moved a	and the area u	nderneath the BC	iT was s	ampled. T	he excavate	d area v	was		
regulations a public health should their or or the environ	Il operators or the envir operations homent. In a	are required to ronment. The nave failed to addition, NMC	o report ar acceptance adequately OCD accep	nd/or file certain report of a C-141 report investigate and re	elease n ort by the emediat	otifications a e NMOCD m e contaminati	nd perform correct arked as "Final R on that pose a thr	ctive act eport" d eat to gr	ions for rele oes not reli ound water	eases which eve the ope , surface wa	may en rator of ater, hu	ndanger f liability man health		
	00	0					OIL CON	SERV	ATION	DIVISIO	<u>N</u>			
Signature:	SHO 1	eare												
Printed Name	e: Jeff Peace	e				Approved by	Environmental S	pecialis	t:					
Title: Field E	nvironment	tal Advisor				Approval Da	te:		Expiration Date:					
E-mail Addre	ess: peace.je	effrey@bp.cor	n			Conditions of	f Approval:			Attached				
Date: Januar	y 6, 2014		Phone:	505-326-9479										

<sup>\*</sup> Attach Additional Sheets If Necessary

CLIENT: BP	BLA P.O. BOX	•	OMFIEL	.D, Ni		3	TANK ID	0045080	_
			632-119				(if applicble): _	A &	<b>b</b>
FIELD REPORT:	(circle one): BGT CONF	IRMATION] / REL	EASE INVESTIG	ATION /	OTHER:		PAGE#:	<b>1</b> of	_1
							DATE STARTED:	10/2	8/13
QUAD/UNIT: F SEC: 23 TWP:	29N RNG: 13	W PM: N	M CNT	: SJ	ST:	NM_	DATE FINISHED:		
						DIAN			
LEASE #: -	PROD. FORMATION:	DK CONTR	RACTOR: MI	3F - K.	AMBROS	E	SPECIALIST(S):	NJ	<u> V</u>
	: WELL HEAD (				96 X 108.	17828	GL E		
1) 95 BGT (SW/DB) - A									
2) 95 BGT (SW/DB) - B			379 X 108	.17786	Dis	STANCE/BE/	ARING FROM W.H.:	147.5', \$	355.5E
3)									
4)	GPS COORD.:					STANCE/BE/	ARING FROM W.H.:		OVM
	_		·						READING (ppm)
<b>—</b> ` '							•	•	NA.
,	•								
•							•		
								300.0(CI)	NA NA
CONSISTENCY (NON COHESIVE SOILS): LC MOISTURE: DRY SLIGHTLY MOIST / MO	DOSE / FIRM DENSE / VEF ET) SATURATED / SUPER SA	RY DENSE STURATED STORY	DENSITY (CHOOLE HC ODOR	DETECTE  BELOW  NATION:	CLAYS & SILT ED: YES / No GRADE.  EXCAVAT	S): SOFT O EXPLA	/ FIRM / STIFF / VE ANATION	RY STIFF / HA	
	EAREST WATER SOURCE:	>1,000° NE	AREST SURFAC	E WATER:	<1,000	_ NMOCI	TPH CLOSURE S	TD: <u>100</u>	_ ppm
DATE STATED 10/28/13									
		<b>⊛ - S.P.</b> D	). (WATER)	X-S	S.P.D. (SOI	L)   B	<del> </del>		)
		GRADE; B = BELOW; T	.H. = TEST HOLE; ~	= APPROX;	W.H. = WELL HEA	AD;	1		
					WALL; NA - NOT	Ma	agnetic declina	ation: 10°	<u>E</u>
					8/13				

#### **Analytical Report**

#### Lab Order 1310E00

Date Reported: 11/6/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

GCU COM #94

Client Sample ID: GW @ 5' (95)-B

Collection Date: 10/28/2013 10:15:00 AM

Project: 1310E00-003 Lab ID:

Matrix: AQUEOUS

Received Date: 10/30/2013 9:44:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	1.0	μg/L	1	11/1/2013 3:00:50 PM	R14530
Toluene	ND	1.0	μg/L	1	11/1/2013 3:00:50 PM	R14530
Ethylbenzene	1.0	1.0	μg/L	1	11/1/2013 3:00:50 PM	R14530
Xylenes, Total	8.6	2.0	μg/L	1	11/1/2013 3:00:50 PM	R14530
Surr: 4-Bromofluorobenzene	105	85-136	%REC	1	11/1/2013 3:00:50 PM	R14530
EPA METHOD 300.0: ANIONS					Analys	: JRR
Chloride	61	5.0	mg/L	10	10/30/2013 6:30:48 PM	1 R14472

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

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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

#### **Analytical Report**

#### Lab Order 1310E00

Hall Environmental Analysis Laboratory, Inc. Date Reported: 11/6/2013

**CLIENT:** Blagg Engineering Project:

1310E00-004

Lab ID:

Client Sample ID: 4PC-SW @ 2'-3' (95)-B

GCU COM #94 Collection Date: 10/28/2013 10:20:00 AM Matrix: SOIL

Received Date: 10/30/2013 9:44:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	SE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/1/2013 5:39:40 PM	10124
Surr: DNOP	98.1	66-131	%REC	1	11/1/2013 5:39:40 PM	10124
EPA METHOD 8015D: GASOLINE RA	ANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	10/31/2013 3:58:51 PM	10112
Surr: BFB	98.4	74.5-129	%REC	1	10/31/2013 3:58:51 PM	10112
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.049	mg/Kg	1	10/31/2013 3:58:51 PM	10112
Toluene	ND	0.049	mg/Kg	1	10/31/2013 3:58:51 PM	10112
Ethylbenzene	ND	0.049	mg/Kg	1	10/31/2013 3:58:51 PM	10112
Xylenes, Total	ND	0.097	mg/Kg	1	10/31/2013 3:58:51 PM	10112
Surr: 4-Bromofluorobenzene	120	80-120	%REC	1	10/31/2013 3:58:51 PM	10112
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Chloride	ND	1.5	mg/Kg	1	11/4/2013 3:15:20 PM	10169
EPA METHOD 418.1: TPH					Analyst	: JME
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	11/5/2013	10126

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

- Not Detected at the Reporting Limit Page 4 of 12 Sample pH greater than 2 for VOA and TOC only. P
- RLReporting Detection Limit

Cr	nain-c	of-Cus	tody Record	Turn-Around T	ime:		E	7		[ <del> -</del>	[] <u>[</u>	LIL		ИV	7][R	(O)		AE P	47 <b>7</b> /	A][	
Client:	BLAG	G ENGR.	/ BP AMERICA	✓ Standard	Rush _		-	مند	_									RA			7
	<del></del>			Project Name:				<u>-</u>	-			w.ha									
Mailing Ad	dress:	P.O. BOX	(87		GCU COM #	<b>†94</b>		490	01 H									7109			
		BLOOMF	FIELD, NM 87413	Project #:							15-39			•	505-						
Phone #:		(505) 63	2-1199			,			e de la composición dela composición de la composición de la composición de la composición dela composición de la composición dela composición dela composición de la composición de la composición de la composición de la composición dela	e en meren			nal	de	Req	ues					
email or Fa	ax#:			Project Manag	er:						22.0			-	-			ਜ਼ੀ	1	1	Τ
QA/QC Pad	-		Level 4 (Full Validation)		NELSON VE	LEZ	<del>TWB's (</del> 8Ø21B)	+ TPH (Gas only)	Towns			ls)		204°SO	PCB's			er - 300.1)		a a	
Accreditati	on:			Sampler:	NELSON VE	LEZ MI	188	(Gas	RO /	ㅋ	ਜ	SIIV		102,1	3082			/ water		sample	•
□ NELAP		□ Other		On ice:	Ç∕Yes .		鬚	폽	0/c	418.	504.1)	8270SIMS)	S	03,1	} / sa		Æ	300.0 /		es a	
□ EDD (T	ype)	<del></del>		Sample Tempe	rature:	LOS		¥ 3E +	(GR(	ğ	ğ		etal	CI,N	icide	Æ	j-V(	==3	<u> </u>	Sosit	1
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALNO 1310E00	BTEX +******	BTEX + MTBE	TPH 8015B (GRO / DRO	TPH (Method 418.1)	EDB (Method	PAH (8310 or	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	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil -	Grab sample	4 pt. composite	
10/28/13	1100	WATER	GW @ 5' (95)-A	40 ml VOA - 2	HCI & Cool	-001	V			·									∀		T
																				1	
10/28/13	1100	WATER	GW @ 5' (95)-A	500 ml - 1	Cool	-0021												V	√	7	
																				T	
10/28/13	1105	SOIL	4PC - SW @ 2'-3' (95)-A	4 oz 1	Cool	-0032	٧		V	V								V		V	
10/28/13	1015	WATER	GW @ 5' (95)-B	40 ml VOA - 2	HCI & Cool	-00 <del>4</del> 3	V												V	<u>/</u>	
			<u> </u>			·															
10/28/13	1015	WATER	GW @ 5' (95)-B	500 ml - 1	Cool	一个053												V	V	9	
10/28/13	1020	SOIL	4PC - SW @ 2'-3' (95)-B	4 oz 1	Cool	-0064	V		V	V								V		V	
Date: 7/29/13	Time: 832	Relinquishe	ler V f	Received by:	Waller '	Date Time 0/29/13 832	BI	nark	RECT				s and	Farm	ingt	on 1	IN A O	7401			
Date: 10 79   13	Time: 1746 If necess	Relinquished	tru () aller	Received by:    Multiple   Technology   Tech	h b/3	Date Time  O12 0 9:44  S. This serves as notice o	w	ork C	rder	:	N15	362	<u>921</u>		Pay	/key:		7401 ZEHV			-

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

1310E00

06-Nov-13

Client:

Blagg Engineering

Project:

GCU COM #94

Sample ID MB-10169

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID: PBS

Batch ID: 10169

RunNo: 14556

Prep Date: 11/4/2013

Analysis Date: 11/4/2013

SeqNo: 417936

Units: mg/Kg

Analyte

SPK value SPK Ref Val **PQL** 

%REC LowLimit

HighLimit

**RPDLimit** Qual

Chloride

ND 1.5

Sample ID LCS-10169

SampType: LCS Batch ID: 10169 TestCode: EPA Method 300.0: Anions

Client ID: LCSS Prep Date: 11/4/2013

Analysis Date: 11/4/2013

RunNo: 14556 SeqNo: 417938

Units: mg/Kg

SPK value SPK Ref Val

Analyte

PQL

LowLimit

Qual

15.00

**RPDLimit** 

Chloride

%REC 90.1

%RPD

%RPD

Result

HighLimit 110

Qualifiers:

Е

Value exceeds Maximum Contaminant Level.

Analyte detected below quantitation limits

0 RSD is greater than RSDlimit R RPD outside accepted recovery limits

Value above quantitation range

Spike Recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit

Page 5 of 12

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1310E00

06-Nov-13

Client:

Blagg Engineering

Project:		GCU COM #94				<u>.</u>					
Sample ID	МВ	Samp	Type: MI	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID:	PBW	Bate	h ID: R1	14472	F	RunNo: 1	4472				
Prep Date:		Analysis	Date: 10	0/30/2013		SeqNo: 4	15748	Units: mg/L	i		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	0.50								···
Sample ID	LCS	Samp	Type: <b>LC</b>	s	Tes	tCode: EI	PA Method	300.0: Anion	s		
Client ID:	LCSW	Bato	h ID: R1	4472	F	RunNo: 14	4472				
Prep Date:		Analysis	Date: 10	0/30/2013	5	SeqNo: 4	15749	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		4.8	0.50	5.000	0	95.6	90	110			
Sample ID	A4	Samp	Type: CC	:V_4	Tes	tCode: EF	PA Method	300.0: Anion	s		
Client ID:	BatchQC	Bato	h ID: <b>R1</b>	4472	F	RunNo: 14	1472				
Prep Date:		Analysis	Date: 10	0/30/2013	5	SeqNo: 4	15758	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		4.7	0.50	5.000	0	93.1	90	110			
Sample ID	A5	Samp	Гуре: СС	V_5	Tes	tCode: EF	A Method	300.0: Anion	<u> </u>		
Client ID:	BatchQC	Bato	h ID: <b>R1</b>	4472	F	RunNo: 14	1472				
Prep Date:		Analysis	Date: <b>10</b>	)/30/2013	5	SeqNo: 41	15770	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HiġhLimit	%RPD	RPDLimit	Qual
Chloride		7.7	0.50	8.000	0	96.7	90	110			
Sample ID	A6	Samp	Гуре: СС		Tes	tCode: EF	PA Method	300.0: Anions	3		
Client ID:	BatchQC	Bato	h ID: <b>R1</b> -	4472	F	tunNo: 14	1472				
Prep Date:		Analysis [	Date: 10	/30/2013	S	eqNo: 41	5782	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		12	0.50	12.00	0	102	90	110			
Sample ID	A4	Samp	ype: CC	V_4	Test	Code: EP	A Method	300.0: Anions	;		
Client ID:	BatchQC	Batc	n ID: <b>R1</b> 4	4472	R	unNo: <b>14</b>	472				
Prep Date:		Analysis [	ate: 10	/30/2013	S	eqNo: <b>41</b>	5794	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		4.7	0.50	5.000	0	93.1	90	110			

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 6 of 12

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

1310E00

06-Nov-13

Client:

Blagg Engineering

Project:

GCU COM #94

Sample ID A6

SampType: CCV\_6

TestCode: EPA Method 300.0: Anions

Client ID: BatchQC Batch ID: R14472

RunNo: 14472

Prep Date:

Analysis Date: 10/31/2013

SeqNo: 415806

TestCode: EPA Method 300.0: Anions

90

Units: mg/L

Analyte

Result PQL 12

SPK value SPK Ref Val 12.00

%REC LowLimit HighLimit

110

**RPDLimit** Qual

Chloride

SampType: CCV\_4

0.50

RunNo: 14472

102

Client ID: Prep Date:

Sample ID A4

Batch ID: R14472

Analysis Date: 10/31/2013

SeqNo: 415814

Units: mg/L

Analyte

**PQL** 

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD

Qual

%RPD

110

0.50

**BatchQC** 

93.0

**RPDLimit** 

Chloride

Result

E

Qualifiers:

Analyte detected below quantitation limits

RSD is greater than RSDlimit 0 RPD outside accepted recovery limits R

Value above quantitation range

Value exceeds Maximum Contaminant Level.

Spike Recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Not Detected at the Reporting Limit

Н Holding times for preparation or analysis exceeded ND

Sample pH greater than 2 for VOA and TOC only.

Page 7 of 12

Reporting Detection Limit

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

1310E00

06-Nov-13

Client:

Blagg Engineering

Project:

GCU COM #94

Sample ID MB-10126	Tes	TestCode: EPA Method 418.1: TPH								
Client ID: PBS	Batcl	n ID: 10	126	F	RunNo: 1	4575				
Prep Date: 10/31/2013 Analysis Date: 11/5/2013		S	SeqNo: 4	18782	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Patroloum Hudrosombons, TD	NID	20								

Petroleum Hydrocarbons, TR ND 20

Sample ID LCS-10126	SampT	ype: <b>LC</b>	S	Tes	tCode: El	PA Method	418.1: TPH			
Client ID: LCSS	Batch	ID: 10	126	F	RunNo: 1	4575				
Prep Date: 10/31/2013	Analysis D	ate: 11	1/5/2013	S	SeqNo: 4	18783	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	95	20	100.0	0	95.1	80	120			

Sample ID LCSD-10126 SampType: LCSD TestCode: EPA Method 418.1: TPH Client ID: LCSS02 Batch ID: 10126 RunNo: 14575 Prep Date: 10/31/2013 Analysis Date: 11/5/2013 SeqNo: 418784 Units: mg/Kg SPK value SPK Ref Val %REC LowLimit Analyte Result PQL HighLimit %RPD **RPDLimit** Qual Petroleum Hydrocarbons, TR 96 20 100.0 96.4 1.36 20

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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# Hall Environmental Analysis Laboratory, Inc.

Result

44

4.6

**PQL** 

10

WO#:

%RPD

HighLimit

128

131

**RPDLimit** 

Qual

1310E00

06-Nov-13

Client:

Blagg Engineering

Project:

Analyte

Surr: DNOP

Diesel Range Organics (DRO)

GCU COM #94

Sample ID MB-10124	SampType: MBLK	TestCode: EPA Method	8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 10124	RunNo: 14475	
Prep Date: 10/31/2013	Analysis Date: 10/31/2013	SeqNo: 416119	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10		
Surr: DNOP	10 10.00	102 66	131
Sample ID LCS-10124	SampType: LCS	TestCode: EPA Method	8015D: Diesel Range Organics
Client ID: LCSS	Batch ID: 10124	RunNo: 14475	·
Prep Date: 10/31/2013	Analysis Date: 10/31/2013	SeqNo: <b>416120</b>	Units: mg/Kg

%REC

87.2

91.9

LowLimit

77.1

66

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

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

Page 9 of 12

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

1310E00

06-Nov-13

Client:

Blagg Engineering

Project:

GCU COM #94

Sample ID MB-10112 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: Batch ID: 10112 PBS RunNo: 14496 Prep Date: 10/30/2013 Analysis Date: 10/31/2013 SeqNo: 416360 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 960 1000 96.4 74.5 129

Sample ID LCS-10112	SampT	ype: LC	s	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch	ID: <b>10</b>	112	F	RunNo: 1	4496				
Prep Date: 10/30/2013	Analysis D	ate: 10	0/31/2013	S	SeqNo: 4	16361	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.0	74.5	126		···	
Surr: BFB	1100		1000		105	74.5	129			

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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# Hall Environmental Analysis Laboratory, Inc.

WO#:

1310E00

06-Nov-13

Client:

Blagg Engineering

Project:

GCU COM #94

Sample ID MB-10112	SampType: MBLK TestCode: EPA Method 8021					8021B: Vola	tiles			
Client ID: PBS	Batc	h ID: <b>10</b>	112	F	RunNo: 14496					
Prep Date: 10/30/2013	Analysis [	Date: 16	0/31/2013	S	SeqNo: 4	16389	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	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		117	80	120			

Sample ID LCS-10112	Samp <sup>*</sup>	SampType: LCS TestCode: EPA Method 8				8021B: Vola	tiles				
Client ID: LCSS	Batc	h ID: 10	112	F	RunNo: 1	4496					
Prep Date: 10/30/2013	Analysis [	Date: 10	)/31/2013	SeqNo: 416390			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.97	0.050	1.000	0	96.6	80	120				
Toluene	1.0	0.050	1.000	0	100	80	120				
Ethylbenzene	0.99	0.050	1.000	0	99.4	80	120				
Xylenes, Total	3.0	0.10	3.000	0	101	80	120				
Surr: 4-Bromofluorobenzene	1.3		1.000		127	80	120			S	

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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# Hall Environmental Analysis Laboratory, Inc.

WO#:

1310E00

06-Nov-13

Client:

Blagg Engineering

Project:

GCU COM #94

Sample ID 5ML RB	SampType: MBLK			Tes	TestCode: EPA Method 8021B: Volatiles					
Client ID: PBW	Batch ID: R14530			F	RunNo: 14530					
Prep Date:	Analysis D	Date: 11	1/1/2013	5	SeqNo: 4	17482	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromoffuorobenzene	21		20.00		105	85	136			

Sample ID 100NG BTEX LO	S Sampl	Γype: <b>LC</b>	s	Tes	tCode: E	PA Method 8021B: Volatiles					
Client ID: LCSW	Batcl	Batch ID: <b>R14530</b> RunNo: <b>14530</b>									
Prep Date:	Analysis E	Date: 11	1/1/2013	\$	SeqNo: 4	17483	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	21	1.0	20.00	0	103	80	120				
Toluene	21	1.0	20.00	0	104	80	120				
Ethylbenzene	21	1.0	20.00	0	104	80	120				
Xylenes, Total	64	2.0	60.00	0	107	80	120				
Surr: 4-Bromofluorobenzene	22		20.00		108	85	136				

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

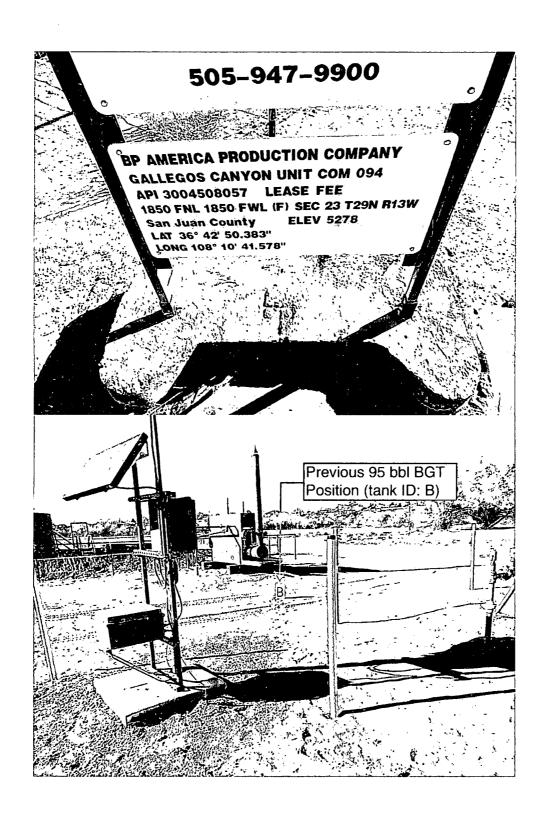
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# HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

	Wedsite. www.	natienvironinental			
Client Name: BLAGG	Work Order Number	er: 1310E00		RcptNo:	1
Received by/date: MA	10/30/13				
Logged By: Michelle Garcia	10/30/2013 9:44:00 A	AM	Mirall Ga	nua)	
Completed By: Michelle Garcia	10/30/2013 10:27:33	AM	Michille Ga Michille Ga	uia)	
Reviewed By:	10/30/13	3			
Chain of Custody			<del>-</del>		
1. Custody seals intact on sample bottles?		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. Was an attempt made to cool the samples'	?	Yes 🗹	No 🗆	na 🗀	
5. Were all samples received at a temperature	of >0° C to 6.0°C	Yes 🗹	No 🗆	na 🗆	
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗆		
7. Sufficient sample volume for indicated test(	s)?	Yes 🗹	No 🗆		
8, Are samples (except VOA and ONG) prope	rly preserved?	Yes 🗹	No 🗆		
9. Was preservative added to bottles?		Yes 🗌	No 🗹	NA 🗆	
10.VOA vials have zero headspace?		Yes 🗌	No 🗆	No VOA Vials 🗹	
11 Were any sample containers received broken	en?	Yes	No <b>☑</b> [	# of preserved	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗆	bottles checked for pH:	r >12 unless noted)
13. Are matrices correctly identified on Chain of	Custody?	Yes 🗹	No 🗆	Adjusted?	
14. Is it clear what analyses were requested?	•	Yes 🗹	No 🗆		•
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗆 🏻	Checked by:	
,					
Special Handling (if applicable)					
16. Was client notified of all discrepancies with	this order?	Yes 🗌	No 🗆	NA 🗹	
Person Notified:	Date:				
By Whom:	Via:	eMail F	Phone 🗌 Fax	In Person	
Regarding:		y New Marine (1) has			
Client Instructions:	· · · · · · · · · · · · · · · · · · ·			·	
17. Additional remarks:					
18. Cooler Information  Cooler No Tèmp °C Condition S	eal Intact   Seal No	Seal Date	Signed By		
1 1.0 Good Ye	3				



#### BP AMERICA PRODUCTION COMPANY

SAN JUAN BASIN, NORTHWEST NEW MEXICO

#### BELOW-GRADE TANK CLOSURE PLAN

# <u>API No. 3004508057</u> Unit Letter F, Section 23, T29N, R13W

This plan will address the standard protocols and procedures for closure of below-grade tanks (BGTs) on BP America Production Company (BP) well sites. As stipulated in Paragraph A of 19.15.17.13 NMAC, BP shall close a BGT within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the New Mexico Oil Conservation Division (NMOCD) requires because of imminent danger to fresh water, public health, safety or the environment. If deviations from this plan are necessary, any specific changes will be included on form C-144 and approved by the NMOCD. BP shall close an existing BGT that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofit with a BGT that complies with the BP NMOCD approved BGT design attached to the BP Design and Construction Plan. BP shall close an existing BGT that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, if not previously retrofitted to comply with the BP NMOCD approve BGT Design attached to the BP Design and Construction Plan, prior to any sale or change in operator pursuant to 19.15.9.9 NMAC. BP shall close the permitted BGT within 60 days of cessation of the BGTs operation or as required by the transitional provisions of Subsection B, D, or E of 19.15.17.17 NMAC.

#### **General Closure Plan**

- 1. BP shall notify the surface owner by certified mail that it plans to close a BGT. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records demonstrates compliance with this requirement.
  - No notice was made due to misunderstanding of the notice requirements. BP did not think notice was necessary if BGT replaced with LPT, but realizes notice is required for any BGT closure. Closure notices will be made for all BGT closures from this point forward.
- 2. BP shall notify the division District III office verbally or by other means at least 72 hours, but not more than one (1) week, prior to any closure operation. The notice shall include the operator's name, and the location to be closed by unit letter, section, township and range. If the BGT closure is associated with a particular well, then the notice shall also include the well's name, number and API number.
  - No notice was made due to misunderstanding of the notice requirements. BP did not think notice was necessary if BGT replaced with LPT, but realizes notice is required for any BGT closure. Closure notices will be made for all BGT closures from this point forward.

- 3. BP shall remove liquids and sludge from the BGT prior to implementing a closure method and dispose of the liquids and sludge in a NMOCD's division-approved facility. The facilities to be used are:
  - a. BP Crouch Mesa Landfarm, Permit NM-02-003 (Solids)
  - b. JFJ Landfarm, Permit NM-01-010(B) (Solids and Sludge)
  - c. Basin Disposal, Permit NM-01-0005 (Liquids)
  - d. Envirotech Inc Soil Remediation Facility, Permit NM-01-0011 (Solids and Sludge)
  - e. BP Operated E.E. Elliott SWD #1, API 30-045-27799 (Liquids)
  - f. BP Operated 13 GCU SWD #1, API 30-045-28601 (Liquids)
  - g. BP Operated GCU 259 SWD, API 30-045-20006 (Liquids)
  - h. BP Operated GCU 306 SWD, API 30-045-24286 (Liquids)
  - i. BP Operated GCU 307 SWD, API 30-045-24248 (Liquids)
  - j. BP Operated GCU 328 SWD, API 30-045-24735 (Liquids)
  - k. BP Operated Pritchard SWD #1, API 30-045-28351 (Liquids)

All liquids and sludge in the BGT were removed and sent to one of the above NMOCD approved facilities for disposal.

4. BP shall remove the BGT and dispose of it in a NMOCD approved facility or recycle, reuse, or reclaim it in a manner that the NMOCD approves. If a liner is present and must be disposed of it will be cleaned by scraping any soils or other attached materials on the liner to a de minimus amount and disposed at a permitted solid waste facility, pursuant to Subparagraph (m) of Paragraph (1) of Subsection C of 19.15.35.8 NMAC. Documentation as to the final disposition of the removed BGT will be provided in the final closure report.

The BGT was transported to a storage area for sale and re-use.

5. BP shall remove any on-site equipment associated with a BGT unless the equipment is required for well production.

All equipment associated with the BGT has been removed.

6. BP shall test the soils beneath the BGT to determine whether a release has occurred. BP shall collect at a minimum: a five (5) point composite sample and individual grab samples from any area that is wet, discolored or showing other evidence of a release and analyze for BTEX, TPH and chlorides. The testing methods for those constituents are as follows;

Constituents	Testing Method	Release Verification	Sample
	95 bbl BGT	(mg/Kg)	results
Benzene	US EPA Method SW-846 8021B or 8260B	0.2	ND
Total BTEX	US EPA Method SW-846 8021B or 8260B	50	ND
TPH	US EPA Method SW-846 418.1	100	ND
Chlorides	US EPA Method 300.0 or 4500B	250 or background	ND

Notes: mg/Kg = milligram per kilogram, BTEX = benzene, toluene, ethylbenzene, and total xylenes, TPH = total petroleum hydrocarbons. Other EPA methods that the division approves may be applied to all constituents

listed. Chloride closure standards will be determined by which ever concentration level is greatest.

Soil under the BGT's was sampled and TPH, BTEX and chloride levels were below the stated limits. Sampling data is attached. Water under the BGT was also sampled and BTEX were below standards. Sampling results are attached.

- 7. BP shall notify the division District III office of its results on form C-141. C-141 is attached.
- If it is determined that a release has occurred, then BP will comply with 19.15.30 NMAC and 19.15.29 NMAC, as appropriate.
   Sampling results indicate no release occurred.
- 9. If the sampling demonstrates that a release has not occurred or that any release does not exceed the concentrations specified above, then BP shall backfill the excavation, with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover, re-contour and re-vegetate the location. The location will be reclaimed if it is not with in the active process area

The area under the BGT was backfilled with clean soil and is still within the active well area.

10. BP shall reclaim the BGT location and all areas associated with the BGT including associated access roads to a safe and stable condition that blends with the surrounding undisturbed area. BP shall substantially restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover as provided in Subsection H of 19.15.17.13 NMAC, re-contour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and re-vegetate according to Subsection I of 19.15.17.13 NMAC.

The area over the 95 bbl BGT is still within the active well area. This area will be reclaimed when the well is plugged and abandoned as part of final reclamation.

11. The soil cover for closures where the BGT has been removed or remediated to the NMOCD's satisfaction shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. The soil cover will be constructed to the site's existing grade and all practicable efforts will be made to prevent ponding of water and erosion of the cover material.

The area over the 95 bbl BGT is still within the active well area. This area will be reclaimed when the well is plugged and abandoned as part of final reclamation.

12. BP shall seed the disturbed area the first growing season after closure of the BGT. Seeding will be accomplished by drilling on the contour whenever practical or by other division-approved methods. Vegetative cover will be, at a minimum, 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation), consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintenance of that cover through two successive growing seasons. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.

The area over the 95 bbl BGT is still within the active well area. This area will be reclaimed when the well is plugged and abandoned as part of final reclamation.

13. BP shall seed, plant and re-seed pursuant to Paragraph (3) of Subsection I of 19.15.17.13 NMAC, until the location successfully achieves the required vegetative cover

BP will seed the area when the well is plugged and abandoned.

14. Pursuant to Paragraph (5) of Subsection I of 19.15.17.13 NMAC, BP shall notify the NMOCD when it has seeded or planted and when it successfully achieves revegetation.

BP will notify NMOCD when re-vegetation is successful.

- 15. Within 60 days of closure completion, BP shall submit a closure report on NMOCD's form C-144, and will include the following:
  - a. proof of closure notification (surface owner and NMOCD)
  - b. sampling analytical reports; information required by 19.15.17 NMAC;
  - c. disposal facility name and permit number
  - d. details on back-filling, capping, covering, and where applicable re-vegetation application rates and seeding techniques and
  - e. site reclamation, photo documentation.

    Closure report on C-144 form is included.
- 16. BP shall certify that all information in the report and attachments is accurate, truthful, and compliant with all applicable closure requirements and conditions specified in the approved closure plan.

Certification section of C-144 has been completed.