Form C-144 July 21, 2008

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. Santa Fe, NM 87505

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.

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# 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 alternated Closure of a pit, closed-loop system, below-grade tank, or proposed alternated Modification to an existing permit Closure plan only submitted for an existing permitted pit below-grade tank, or proposed alternative method	ative method
Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tan	k 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	•
environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority	
Operator: BP AMERICA PRODUCTION COMPANY OGRID #: 778	
Address: 200 Energy Court, Farmington, NM 87401	
Facility or well name: GALLEGOS CANYON UNIT COM G 179E	
API Number: 3004524556 OCD Permit Number:	
U/L or Qtr/Qtr J Section 26.0 Township 29.0N Range 12W County: San Ju	an County
Center of Proposed Design: Latitude 36.69517 Longitude -108.06583	_ NAD: □1927 🗷 1983
Surface Owner: ▼ Federal □ State □ Private □ Tribal Trust or Indian Allotment	
2.	
Pit: Subsection F or G of 19.15.17.11 NMAC	RCVD DEC 6 '13
Temporary: Drilling Workover	OIL CONS. DIV.
Permanent Emergency Cavitation P&A	DIST. 3
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other	
String-Reinforced	
	*W vD
Liner Seams: Welded Factory Other Volume: bbl Dimensions: L_	^ ^ '' ^ ^
3. Closed-loop System: Subsection H of 19.15.17.11 NMAC	
Type of Operation:   P&A Drilling a new well Workover or Drilling (Applies to activities which require prior applied to a prior	mount of a marmit or making of
intent)	loval of a permit of florice of
Drying Pad Above Ground Steel Tanks Haul-off Bins Other	
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other	
Liner Seams: Welded Factory Other	
4	
Below-grade tank: Subsection I of 19.15.17.11 NMAC Tank ID: B	
Volume: 21.0 bbl Type of fluid: Produced Water	
Tank Construction material: Steel	
Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	
☐ Visible sidewalls and liner ■ Visible sidewalls only ☐ Other SINGLE WALLED SINGLE BOTTOMED	
Liner type: Thicknessmil   HDPE  PVC Other	
5.	
Alternative Method:	
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office fo	r consideration of approval.

Form C-144

Oil Conservation Division

Page 1 of 5

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)	hospital,
Four foot height, four strands of barbed wire evenly spaced between one and four feet	
Alternate. Please specify 4' Hogwire with single barbed wire	
7.  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 accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appro office 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; Acrial photo; Satellite image	☐ Yes ➤ No☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  (Applies to permanent pits)	☐ Yes ☐ No  ■ NA
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  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 19.15.17.11 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: 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
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)
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   Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC   Quality Control/Quality Assurance Construction and Installation Plan   Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC   Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC   Nuisance or Hazardous Odors, including H <sub>2</sub> S. Prevention Plan   Cili Field Waste Stream Characterization   Monitoring and Inspection Plan   Erosion Control Plan   Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
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.	d Steel Tanks or Haul-off Bins Only: (19.15.17.13.l. drilling fluids and drill cuttings. Use attachment if it	O NMAC) more than two
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 of	,	uice and operations?
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 operations of the solid Backfill and Cover Design Specifications of the appropriation of Re-vegetation Plan of Subsection of Subsection of Site Reclamation Plan of Subsection of Su	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 request considered an exception which must be submitted to the Santa Fe Environment 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.  Justi	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; USG	ata 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; Da	ta obtained from nearby wells	Yes No
Ground water is more than 100 feet below the bottom of the buried waste.  - NM Office of the State Engineer - iWATERS database search; USGS; Da	ata obtained from nearby wells	Yes No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other si lake (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 churc - Visual inspection (certification) of the proposed site; Aerial photo; Satelli		☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that le 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 wa adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written appro	•	☐ Yes ☐ No
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Vist	ual 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-Minim	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
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 appropriate 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 of Subsection F of 19.15.17.13 NMAC appropriate 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 of 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	15.17.11 NMAC

Form C-144 Oil Conservation Division

Page 4 of 5

0perator Application Certification:	
I hereby certify that the information submitted with this application is true, accurate	•
Name (Print): Jeffrey Peace	Title: Field Environmental Advisor
Signature: Here	Date: <u>06/14/2010</u>
e-mail address:_Peace.deffrey@op.com	Telephone:505-326-9479
20.  OCD Approval: Permit Application (including closure plan) Plosure Han	(only) OCE Conditions (see attachment)
OCD Representative Signature:	Approval Date: 16/26/17
Title: Seniore Hydrologist	CD Permit Number:
21. Closure Report (required within 60 days of closure completion): Subsection K is Instructions: Operators are required to obtain an approved closure plan prior to it. The closure report is required to be submitted to the division within 60 days of the section of the form until an approved closure plan has been obtained and the closure.	mplementing any closure activities and submitting the closure report. completion of the closure activities. Please do not complete this
22. Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative If different from approved plan, please explain.	e Closure Method Waste Removal (Closed-loop systems only)
23. Closure Report Regarding Waste Removal Closure For Closed-loop Systems TI Instructions: Please indentify the facility or facilities for where the liquids, drilling two facilities were utilized.	hat Utilize Above Ground Steel Tanks or Haul-off Bins Only: g fluids and drill cuttings were disposed. Use attachment if more than
	Disposal Facility Permit Number:
Disposal Facility Name:	Disposal Facility Permit Number:
Were the closed-loop system operations and associated activities performed on or in  ☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No	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)	5:
☐ Soil Backfilling and Cover Installation ☐ Re-vegetation Application Rates and Seeding Technique	·
24. Closure Report Attachment Checklist: Instructions: Each of the following item:	s must be attached to the closure report. Please indicate, by a check
mark in the box, that the documents are attached.	the second secon
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)	) a (a Ca)
On-site Closure Location: Latitude 36. 6951'7 Longitude	<u>-108.06583</u> NAD: □1927 🗹 1983
25. Operator Closure Certification:	
I hereby certify that the information and attachments submitted with this closure repo	Off is true, accurate and complete to the best of my knowledge and
belief. I also certify that the closure complies with all applicable closure requiremen	ts and conditions specified in the approved closure plan.
Name (Print): <u>Jeff leace</u>	Title: Field Environmental Advisor
Signature: Signature: 100	Date: Decamber 5,2013
e-mail address: peace . jettray @ bf.com	Telephone: (505) 326-94'79

District 1 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., 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 in 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 D.I

			Reie	ease Nounc	cation	i and Co	orrective A	ction	1			
						<b>OPERA</b>	<b>TOR</b>	•	Initia	al Report	$\boxtimes$	Final Report
Name of Co							f Peace			· • •		
Name of Company: BP  Address: 200 Energy Court, Farmington, NM 87401  Facility Name: Gallegos Canyon Unit Com G 179E  Surface Owner: Federal Mineral  LOC  Unit Letter Section Township Range 1,615  Latitude 36.69502  NA  Type of Release: none Source of Release: below grade tanks – 95 bbl and 21 bbl  Was Immediate Notice Given?  Yes No Not  By Whom?  Was a Watercourse Reached?  Yes No  If a Watercourse was Impacted, Describe Fully.*						Telephone 1	No.: 505-326-94	79				
Address: 200 Energy Court, Farmington, NM 87401 Facility Name: Gallegos Canyon Unit Com G 179E  Surface Owner: Federal Mineral  LOC Unit Letter Section 70 Township 12W 1,615  Latitude 36.69502  NA  Type of Release: none Source of Release: below grade tanks – 95 bbl and 21 bbl Was Immediate Notice Given?  Yes No Not  By Whom?  Was a Watercourse Reached?  Yes No  If a Watercourse was Impacted, Describe Fully.*						Facility Type: Natural gas well						
Surface Ow	mer: Feder	al		Mineral C	)wner: 1	Federal			API No	. 3004524:	556	
				LOCA	ATIO	N OF REI	LEASE					
	1			Feet from the 1,615	North/ South	South Line	Feet from the 1,740	East/ East	West Line	County: S	an Juan	
		Lati	tude_3	6.69502		_ Longitud	e108.06591_					
				NAT	URE	OF REL	EASE					
							Release: N/A			Recovered: 1		
			– 95 bbl a	nd 21 bbl			lour of Occurrence	e:	Date and	Hour of Dis	covery:	
Was Immedi	ate Notice		Yes [	No Not R	equired	If YES, To	Whom?					
						Date and I						
Was a Water	course Read		Yes 🗵	] No		If YES, Vo	lume Impacting t	the Wat	ercourse.			i
If a Waterco	urse was Im	nacted Descr	ibe Fully.	*	<del></del> -	<u> </u>						
impacts from  Describe Are	ea Affected	Soil analysis r	esulted in		chloride	es below stan	dards. Analysis r	esults a	re attached.	d. The exca	vated ar	
regulations a public health should their or the enviro	Il operators or the envi operations h nment. In a	are required to ronment. The nave failed to a	o report an acceptand adequately ICD accep	e is true and comp nd/or file certain in the of a C-141 report investigate and in the of a C-141	elease nort by the emediate	otifications as e NMOCD m e contaminati	nd perform correct arked as "Final R on that pose a thr	ctive act eport" of eat to g	ions for rele loes not reli round water	eases which leve the oper , surface wa	may en- rator of iter, hun	danger liability nan health
Signature:	ela-	Reals					OIL CON	SERV	ATION	DIVISIO	<u>N</u>	
Printed Nam	e: Jeff Peac	e `				Approved by	Environmental S	pecialis	t:			
Title: Field I	Environmen	tal Advisor				Approval Da	e:		Expiration	Date:		
E-mail Addr	ess: peace.jo	effrey@bp.coi	<u>n</u>			Conditions of	Approval:			Attached		
Date: Decer	nber 5, 201	3	Pho	ne: 505-326-9479								

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

CLIENT: BP	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413	API #: 3004524556  TANK ID
FIELD REPORT:	(circle one): BGT CONFIRMATION / RELEASE INVESTIGATION / OTHER:	PAGE #:1_ of1_
	P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199  (circle one): BGT CONFRINATION] RELEASE INVESTIGATION / OTHER  PAGE #: 1_ of	
LEASE #: SF - 078109	PROD. FORMATION: DK CONTRACTOR: MBF - S. GENTRY	SPECIALIST(S): JCB
1) 95 BGT (SW/SB) 2) 21 BGT (SW/SB)	GPS COORD.: 36.69502 X 108.06591 DISTANCE/BE.  GPS COORD.: 36.69517 X 108.06583 DISTANCE/BE.  GPS COORD.: DISTANCE/BE.	ARING FROM W.H.: 70', N7W  ARING FROM W.H.: 137', N9.5E  ARING FROM W.H.:
SAMPLING DATA:		OVM READING
2) SAMPLE ID:21_BGT_5 - pt. @	0.5'       SAMPLE DATE:       07/29/13       SAMPLE TIME:       1340       LAB ANALYSIS:       418.1/8         0.6'       SAMPLE DATE:       07/29/13       SAMPLE TIME:       1356       LAB ANALYSIS:       418.1/8         SAMPLE DATE:       SAMPLE TIME:       LAB ANALYSIS:       LAB ANALYSIS:	8015B/8021B/300.0(CI) 0.0
CONSISTENCY (NON COHESIVE SOILS): LE MOISTURE: DRY (SLIGHTLY MOIST) MOIST / W SAMPLE TYPE: GRAB COMPOSITE +	DOSE / FIRM DENSE / VERY DENSE  ET / SATURATED / SUPER SATURATED  OF PTS  DENSITY (COHESIVE CLAYS & SILTS): SOFT  HC ODOR DETECTED: YES NO EXPL	/FIRM / STIFF / VERY STIFF / HARD
SOIL IMPACT DIMENSION ESTIMATION: DEPTH TO GROUNDWATER: <a href="#">&lt;50'</a>		
( x x̂ x ) ← T.B. ~ 5	T.B.~6' B.G.  N  TIME	CALIB. GAS = 100 ppm
JACK  W.H.  NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION	DN DEPRESSION; B.G. = BELOW GRADE; B = BELOW, T.H. = TEST HOLE; ~ = APPROX.; W.H. = WELL HEAD;	ermit date(s): 06/14/10  CD Appr. date(s): 10/26/12  OVM = Organic Vapor Meter ppm = parts per million BGT Sidewalls Visible: Y/ N  BGT Sidewalls Visible: Y / N
		lagnetic declination: 10 E

## **Analytical Report**

Lab Order 1308135

Date Reported: 8/13/2013

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: 95 BGT 5-pt @ 5'

Project: GCU Com G 179E

**Collection Date:** 7/29/2013 1:40:00 PM

Lab ID: 1308135-001 Matrix: SOIL

Received Date: 8/3/2013 11:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	SE ORGANICS				Analys	t: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/6/2013 12:00:02 PM	8722
Surr: DNOP	100	63-147	%REC	1	8/6/2013 12:00:02 PM	8722
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	t: DAM
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/6/2013 3:39:00 PM	8724
Surr: BFB	103	80-120	%REC	1	8/6/2013 3:39:00 PM	8724
EPA METHOD 8021B: VOLATILES					Analys	t: DAM
Benzene	ND	0.047	mg/Kg	1	8/6/2013 3:39:00 PM	8724
Toluene	ND	0.047	mg/Kg	1	8/6/2013 3:39:00 PM	8724
Ethylbenzene	ND	0.047	mg/Kg	1	8/6/2013 3:39:00 PM	8724
Xylenes, Total	ND	0.094	mg/Kg	1	8/6/2013 3:39:00 PM	8724
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	8/6/2013 3:39:00 PM	8724
EPA METHOD 300.0: ANIONS					Analys	: JRR
Chloride	16	1.5	mg/Kg	1	8/5/2013 4:55:12 PM	8731
EPA METHOD 418.1: TPH					Analys	: LRW
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	8/6/2013	8740

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

- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- Not Detected at the Reporting Limit Page 1 of 7 Sample pH greater than 2 for VOA and TOC only. P
- RL Reporting Detection Limit

## **Analytical Report**

Lab Order 1308135

Date Reported: 8/13/2013

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample 1D: 21 BGT 5-pt @ 6'

Project: GCU Com G 179E Collection Date: 7/29/2013 1:56:00 PM

Lab ID: 1308135-002 Matrix: SOIL Received Date: 8/3/2013 11:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS		•	=-	Analys	t: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/6/2013 12:30:21 PM	8722
Surr: DNOP	103	63-147	%REC	1	8/6/2013 12:30:21 PM	8722
EPA METHOD 8015D: GASOLINE RANG	GE				Analys	t: DAM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/6/2013 4:07:39 PM	8724
Surr: BFB	91.8	80-120	%REC	1	8/6/2013 4:07:39 PM	8724
EPA METHOD 8021B: VOLATILES					Analys	t: DAM
Benzene	ND	0.048	mg/Kg	1	8/6/2013 4:07:39 PM	8724
Toluene	ND	0.048	mg/Kg	1	8/6/2013 4:07:39 PM	8724
Ethylbenzene	ND	0.048	mg/Kg	1	8/6/2013 4:07:39 PM	8724
Xylenes, Total	ND	0.096	mg/Kg	1	8/6/2013 4:07:39 PM	8724
Surr: 4-Bromofluorobenzene	102	80-120	%REC	1	8/6/2013 4:07:39 PM	8724
EPA METHOD 300.0: ANIONS					Analys	t: JRR
Chloride	ND	1.5	mg/Kg	1	8/5/2013 5:20:01 PM	8731
EPA METHOD 418.1: TPH					Analys	t: <b>LRW</b>
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	8/6/2013	8740

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

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

Page 2 of 7

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

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1308135

13-Aug-13

Client:

Blagg Engineering

Project:

GCU Com G 179E

Sample ID MB-8731

SampType: MBLK

TestCode: EPA Method 300.0: Anions

TestCode: EPA Method 300.0: Anions

LowLimit

Client ID:

Prep Date:

8/5/2013

Batch ID: 8731

**PQL** 

RunNo: 12430

Analysis Date: 8/5/2013

Result

SeqNo: 353758

Units: mg/Kg

HighLimit

**RPDLimit** 

Qual

Analyte Chloride

ND 1.5

Sample ID LCS-8731

SampType: LCS

14

RunNo: 12430

SPK value SPK Ref Val %REC LowLimit

Client ID: LCSS Prep Date: 8/5/2013

Batch ID: 8731 Analysis Date: 8/5/2013

SeqNo: 353759

Units: mg/Kg

%RPD **RPDLimit** 

Analyte

PQL SPK value SPK Ref Val

96.6

Chloride

1.5 15.00 %REC

HighLimit

110

## Qualifiers:

Value exceeds Maximum Contaminant Level.

Е Value above quantitation range

Analyte detected below quantitation limits

0 RSD is greater than RSDlimit

RPD outside accepted recovery limits

Analyte detected in the associated Method Blank В

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.

RLReporting Detection Limit Page 3 of 7

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1308135

13-Aug-13

Client:

Blagg Engineering

Project:

GCU Com G 179E

Sample ID MB-8740

SampType: MBLK

TestCode: EPA Method 418.1: TPH

Client ID:

**PBS** 

Batch ID: 8740

RunNo: 12439

HighLimit

Prep Date:

Units: mg/Kg

Analyte

8/6/2013

Analysis Date: 8/6/2013

SeqNo: 354090

Qual

Petroleum Hydrocarbons, TR

Result ND 20

**PQL** 

20

**PQL** 

TestCode: EPA Method 418.1: TPH

**RPDLimit** 

Sample ID LCS-8740

Analyte

SampType: LCS

SPK value SPK Ref Val %REC LowLimit

%RPD

%RPD

Client ID: LCSS

RunNo: 12439

Batch ID: 8740

Prep Date:

8/6/2013

Analysis Date: 8/6/2013

SeqNo: 354091 %REC

103

Units: mg/Kg

120

HighLimit

**RPDLimit** 

Qual

Petroleum Hydrocarbons, TR

SampType: LCSD

TestCode: EPA Method 418.1: TPH

LowLimit

80

Sample ID LCSD-8740 Client ID: LCSS02

Batch ID: 8740

Result

100

100

RunNo: 12439

Prep Date: 8/6/2013

Analysis Date: 8/6/2013

SeqNo: 354092

Units: mg/Kg

120

Analyte

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD **RPDLimit** 

Qual

Petroleum Hydrocarbons, TR

20 100.0

SPK value SPK Ref Val

100.0

101

2.67

Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

RPD outside accepted recovery limits

0 RSD is greater than RSDlimit В

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.

Reporting Detection Limit RL

Analyte detected in the associated Method Blank

Page 4 of 7

# Hall Environmental Analysis Laboratory, Inc.

50

3.7

WO#:

1308135

13-Aug-13

Client:

Blagg Engineering

Project:

Diesel Range Organics (DRO)

Surr: DNOP

GCU Com G 179E

Sample ID MB-8722	SampType: MBLK			TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID: PBS	Batch	ID: <b>872</b>	2	F	tunNo: 1	2400				
Prep Date: 8/5/2013	Analysis Da	ate: <b>8/5</b>	6/2013	S	SeqNo: 3	53060	Units: mg/F	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.9		10.00		99.2	63	147			
Sample ID 1308127-001AMS	SampT	ype: MS		Tes	tCode: El	PA Method	8015D: Dies	el Range (	Organics	
Client ID: BatchQC	Batch	ID: <b>872</b>	2	F	RunNo: 1	2400				
Prep Date: 8/5/2013	Analysis Da	ate: 8/5	5/2013	S	eqNo: 3	53063	Units: mg/h	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Sample ID	1308127-001AMSE	) SampTyp	e: <b>M</b> \$	SD	Tes	tCode: E	PA Method	8015D: Dies	el Range (	Organics	
Client ID:	BatchQC	Batch II	): <b>87</b>	22	F	RunNo: 1	2400				
Prep Date:	8/5/2013	Analysis Date	e: <b>8/</b>	5/2013	SeqNo: <b>353064</b>		Units: mg/Kg				
Analyte		Result I	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	rganics (DRO)	51	9.9	49.55	14.67	73.0	61.3	138	1.68	20	
Surr: DNOP		3.7		4.955		74.6	63	147	0	0	

14.67

70.7

73.3

61.3

63

138

147

49.95

4.995

Sample ID LCS-8722	SampT	ype: LC	:S	Tes	tCode: E	PA Method	8015D: Dies	el Range (	Organics	
Client ID: LCSS	Batch	1D: <b>87</b> :	22	F	RunNo: 1	2400				
Prep Date: 8/5/2013	Analysis D	ate: 8/	5/2013	S	SeqNo: 3	53065	Units: mg/k	<b>(</b> g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.3	77.1	128			
Surr: DNOP	3.5		5.000		69.8	63	147			

## 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

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 5 of 7

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1308135

13-Aug-13

Client:

Blagg Engineering

Project:

GCU Com G 179E

Sample ID MB-8724 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: Batch ID: 8724 RunNo: 12441 PBS Analysis Date: 8/6/2013 SeqNo: 354525 Prep Date: 8/5/2013 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 860 1000 86.3 80 120

Sample ID LCS-8724	SampT	ype: LC	:S	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	е	
Client ID: LCSS	Batch	1D: <b>87</b>	24	F	RunNo: 1	2441				
Prep Date: 8/5/2013	Analysis D	ate: 8/	6/2013	S	SeqNo: 3	54526	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	103	62.6	136			
Surr: BFB	980		1000		97.9	80	120			

### 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

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 7

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1308135

13-Aug-13

Client: Project:

Blagg Engineering GCU Com G 179E

Sample ID MB-8724	SampType: MBLK TestCode: EPA Method						8021B: Volat	tiles		
Client ID: PBS	Batch	ID: 87	24	F	RunNo: 1	2441				
Prep Date: 8/5/2013	Analysis D	ate: 8/	6/2013	S	SeqNo: 3	54556	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	0.98		1.000		97.6	80	120			

Sample ID LCS-8724	SampT	ype: LC	s	Tes						
Client ID: LCSS	Batch	1D: <b>87</b>	24	F	RunNo: 1					
Prep Date: 8/5/2013	Analysis D	ate: 8/	6/2013	8	SeqNo: 3	54557	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	106	80	120			
Toluene	1.0	0.050	1.000	0	· 103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	105	80	120			
Xylenes, Total	3.2	0.10	3.000	0	105	80	120			
Surr: 4-Bromoflugrobenzene	1.1		1.000		106	80	120			

Sample ID 1308132-001AM	<b>S</b> SampT	ype: <b>M</b> \$	3	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: BatchQC	Batch	ID: <b>87</b>	24	F	RunNo: 1	2441				
Prep Date: 8/5/2013	Analysis D	ate: 8/	6/2013	9	SeqNo: 3	54558	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.047	0.9416	0	114	67.3	145			
Toluene	1.1	0.047	0.9416	0.007148	111	66.8	144			
Ethylbenzene	1.1	0.047	0.9416	0	115	61.9	153			
Xylenes, Total	3.3	0.094	2.825	0	116	65.8	149			
Surr: 4-Bromofluorobenzene	1.0		0.9416		106	80	120			

Sample ID 1308132-001AMS	D SampTy	pe: MS	D	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: BatchQC	Batch I	ID: <b>87</b> 2	24	F	RunNo: 1:	2441				
Prep Date: 8/5/2013	Analysis Da	te: <b>8</b> /	6/2013	S	SeqNo: 3	54559	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.047	0.9416	0	103	67.3	145	10.6	20	
Toluene	0.93	0.047	0.9416	0.007148	98.5	66.8	144	12.2	20	
Ethylbenzene	0.96	0.047	0.9416	0	102	61.9	153	12.2	20	
Xylenes, Total	2.9	0.094	2.825	0	103	65.8	149	12.0	20	
Surr: 4-Bromofluorobenzene	1.0		0.9416		106	80	120	0	0	

#### 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

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 7 of 7

			stody Record	Turn-Around	Time:					Ż	<b>8</b> 4	AI	•	FR	W	TR	201	NR	4F	NT	'AL	
Client:	BLAGE	5 ENGI	WEEKWO INC.	Standard	☐ Rush					Ħ												
	BP A	MERICA	······································	Project Name							ANALYSIS LABORATO www.hallenvironmental.com									_		
Mailing	Address	P0.7	Sox 87	GCL	1 Com G	; 179E	•	ļ	49	01 H:	awkins NE - Albuquerque, NM 87109											
			NM 87413	Project #:							5-34				-	-						
Phone:			2-1199					Actor.														P. C.
email o				Project Mana	iger:				(yl	<b>P</b>					(3)				i			$\top$
QA/QC	Package:		☐ Level 4 (Full Validation)	J. Bi	Aldo			\$ (8021	Gas or	野(0)			SIMS)		PO4,S(	PCB's						
Accredi	itation		ſ	Sampler:	A B C V C CONTRACTOR DESCRIPTION	e Norte	raes at a	THMB	трн (	70 / DF	(8.1)		8270 S		3,NO <sub>2</sub> ,	/ 8082		(A)	N			(S
	(Type)			Opplices 177 Sampleauen	erature± : =	-233			BE +	9	д ,	) Q	اة	tals	<u>z</u>	ides	2	9	70			≿
Date	Time	Matrix	Sample Request ID	1	Preservative Type		THE PARTY OF THE P	1 79 1	BTEX + MTBE + TPH (Gas only)	ТРН 8015В (GRO / DRO <u>/ МЯЖ</u> Ө)	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	8260B (VOA)	8270 (Semi-VOA)	CHOUD			Air Bubbles (Y or N)
1/29/17	1340	SOIL	95 BGT / 5-Pt 0.5	402×1	COOL	-1	)()(	メ		X	X				Ì				$\overline{\chi}$	$\top$		1
11	1356	1 (	95 EGT / 5-pt 0.5 21 BGT / 5-pt 0.6	iv.	14	-1	02	X		文	人		$\top$				$\exists$		귓	$\top$	$\top$	$\top$
			7										T			7			1	$\top$	$\top$	十
											1	T	$\top$			_†				1		十
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													一	$\exists$		_†						
		-									1		1					$\rightarrow$			$\top$	丁
											7	1		十	十	_			1	$\neg$	1	十
-						_															$\top$	<b>T</b>
														$\neg$	T	$\neg$						T
																1						T
												$\neg$		$\neg$						$\neg$	Ţ	T
Date: 8/2/13	Time: 1400	Relinquishe	1 Blogg	Received by:	Haller,	2/2/3	Time	Ren	narks		Biu			FV.	นอา	1 R	ध्या १	- <u></u> 1			يا	
Date: 8/2/13	Time: 1530	Rédingulishe Mus	to Waller	Received by		Date Obles	Time	PAYKEY: ZEVHO1BGT2 CONTACT: JEFF PEACE														
	f necessary	samples subr	nitted to Hall Environmental may be subc	ontracted to other ac	credited laboratorie	s. This serves as	notice of this	possit	oility.	Any sul	b-contr	acted o	data w	ill be c	learly	notat	ed on	the ar	nalytica	l report	ł.	

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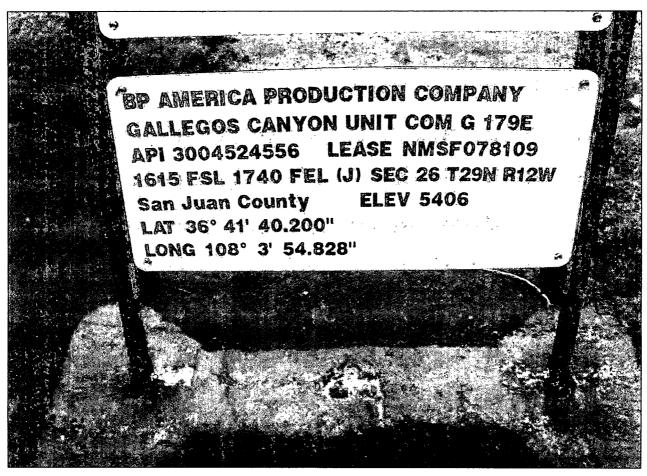


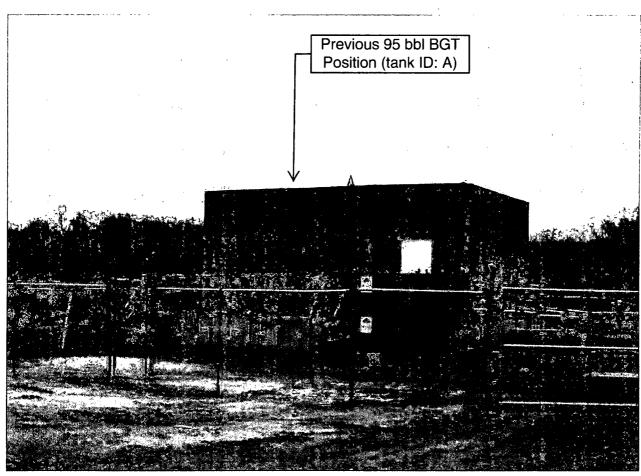
Hall Environmental Analysis Laboratory 4901 Hawkins NE

Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

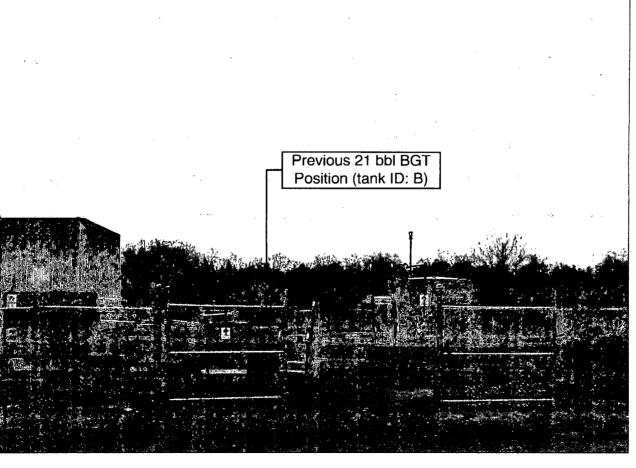
# Sample Log-In Check List

Website: www.hallenvironmental.com Client Name: BLAGG Work Order Number: 1308135 RcptNo: 1 Received by/date: Logged By: 8/3/2013 11:00:00 AM **Ashley Gallegos** 8/5/2013 9:14:30 AM Completed By: **Ashley Gallegos** Reviewed By: Chain of Custody Not Present < 1 Custody seals intact on sample bottles? Yes No : No : Not Present 2. Is Chain of Custody complete? Yes 🗸 3 How was the sample delivered? Courier Log In No i 4. Was an attempt made to cool the samples? NA : : Yes 🗸 5. Were all samples received at a temperature of >0° C to 6.0°C No NA : 6. Sample(s) in proper container(s)? No 7. Sufficient sample volume for indicated test(s)? No : 8 Are samples (except VOA and ONG) properly preserved? 9. Was preservative added to bottles? No V NΑ Yes Yes No 10.VOA vials have zero headspace? No VOA Vials 11. Were any sample containers received broken? Yes No V # of preserved bottles checked for pH: 12. Does paperwork match bottle labels? Nα (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 13 Are matrices correctly identified on Chain of Custody? No 14. Is it clear what analyses were requested? Checked by: 15. Were all holding times able to be met? No (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No · Person Notified: Date: By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date Good









## BP AMERICA PRODUCTION COMPANY

SAN JUAN BASIN, NORTHWEST NEW MEXICO

## BELOW-GRADE TANK CLOSURE PLAN

Gallegos Canyon Unit Com G 179E API No. 3004524556 Unit Letter J, Section 26, T29N, R12W RCVD DEC 6'13

OIL CONS. DIV. DIST. 3

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's 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's were 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's 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	16

Constituents	Testing Method	Release Verification	Sample			
	21 bbl BGT	(mg/Kg)				
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.

- 7. BP shall notify the division District III office of its results on form C-141. **C-141 is attached.**
- 8. 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's were backfilled with clean soil. The area over the 95 bbl BGT is covered by the raised compressor pad and the area over the 21 bbl BGT is covered by the LPT.

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 covered by the raised compressor pad and the area over the 21 bbl BGT is covered by the LPT. 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 covered by the raised compressor pad and the area over the 21 bbl BGT is covered by the LPT. 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 covered by the raised compressor pad and the area over the 21 bbl BGT is covered by the LPT. 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.