

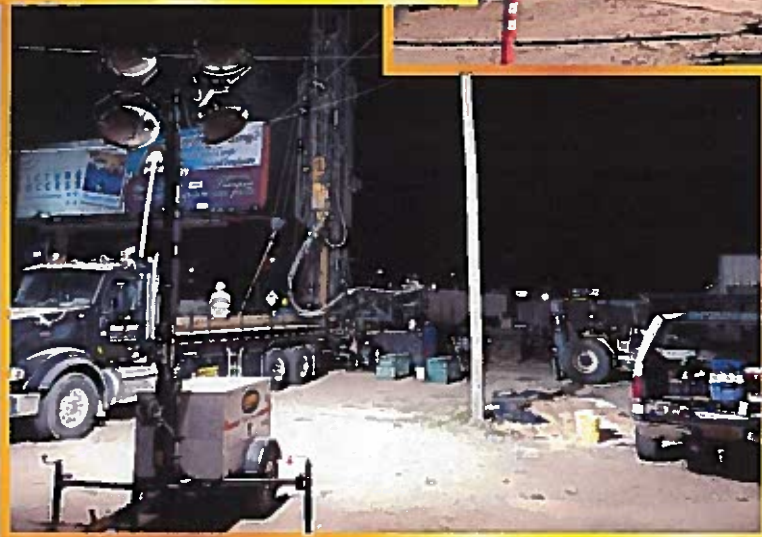
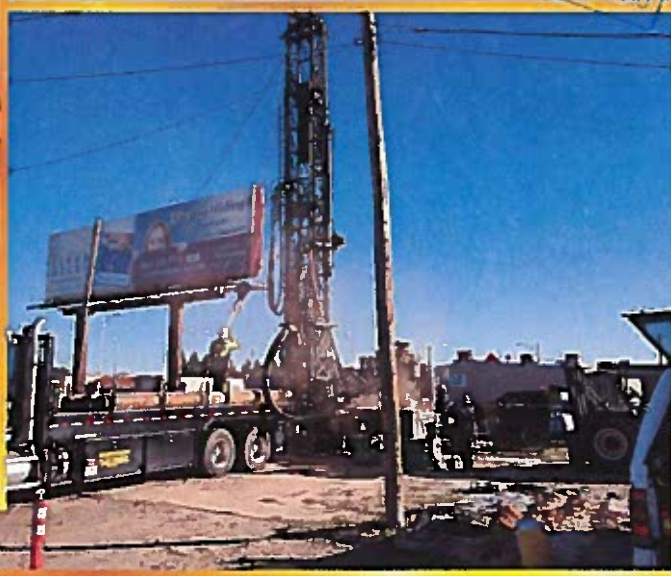
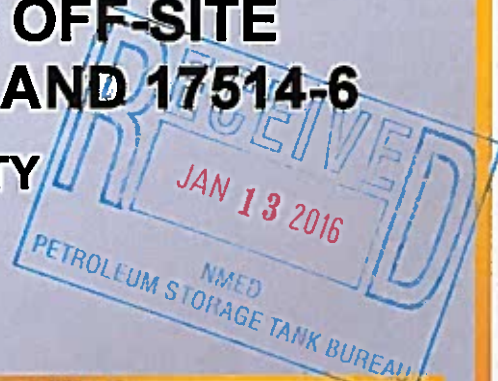


BROWN ENVIRONMENTAL, INC.

P.O. BOX 886 PLACITAS, NM 87043

COMPLETION OF EXTENDED OFF-SITE INVESTIGATION TASKS 17514-1 AND 17514-6

**ALLSUPS #320 SITE VICINITY
CLOVIS, NEW MEXICO**



Submitted To:

**Ms. Renee Romero
NMED-PSTB
1914 West 2nd Street
Roswell, New Mexico 88201**

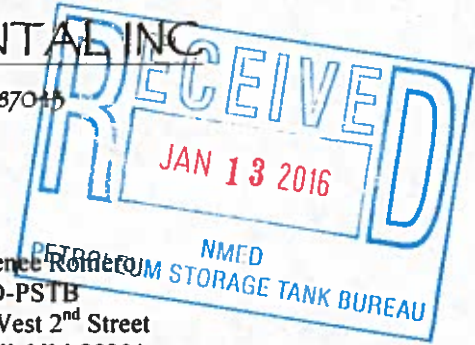
**Mr. Jeff Scarbrough
Allsups Petroleum, Inc
2112 Thornton Ave.
Clovis, New Mexico 88102**

January 2016



BROWN ENVIRONMENTAL, INC.

P.O. BOX 886 PLACITAS, NM 87015



January 7, 2016
E-Mail Transmission/Priority Mail

Mr. Jeff Scarbrough
Allsups Petroleum, Inc.
2112 Thornton Ave
Clovis, NM 88102

Ms. Renee Romero
NMED-PSTB
1914 West 2nd Street
Roswell, NM 88201

RE: COMPLETION OF DID #17514-1 AND #17514-6 - EXTENDED OFF-SITE INVESTIGATION IN THE VICINITY OF THE ALLSUPS #320 FACILITY LOCATED IN CLOVIS, NEW MEXICO

Dear Mr. Scarbrough and Ms. Romero:

On behalf of Allsups Petroleum, Inc. (Allsup), Brown Environmental, Inc. (BEI) is pleased to present to the New Mexico Environment Department-Petroleum Storage Tank Bureau (NMED) the enclosed data documenting completion of the above tasks as part of Extended Off-Site Investigation (EOSI) in the vicinity of the above referenced Allsups 320 Site ("the Site"):

- Task 1 - Borehole/Well Completion diagrams documenting the advancement and installation of three ~350 foot deep monitor wells (BW-8, BW-9, and BW-10). Total invoice for Task 1 amounts to \$208,803.78 including NMGR.T.
- Task 6 – Out of scope/contingency, which included converting two of the above referenced well locations (BW-9 and BW-10) into nested wells. BW-8 was approved as a nested well in the original workplan. Total invoice for Task 6 amounts to \$7,490.00 including NMGR.T.

Please note that well nomenclature and locations were modified from the originally approved workplan as a result of site access issues. Total costs for this portion of the project amount to \$216,293.78 including NMGR.T.

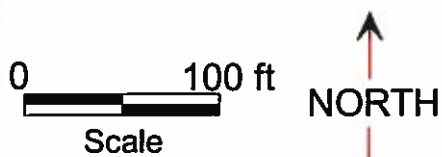
Sincerely,
Brown Environmental, Inc.

William Brown, PG
Vice President
cc: BEI Allsups 320 file w/attachments



EXPLANATION

- BW-6 Single Completion Monitor Well Location
- BW-3 Nested Monitor Well Location
- BW-10 NEWLY INSTALLED MULTIPLE COMPLETION WELL



**SITE BASE MAP
HIGHLIGHTING NEW
MONITOR WELL LOCATIONS**

Allsup's Store #320 Clovis, New Mexico



BROWN ENVIRONMENTAL, INC.

P.O. Box 886 Placitas, NM 87043

Drawn by:	WJB	10/15	Client: Allsup's/NMED
Drafted by:	EMB	10/15	Job #1070
Reviewed by:	WJB	10/15	FIGURE 1

ALLSUPS #320

CLIENT: Allsup Petroleum, Inc.

Borehole ID: BW-8

page 1 of 5

DATE OF DRILLING: 11/10-14/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 11 3/4"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: ~327'
 TOTAL DEPTH: 356'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 115'-175'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 200'-260'
 DEEP WELL: 4" Sched 80 PVC; Screen 287'-347'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION

Construction Data	Borehole/ Monitor Well Construction	Laboratory Sample (mg/kg) B=benzene, T=toluene X=xylene, M=metaxylene TPH=TPH gas range	PID Reading (ppm)/ Lab Sample (ppm)	Depth (in feet)	Sample Interval	Simplified Lithology
Concrete	4" casing	no odor	no	5		
	2" casing	no odor	no	10		
	2" casing	no odor	no	15		
	2" casing	no odor	no	20		
		no odor	no	25		
		no odor	no	30		
		no odor	no	35		
		no odor	no	40		
		no odor	no	45		
		no odor	no	50		
		no odor	no	55		
		no odor	no	60		
		no odor	no	65		
		no odor	no	70		

Surface Conditions: 0-0.3' Saw cut concrete.

0.3'-3.5' Cuttings/Posthole 0.3'-1.0' (SM/SW) with (SC) Silty fine to medium sand with minor gravel and clay/silt. 1.0'-3.5' (SM/SC) Clayey silty very fine sand, weakly plastic, brown (10YR), soft, slightly moist, no apparent hydrocarbon odor.

3.5'-7.5' Cuttings (SC/ML) Light tan-brown silty clayey very fine sand, plastic, soft, slightly moist, calcium carbonate, no apparent hydrocarbon odor.

7.5'-15.5' Cuttings (SC/CL) Light brown (10YR) silty sandy clay, plastic, slightly moist, no apparent hydrocarbon odor.

15.5'-23.0' Cuttings (SC/ML) Weakly cemented with calcium carbonate, slightly moist, no apparent hydrocarbon odor.

23.0'-26.0' Cuttings (SC/CL) Light brown (10YR) soft, plastic, silty very fine sand-clay mixture, slightly moist, no apparent hydrocarbon odor.

26.0'-28.0' Cuttings (SM/ML) silt-very fine sand with Stage 3 caliche, hard drilling, light tan-white, no apparent hydrocarbon odor.

28.0'-41.0' Cuttings (Caliche), Stage 3+ to 4, dense, massive, hard drilling, light tan-white.

<11/10/15 19:50 Stopped Drilling at 40'>
 <11/11/15 7:20 Blowdown - 1.1 ppm/v, no apparent hydrocarbon odor.>

41.0'-46.0' Cuttings (SM/ML) silt-very fine sand Stage 3+ calcium carbonate with interbeds of Stage 4, slightly moist.

46.0'-51.0' Cuttings (SM) (5YR 6/4) Light red brown, silty very fine sand, unconsolidated at top with localized calcium carbonate nodules, no apparent hydrocarbon odor, slightly moist.

51.0'-63.0' Cuttings (SM/ML) with Stage 2 to Stage 3 -3+ calcium carbonate zones, light tan-white pink, (5YR) slightly moist, no apparent hydrocarbon odor.

63.0'-70.0' Cuttings (SM/ML) Silt-very fine sand, light tan-brown (10YR) localized minor calcium carbonate, slightly moist, no apparent hydrocarbon odor.

70.0'-74.0' Cuttings (SM) silty very fine sand, light brown (7.5YR), unconsolidated, slightly moist.



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043

ALLSUPS #320

CLIENT: Allsup's Petroleum, Inc.

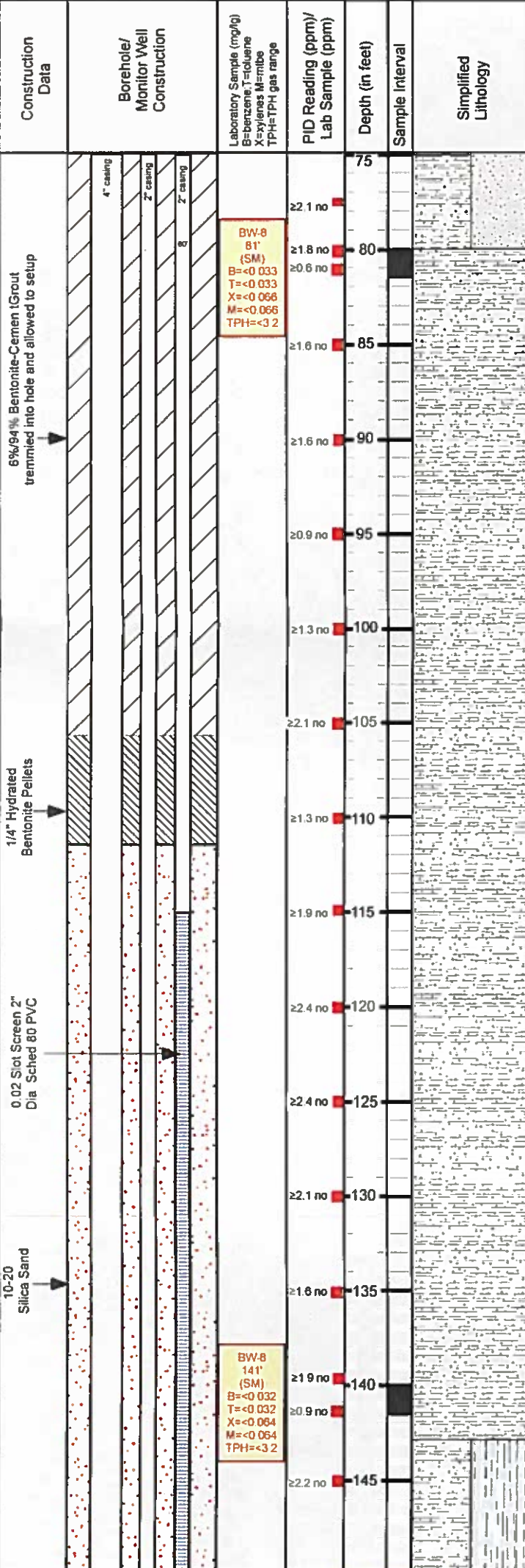
Borehole ID: BW-8

page 2 of 5

DATE OF DRILLING: 11/10-14/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 11 3/4"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: ~327'
 TOTAL DEPTH: 356'
 SHALLOW WELL 2" Sched 80 PVC; Screen 115'-175'
 INTERMEDIATE WELL 2" Sched 80 PVC; Screen 200'-260'
 DEEP WELL 4" Sched 80 PVC; Screen 287'-347'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION



BW-8
81'
(SM)
B=<0.033
T=<0.033
X=<0.066
M=<0.066
TPH=<3.2

BW-8
141'
(SM)
B=<0.032
T=<0.032
X=<0.064
M=<0.064
TPH=<3.2

74.0'-80.0' Cuttings (SM/SP) Fine to medium sand with trace silt - well sorted, slightly moist, unconsolidated no apparent hydrocarbon odor.

<10:32 @ 80' Let hole sit until 11:40 and collected split spoon drive sample for PID and lab analysis.>

80.0'-81.5' Split Spoon 1.5' sample. 0.0'-1.5' (SM) Silty very fine to fine sand, unconsolidated, slightly moist, no apparent hydrocarbon odor.

<Blowdown on hole at 11:45 = 1.2 ppm/v, no apparent hydrocarbon odor.>

81.5'-143' Cuttings (SM) Silty-very fine sand. Light reddish-brown (7.5YR) unconsolidated, slightly moist, well sorted, no apparent hydrocarbon odor.

<13:39 Let hole equilibrate at 140' - collected split spoon at 15:10.>

140.0'-141.5' Split Spoon 1.5' sample. (SM) (7.5YR) Very fine to fine sand with minor silt, unconsolidated to weakly disseminated calcium carbonate cemented, slightly moist, no apparent hydrocarbon odor.

143'-152' Cuttings (SM/ML) Silt content higher than surrounding with very fine sand, unconsolidated, no apparent hydrocarbon odor, slightly moist.

<15:30-16:45 Rig shutdown @ 150' for 75 minutes. Blowdown - 2.9 ppm/v.>



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043

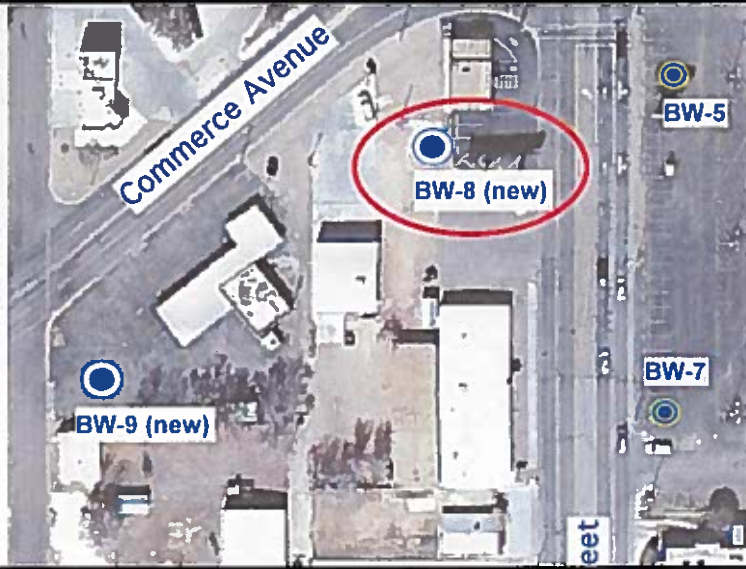
ALLSUPS #320

CLIENT: Allsup's Petroleum, Inc.

Borehole ID: BW-8

page 3 of 5

DATE OF DRILLING: 11/10-14/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 11 3/4"
 DRILLING METHOD: ARCH - Stratex / Air Rotary
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: -327'
 TOTAL DEPTH: 356'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 115'-175'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 200'-260'
 DEEP WELL: 4" Sched 80 PVC; Screen 287'-347'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION

Construction Data	Borehole/ Monitor Well Construction	Laboratory Sample (mg/kg) B=benzene, T=toluene X=xylene, M=mtbe TPH=TPH gas range	PID Reading (ppm)/ Lab Sample (ppm)	Depth (in feet)	Sample Interval	Simplified Lithology
0.02 Slot Screen 2" Dia. Sched 80 PVC			≥1.7 no	150		
10-20 Silica Sand			≥1.8 no	155		
			≥2.1 no	160		
			≥0.9 no	165		
			≥2.2 no	170		
			≥2.5 no	175		
6%94% Bentonite Cement Grout tremied into hole and allowed to setup overnight			≥1.6 no	180		
			≥0.5 wo	185		
1/4" Hydrated Bentonite Pellets			≥18.1 wo	190		
			≥12.4 wo	195		
			≥6.9 no	200		
0.02 Slot Screen 2" Dia. Sched 80 PVC			≥1.9 no	205		
			≥2.4 no	210		
			≥3.7 no	215		
			≥1.9 no	220		
			≥1.8 wo	220		

152'-161' Cuttings (SM) Silty very fine to fine sand, (7.5YR) brown, slightly moist, unconsolidated, no apparent hydrocarbon odor.

161'-165' Cuttings (SM/ML) As above, silt - very fine sand (7.5YR).

165'-238' Cuttings (SM) (7.5YR) Silty very fine to fine sand, unconsolidated, slightly moist, no apparent hydrocarbon odor.

<188' Rig breakdown, hole sat overnight, blowdown at 10:50 = 0.5 ppm/v, no apparent hydrocarbon odor.>

~200 to 210', minor calcium carbonate cemented, small sandstone nodules.

210'-240' Occasional weathered turpene-like hydrocarbon odor in off gas from hole/cyclone 2-10 ppm/v.



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043

ALLSUPS #320

CLIENT: Allsup Petroleum, Inc.
Borehole ID: BW-8

DATE OF DRILLING: 11/10-14/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 11 3/4"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: -327'
 TOTAL DEPTH: 356'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 115'-175'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 200'-260'
 DEEP WELL: 4" Sched 80 PVC; Screen 287'-347'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION

Construction Data	Borehole/ Monitor Well Construction	Laboratory Sample (mg/kg) B=benzene; T=toluene X=xylene; M=methane TPH=TPH gas range	PID Reading (ppm)/ Lab Sample (ppm)	Depth (in feet)	Simplified Lithology
0.02 Slot Screen 2" Dia. Sched 80 PVC			≥2.4 no	225	
			≥2.4 no	230	
			≥8.2 wo	235	
10-20 Silica Sand		BW-8 241' (SM/ML) B=<0.032 T=0.072 X=0.14 M=<0.063 TPH=<3.2	≥89 no ≥129 mo	240	
			≥8.9 no	245	
			≥17.1 no	250	
			≥5.9 no	255	
			≥4.1 no	260	
6% 94% Bentonite Cement Grout tremied into hole and allowed to setup			≥5.8 no	265	
			≥7.9 no	270	
			4.7 wo	275	
3/8" Hydrated Bentonite Chips and 1/4" Pellets		BW-8 281' (SM/ML) B=<0.030 T=<0.030 X=<0.061 M=<0.061 TPH=<3.0	≥30.2 no ≥36.1 wo	280	
			≥0.1 no	285	
			≥26 wo	290	
0.01 Slot Screen 4" Dia. Sched 80 PVC			≥10.1 wo	295	
			≥8.0 wo		

236'-252' (SM/ML) (7.5YR) silt-very fine sand, well sorted, slightly moist with minor calcium carbonate cemented sandstone (SAS) nodules.

<12:30 Hole at 240', stop for lunch and to let hole equilibrate. 14:00 Collected split spoon at 240'-241.5', weathered hydrocarbon odor.>

240.0'-241.5' Split Spoon 1.4' sample. (SM/ML) (7.5YR) Light brown silt to very fine sand, well sorted, slightly moist with ~2-3% calcium carbonate cemented (SAS) nodules, degraded hydrocarbon odor.

<245' Rig down for 25 minutes, blowdown = 68 ppm/v, moderate weathered hydrocarbon odor.>

252'-309' Cuttings (SM) Silty very fine to fine sand (5YR to 7.5 YR) Reddish-light brown, occasional (SAS) concretions, slightly moist.

<270' measured vapor levels in adjacent deep wells BW-4d and BW-5d= 0.01 and 0.07 ppm/v, respectively. Wells under negative pressure.>

280.0' -281.5' Split Spoon 1.4' sample. (SM) (7.5YR) Light brown, silty very fine to fine sand with several prominent concretions, slightly moist, weak hydrocarbon odor, localized (SM/ML) finer grained silt-very fine sand intervals.

(5YR) Light reddish brown below ~300' depth.



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043

ALLSUPS #320

CLIENT: Allsup Petroleum, Inc.

Borehole ID: BW-8

page 5 of 5

DATE OF DRILLING: 11/10-14/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 11 3/4"
 DRILLING METHOD: ARCH - Stratex / Air Rotary
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: -327'
 TOTAL DEPTH: 356'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 115'-175'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 200'-260'
 DEEP WELL: 4" Sched 80 PVC; Screen 287'-347'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION

Construction Data	Borehole/Monitor Well Construction	Laboratory Sample (mg/kg) Benzene, Toluene Xylenes M+m+b TPH-TPH gas range	PID Reading (ppm) Lab Sample (ppm)	Depth (in feet)	Simplified Lithology
10-20 Silica Sand			≥8.0 wo		
			≥24 wo	305	
			≥33 wo	310	
			≥67 mo	315	
0.01 Slot Screen 4" Dia. Sched 80 PVC		BW-8 321' (SM/ML) B=<0.035 T=<0.035 X=<0.070 M=<0.070 TPH=<3.5 (1st SPT)	≥52 mo ≥276 mo ≥247 so	320	
			≥4.1 wo	325	
			≥5.1 wo	325	
			≥6.9 wo	330	
			≥6.4 wo	330	
			≥4.1 no	335	
			≥2.0 no	340	
			≥2.9 no	345	
			≥1.9 no	350	
				355	
				360	
				365	
				370	
				TD= 356'	
5' long 4" dia. blank sump Sched 80 PVC					
Natural Formation (heave)					

309'-323' Cuttings (SM) silty fine sand with (SM/ML)silt-very fine sand interbeds, gradational contacts, (5YR) reddish brown, slightly moist, degraded hydrocarbon odor, concretions common-especially in lower 5', possible thin laminar calcium carbonate cemented (SAS) sandstone zones.

320.0'-321.5' Split Spoon 1st sample collected 11/12/15 at 19:02 1.5' sample. 0.0'-1.5' (ML/SM) Silt-very fine sand (7.5YR) light reddish brown, unconsolidated, slightly moist with moderate highly weathered hydrocarbon odor (more volatile compounds partially stripped out from drilling procedure). Several 1-2" calcium carbonate cemented (SAS) nodules.

Stopped drilling at 320' 11/12/15 at 19:02, let hole sit overnight-collected 2nd split spoon from same depth and continued drilling to total depth.

320.0'-321.5' Split Spoon 2nd sample collected 11/13/15 at 8:35 - refusal 2 times - calcium carbonate zone, dense, hard, not enough sample for lab - PID =471 ppm/v, moderate to strong hydrocarbon odor, ~1" (SM/ML) in spoon. Note: borehole under vacuum - atmospheric air going into borehole.

323'-334' Cuttings (SM) (5YR) Reddish-brown silty very fine to fine sand with some concretions but less than above, moist below ~325', degraded hydrocarbon odor, present.

334'-343' Cuttings (SM/ML) Very fine to fine sand-silt, moist, (5YR) red-brown, weathered hydrocarbon odor at top with localized (SM) silty very fine to fine sand intervals (borehole not making much water - having to add water to retrieve cuttings).

343'-346' Cuttings Very hard zone, very fine to fine grained sandstone (SAS) light tan-brown (7.5YR) calcium carbonate cemented.

346'-356' Cuttings Poor cuttings return - soupy, (ML/SM) silt-very fine sand, (7.5) light brown, no apparent hydrocarbon odor, water saturated; likely interbedded (SM), coarse grained zones as above.



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043

ALLSUPS #320

CLIENT: Allsup's Petroleum, Inc.

Borehole ID: BW-9

page 1 of 5

DATE OF DRILLING: 11/18-21/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 9 5/8"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: ~327'
 TOTAL DEPTH: 360'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 182'-217'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 227'-262'
 DEEP WELL: 4" Sched 80 PVC; Screen 287'-347'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION

Construction Data	Borehole/Monitor Well Construction	Laboratory Sample (mg/kg) B=benzene T=toluene X=xylene's N=nitrite TPH=TPH gas range	PID Reading (ppm) Lab Sample (ppm)	Depth (in feet)	Sample Interval	Simplified Lithology
Concrete	4" casing 2" casing 2" casing		no odor to=trace odor wo=weak odor mo=moderate odor so=strong odor	5		
			no odor	10		
			no odor	15		
			no odor	20		
			no odor	25		
			no odor	30		
			no odor	35		
			no odor	40		
			no odor	45		
			no odor	50		
			no odor	55		
			no odor	60		
			no odor	65		
			no odor	70		

Surface Conditions: 0-0.3' Asphalt.

0.3'-4.5' Cuttings/Posthole-no utilities encountered 0.3'-1.3' (GM) sandy gravel/fill (basecourse). 1.3'-3.5' (SM/SC) Clayey silty very fine sand, brown (10YR). 3.5'-4.5' (SM/ML) silt-very fine sand, slightly moist, no apparent hydrocarbon odor, disseminated calcium carbonate.

4.5'-17' Cuttings (SM/ML) Silt-very fine sand (7.5 YR) light to medium brown with varying degrees of calcium carbonate cementation (Stage 1 to 2+), slightly moist, calcium carbonate lessens with depth, no apparent hydrocarbon odor.

17'-22' Cuttings (SM) Light brown (7.5YR) silty very fine to fine sand, slightly moist, no apparent hydrocarbon odor. Calcium carbonate lessens with depth.

22'-38' Cuttings (SM/ML) Silt-very fine sand w stage 3 to 3+ calcium carbonate in alternating beds. Light brown-tan (7.5YR) to light gray-white, slightly moist, no apparent hydrocarbon odor.

38'-51.5' Cuttings (Caliche) Pedogenic carbonate; well cemented Stage 3+ to 4. Hard drilling, (7.5 YR) light brown-white, slightly moist. Drilling with some water to reduce dust from cyclone.

51.5'-52.5' Cuttings (SM) reddish brown (5YR) very fine to fine sand, no apparent hydrocarbon odor.

52.5'-59' Cuttings (Caliche) Pedogenic carbonate as above. Localized (SM/ML) stage 3 intervals of silt-very fine sand, (7.5YR) light tan-brown.

59'-69' Cuttings (SM/ML) silt-very fine sand, (7.5YR) light tan-brown with state 2+ to stage 3 calcium carbonate—likely in bands and stringers. Overall less carbonate content with depth.

69'-71.5' Cuttings (Caliche) (10YR) (light tan), pedogenic carbonate. Hard drilling zone.

71' - 74' Cuttings (SM) silty very fine sand with some calcium carbonate decreasing with depth. Stopped adding drilling water at this interval. No apparent hydrocarbon odor.



BROWN ENVIRONMENTAL, INC

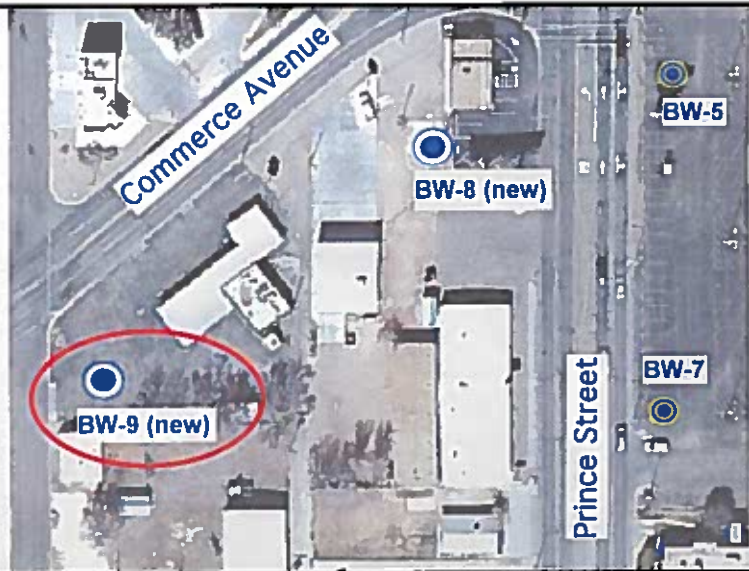
P.O. BOX 886 PLACITAS, NM 87043

ALLSUPS #320

CLIENT: Allsup Petroleum, Inc.
Borehole ID: BW-9

page 2 of 5

DATE OF DRILLING: 11/18-21/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 9 5/8"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: -327'
 TOTAL DEPTH: 360'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 182'-217'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 227'-262'
 DEEP WELL: 4" Sched 80 PVC; Screen 287'-347'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION

Construction Data	Borehole/Monitor Well Construction	Laboratory Sample (mg/kg) Benzene Toluene Xylene TPH gas range	PID Reading (ppm)/ Lab Sample (ppm)	Depth (in feet)	Sample Interval	Simplified Lithology
	4" casing 2" casing 2" casing		≥0.0 no	75		
			≥0.0 no	80		
			≥0.0 no	85		
			≥0.0 no	90		
			≥0.3 no	95		
			≥0.0 no	100		
			≥0.0 no	105		
			≥0.0 no	110		
			≥0.0 no	115		
			≥0.3 no	120		
			≥0.0 no	125		
			≥0.0 no	130		
			≥0.0 no	135		
			≥0.0 no	140		
			≥0.8 no			
			≥0.8 no			
			≥0.5 no	145		

8%/94% Bentonite-Cement (GROUT) trimmed into hole and allowed to set up

BW-9
141'
(SM/ML)
B=<0.042
T=<0.042
X=<0.084
M=<0.084
TPH=<4.2

74'-83' Cuttings (SM) Silty very fine sand (7.5 YR) light brown, slightly moist, unconsolidated, no apparent hydrocarbon odor.

83'-88' Cuttings (SP) Fine sand (7.5 YR) light brown, slightly moist, unconsolidated, no apparent hydrocarbon odor.

88'-108' Cuttings (SM) Silty-very fine sand. Light brown (7.5YR) unconsolidated, slightly moist, no apparent hydrocarbon odor.

100.0'-101.5' Split Spoon 1.5' sample. Entire core is (SM) Silty very fine to fine sand (7.5YR) light brown. Well-sorted, unconsolidated slightly moist, massive, no apparent hydrocarbon odor.

108'-121' Cuttings (SM/ML) Silt-very fine sand, finer-grained and higher silt content than above, slightly moist, unconsolidated, no apparent hydrocarbon odor.

121'-134' Cuttings (SM) Silty-very fine sand. brown (7.5YR) unconsolidated, slightly moist, no apparent hydrocarbon odor.

134'-142' Cuttings (SM/ML) Silt-very fine sand, (5YR) reddish brown; slightly moist, unconsolidated at top to partially cemented at base, no apparent hydrocarbon odor.

<140' 11/18/15@19:25 - stop drilling for tonight at 140' depth. Let hole equilibrate overnight - collected split spoon on 11/19/15 @ 8:10. Well under slight vacuum conditions in AM.>

140.0'-141.5' Split Spoon 1.3' sample--refusal at bottom of drive.0.0'-0.8 (SM/ML) as above with localized carbonate cement. 0.8'-1.3' (SAS)(SM/ML) well cemented siltstone/very fine sandstone (7.5 YR) slightly moist throughout core. no apparent hydrocarbon odor.

<141.5' blowdown on hole following SPT = 0.0 ppm/v no apparent hydrocarbon odor.>

142'-145' Cuttings (SAS)(SM/ML) as above. Cemented sandstone zones likely in beds with gradational boundaries based on drill cuttings. no apparent hydrocarbon odor.



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043

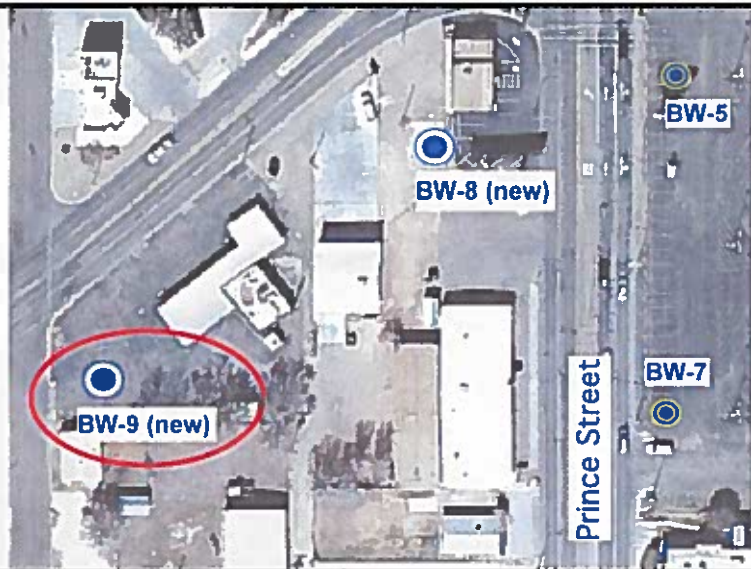
ALLSUPS #320

CLIENT: Allsup's Petroleum, Inc.

Borehole ID: BW-9

page 3 of 5

DATE OF DRILLING: 11/18-21/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 9 5/8"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: ~327'
 TOTAL DEPTH: 360'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 182'-217'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 227'-262'
 DEEP WELL: 4" Sched 80 PVC; Screen 287'-347'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION

Construction Data	Borehole/ Monitor Well Construction	Laboratory Sample (mg/kg) B=benzene T=toluene X=xylene M=methe TPH=TPH gas range	PID Reading (ppm)/ Lab Sample (ppm)	Depth (in feet)	Sample Interval	Simplified Lithology
				150	±0.7 no	<p>145'-170' Cuttings (SM/ML) Silt-very fine sand—almost an (SM). (5YR) reddish-brown well sorted, with occasional carbonate nodules, slightly moist, unconsolidated, no apparent hydrocarbon odor.</p>
				155	±0.9 no	
				160	±0.9 no	
				165	±1.0 no	
				170	±0.7 no	<p>170'-202' Cuttings (SM) (5YR) reddish brown Silty very fine to fine sand, slightly coarser-grained than above with lesser silt, unconsolidated, slightly moist, no apparent hydrocarbon odor. Below 180' sediments finer-grained-silty very fine sand.</p>
				175	±1.2 no	
				180	±1.8 no	<p><11/19/15 9:32 depth = 200'. Let hole sit for 66 minutes prior to SPT collection at 10:38></p> <p>200'-201.5' Split Spoon 1.3' sample. 0.0'-1.3' (SM) silty very fine sand bordering on (SM/ML); well sorted (5 YR) reddish-brown, slightly moist throughout core, unconsolidated but with several carbonate cemented concretions to 3/4" across. No apparent hydrocarbon odor.</p> <p><141.5' blowdown on hole following SPT = 0.0 ppm/v no apparent hydrocarbon odor></p>
				185	±1.4 wo	
				190	±3.1 wo	
				195	±1.7 wo	<p>203'-214' Cuttings (SM/ML) Silt-very fine sand (5YR) reddish-brown, with occasional carbonate nodules, slightly moist, unconsolidated, no apparent hydrocarbon odor.</p>
				200	±2.3 no ±0.9 no	
				205	±0.6 wo	<p>214'-232' Cuttings (SM) Silty very fine sand (5YR) reddish brown, unconsolidated, slightly moist, minor carbonate concretions. No apparent hydrocarbon odor.</p>
				210	±0.8 no	
				215	±0.7 no	
				220	±0.9 wo	

6% 94% Bentonite Cement Grout
tremied into hole and allowed to setup

1/4" Hydrated
Bentonite Pellets

10-20
Silica Sand

0.02 Slot Screen 2"
Dia. Sched 80 PVC



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87013

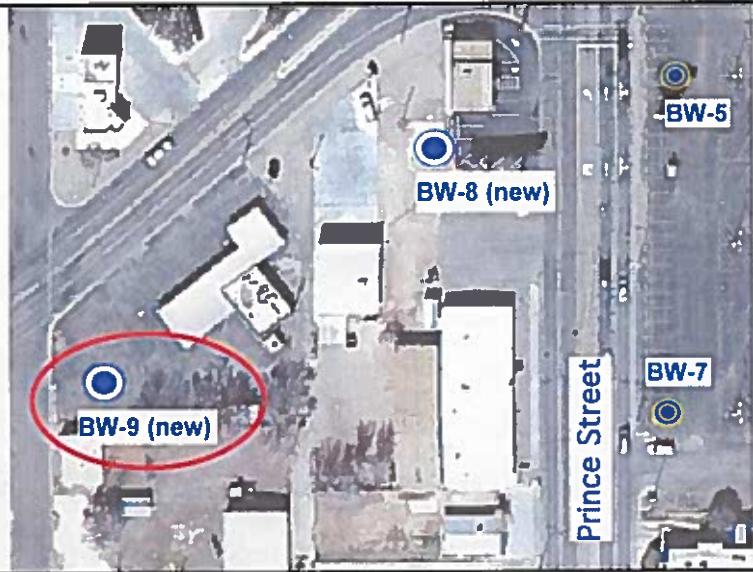
ALLSUPS #320

CLIENT: Allsup's Petroleum, Inc.

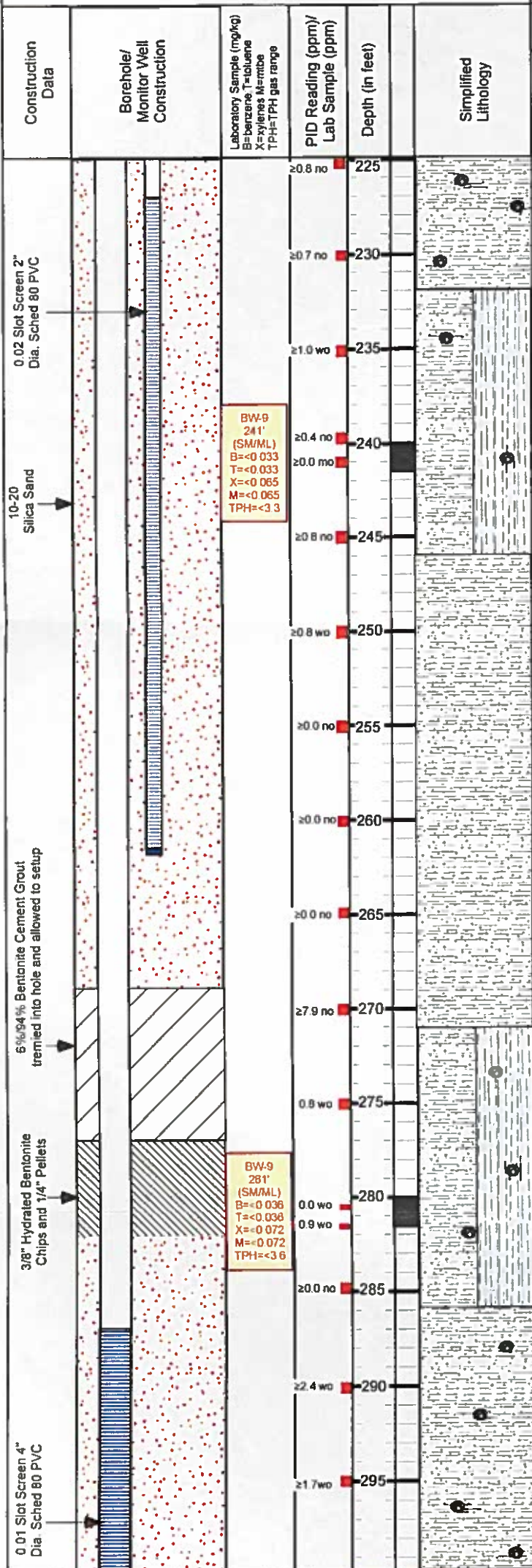
Borehole ID: BW-9

page 4 of 5

DATE OF DRILLING: 11/18-21/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 9 5/8"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: ~327'
 TOTAL DEPTH: 360'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 182'-217'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 227'-262'
 DEEP WELL: 4" Sched 80 PVC; Screen 287'-347'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION



232'-246' (SM/ML) (7.5YR) silt-very fine sand mixture, more moisture than above with minor calcium carbonate cemented sandstone (SAS) nodules.

<11:23 Hole at 240', stop for lunch and to let hole equilibrate. 13:30 Collected split spoon at 240'-241.5'>

240.0'-241.5' Split Spoon 1.3' sample. Entire sample is (SM/ML) (5YR) reddish-brown silt - very fine sand mixture, slightly moist, unconsolidated.

246'-271' Cuttings (SM) Silty very fine sand (5YR to 7.5 YR) Reddish-brown, concretions absent, slightly moist, no apparent hydrocarbon odor.

271'-286' Cuttings (SM/ML) Silt-very fine sand mixture (5YR) reddish-brown, unconsolidated slightly moist, but more than above, no apparent hydrocarbon odor. Minor calcium carbonate nodules.

280.0'-281.5' Split Spoon 1.1' sample. 0.0'-1.1' (SM/ML) (7.5YR) Light brown, silt-very fine sand, unconsolidated, slightly moist, with minor concretions to 1/2" across.

286'-316' Cuttings (SM) Silty very fine to fine sand (7.5YR) unconsolidated, with some concretions which become abundant between 300' to 316'. No apparent hydrocarbon odor, greater moisture content than above.



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043

ALLSUPS #320

CLIENT: Allsup's Petroleum, Inc.

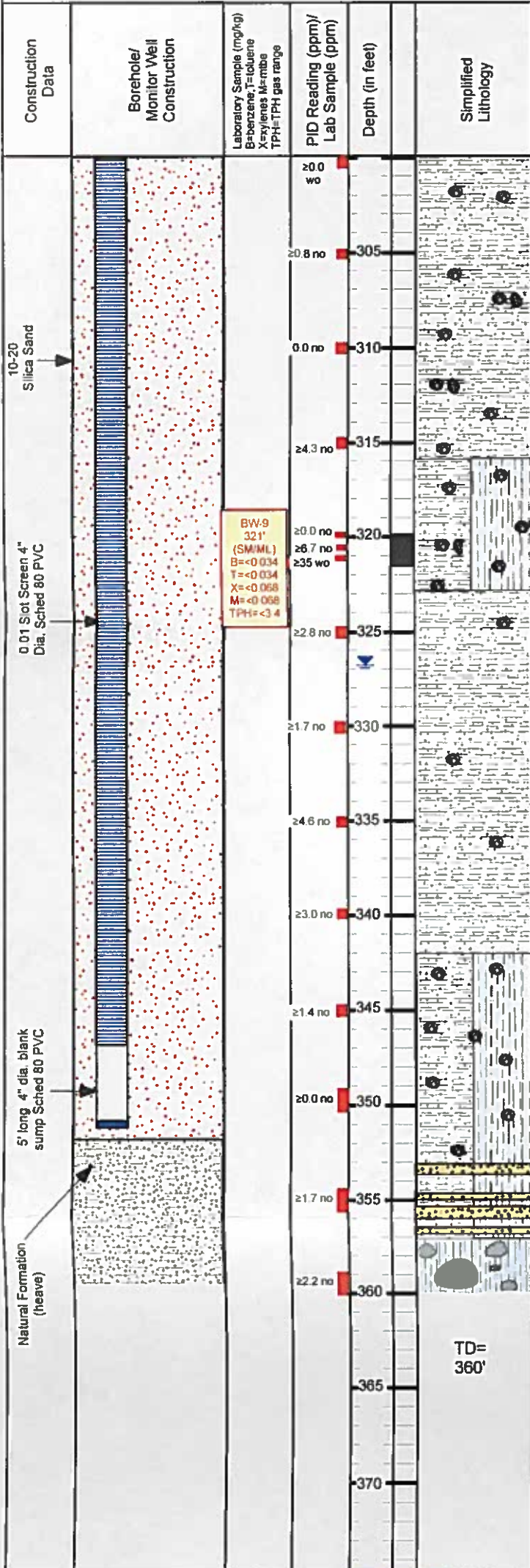
Borehole ID: BW-9

page 5 of 5

DATE OF DRILLING: 11/18-21/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 9 5/8"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: ~327'
 TOTAL DEPTH: 360'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 182'-217'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 227'-262'
 DEEP WELL: 4" Sched 80 PVC; Screen 287'-347'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION



316'-323' Cuttings (SM/ML) silt-very fine sand, (7.5YR) medium brown, unconsolidated, slightly moist-less than above, no apparent hydrocarbon odor, concretions common.

<Stopped drilling at 320' 11/19/15 at 16:05, let hole sit overnight-collected split spoon 11/20/15 at 8:30>

320.0'-321.5' Split Spoon 1.4' of sample. Entire core is (SM/ML) Silt-very fine sand (7.5YR) light brown, unconsolidated, moist, with several concretions to 3/4" across. No apparent hydrocarbon odor.

323'-342' Cuttings (SM) Silty very fine to fine sand (7.5YR) light brown with only minor concretions, moist to wet with depth no apparent hydrocarbon odor.

342'-353' Cuttings (SM/ML) Silt-very fine sand, wet, (7.5YR) brown, abundant 1/2" concretions. No apparent hydrocarbon odor.

353'-357' Cuttings (SAS and ML/SM) Cuttings are a mixture of both very fine to fine sandstone light tan-brown (7.5YR) and unconsolidated silt-very fine sand, . Water saturated; cementation is likely in beds.

357'-360' Cuttings (GM) Silty fine sandy gravel. 1/2" to 1" clasts of dark gray to tan brown (SAS), and (SST) are rounded and ~30% to 40% of interval. Matrix is (SM/ML) silt-very fine sand (7.5 YR) brown, H₂O saturated, no apparent hydrocarbon odor.

TD= 360'



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043

ALLSUPS #320

CLIENT: Allsup Petroleum, Inc.

Borehole ID: BW-10

page 1 of 5

DATE OF DRILLING: 12/1-4/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 9 5/8"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: ~326'
 TOTAL DEPTH: 360'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 192'-232'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 247'-282'
 DEEP WELL: 4" Sched 80 PVC; Screen 306'-346'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION

Construction Data	Borehole/Monitor Well Construction	Laboratory Sample (mg/kg) Benzene, Toluene Xylenes, M+mibz TPH=TPH gas range	PID Reading (ppm)/ Lab Sample (ppm)	Depth (in feet)	Sample Interval	Simplified Lithology
Concrete	4" casing		≥1.8 no	5		
	2" casing		≥2.9 no	10		
	2" casing		≥1.6 no	15		
			≥2.0 no	20		
			≥2.1 no	25		
			≥3.0 no	30		
			≥1.7 no	35		
			≥2.3 no	40		
			≥0.9 no	45		
			≥1.3 no	50		
			≥3.2 no	55		
			≥3.4 no	60		
			≥2.9 no	65		
			≥3.8 no	70		

Surface Conditions: 0-0.4' Concrete (sawcut).

0.4'-4.5' Cuttings/Posthole-no utilities encountered 0.4'-4.5' (SC) (10YR) dark brown, silty clayey very fine sand, some moisture, no apparent hydrocarbon odor, weakly plastic.

4.5'-13' Cuttings (SM) Silty very fine sand (5 YR to 7.5 YR at base) reddish-brown, slightly moist, unconsolidated, no apparent hydrocarbon odor.

13'-15' Cuttings (SM/ML) Silt-very fine sand, reddish-brown (7.5YR) slightly moist, no apparent hydrocarbon odor.

15'-18' Cuttings (Caliche) Pedogenic carbonate cemented zone. Stage 3+ to 4 (7.5YR) light tan-brown. No apparent hydrocarbon odor.

18'-25' Cuttings (SM/ML) Silt-very fine sand, reddish-brown (7.5YR) slightly moist, with Stage 3 caliche decreasing with depth. No apparent hydrocarbon odor.

25'-31' Cuttings (SM) Silty very fine sand (5 R) red, well sorted, slightly moist, unconsolidated, no apparent hydrocarbon odor.

31'-46' Cuttings (SM/ML) silt-very fine sand, light brown to gray-white with state 2+ to stage 3 calcium carbonate. No apparent hydrocarbon odor.

46'-49' Cuttings (SM) (5YR) red as above; very fine to fine sand, no caliche, no apparent hydrocarbon odor.

49'-56' Cuttings (SM/ML) silt-very fine sand, light red-brown (7.5YR) with state 2 to stage 3 calcium carbonate. Slightly moist, no apparent hydrocarbon odor.

56'-67' Cuttings (Caliche) Stage 3+ to 4 pedogenic carbonate zone; very hard drilling, dry, no apparent hydrocarbon odor.

67'-71' Cuttings (SM/SP) very fine to medium sand with almost no silt; brown (7.5YR), with stage 2 calcium carbonate zones at grading to carbonate nodules with depth, slightly moist, no apparent hydrocarbon odor.



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043

ALLSUPS #320

CLIENT: Allsup's Petroleum, Inc.

Borehole ID: BW-10

page 2 of 5

DATE OF DRILLING: 12/1-4/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 9 5/8"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: ~326'
 TOTAL DEPTH: 360'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 192'-232'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 247'-282'
 DEEP WELL: 4" Sched 80 PVC; Screen 306'-346'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION

Construction Data	Borehole/Monitor Well Construction	Laboratory Sample (mg/lg) B=benzene; T=toluene X=xylene; M=mtbe TPH=TPH gas range	PID Reading (ppm)/ Lab Sample (ppm)	Depth (in feet)	Sample Interval	Simplified Lithology
6%54% Bentonite-Cement (Grout) tremmied into hole and allowed to setup	4" casing			75	71'-75'	<p>71'-111' Cuttings (SM) Silty very fine sand (7.5 YR) brown, localized carbonate cemented zones at top of interval; slightly moist, no apparent hydrocarbon odor; transitional upper boundary; lower 30 feet of interval has greater moisture content.</p> <p>~80' Abundant 3/4" to 1" carbonate nodules.</p> <p>90'-91.5' Cuttings (SM/ML) thin silt-very fine sand interval. nearly dry, no apparent hydrocarbon odor.</p> <p>111'-114' Cuttings (SM/ML) Silt-very fine sand, with abundant (~20%) carbonate concretions, slightly moist, unconsolidated, no apparent hydrocarbon odor.</p> <p>114'-132' Cuttings (SM) Silty-very fine sand, as above.</p> <p>132'-146' Cuttings (SM/ML) Silt-very fine sand, (7.5YR) light-brown. Finer grained than surrounding sediments, slightly moist, partially cemented in localized beds, 136'-140' stage 2 disseminated carbonate; harder drilling, no apparent hydrocarbon odor.</p> <p><140' 12/1/15@7:08 - stop drilling for tonight at 140' depth. Let hole equilibrate overnight - collected split spoon on 12/2/15 @ 8.16.></p> <p>140.0'-141.5' Split Spoon 1.4' sample. 0.0'-0.8 (SM/ML) light brown (10 YR) silt-very fine sand with localized carbonate cement. 0.8'-1.4' (SM/ML) with stage 2+ to 3 carbonate cement (7.5 YR) light brown, slightly moist throughout core. No apparent hydrocarbon odor.</p>
	2" casing			80	80	
	2" casing			85	85	
	2" casing			90	90	
				95	95	
				100	100	
				105	105	
				110	110	
				115	115	
				120	120	
				125	125	
				130	130	
				135	135	
				140	140	
			145	145		

BW-10
 141'
 (SM/ML)
 B=<0.041
 T=<0.041
 X=<0.082
 M=<0.082
 TPH=<4.1



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043

ALLSUPS #320

CLIENT: Allsup's Petroleum, Inc.

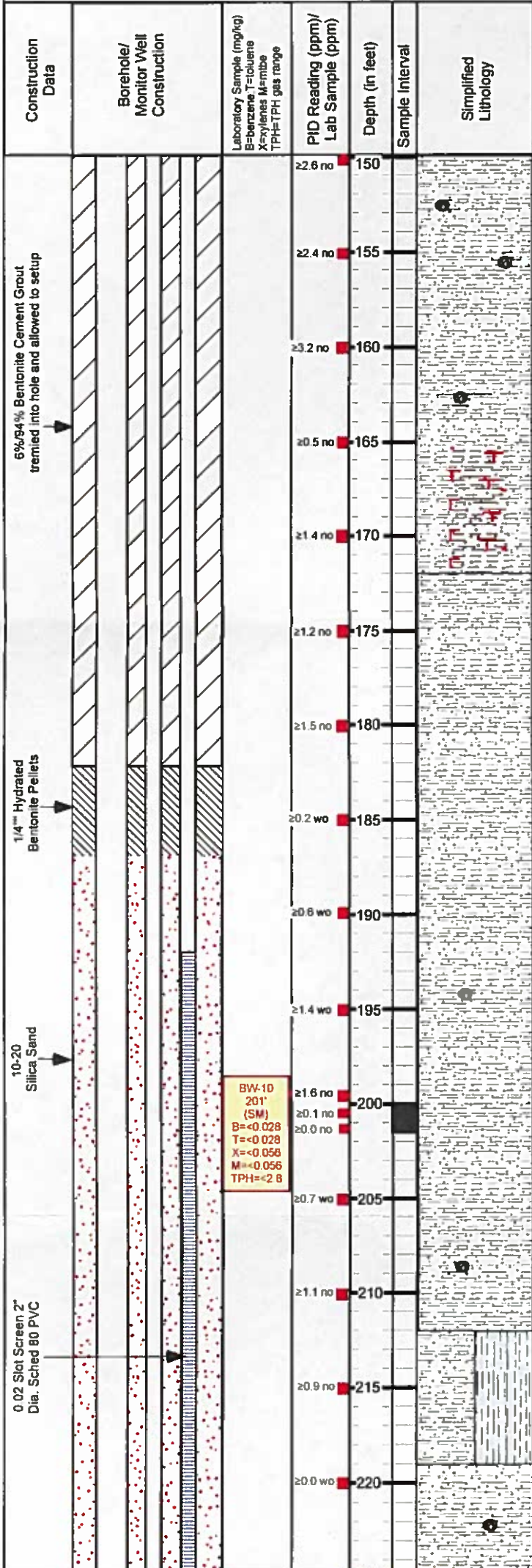
Borehole ID: BW-10

page 3 of 5

DATE OF DRILLING: 12/1-4/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 9 5/8"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: -326'
 TOTAL DEPTH: 360'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 192'-232'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 247'-282'
 DEEP WELL: 4" Sched 80 PVC; Screen 306'-346'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION



146'-172' Cuttings (7.5YR) light brown (SM) Silty very fine sand—bordering on (SM/ML), well sorted, with occasional carbonate nodules, some moisture, unconsolidated, no apparent hydrocarbon odor. Carbonate zone near base of interval.

172'-212' Cuttings (SM) very fine sand with only minor silt (10YR) light brown, coarser-grained than above with lesser silt, unconsolidated, some moisture, no apparent hydrocarbon odor.

<12/2/15/15 9:48 depth = 200'. Let hole sit for 62 minutes prior to SPT collection.>

200'-201.5' Split Spoon 1.5' sample. Entire core is (SM) silty very fine sand; (10 YR) light brown, slightly moist throughout, unconsolidated, no apparent hydrocarbon odor.

212'-219' Cuttings (SM/ML) Silt-very fine sand (10YR) light brown, finer grained than above or below w/gradational boundaries, some moisture, unconsolidated, no apparent hydrocarbon odor.

219'-242' Cuttings (SM) Silty very fine sand (10YR) light brown, unconsolidated, some moisture, occasional carbonate concretions. No apparent hydrocarbon odor.



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P.O. BOX 886 PLACITAS, NM 87043

ALLSUPS #320

CLIENT: Allsup Petroleum, Inc.

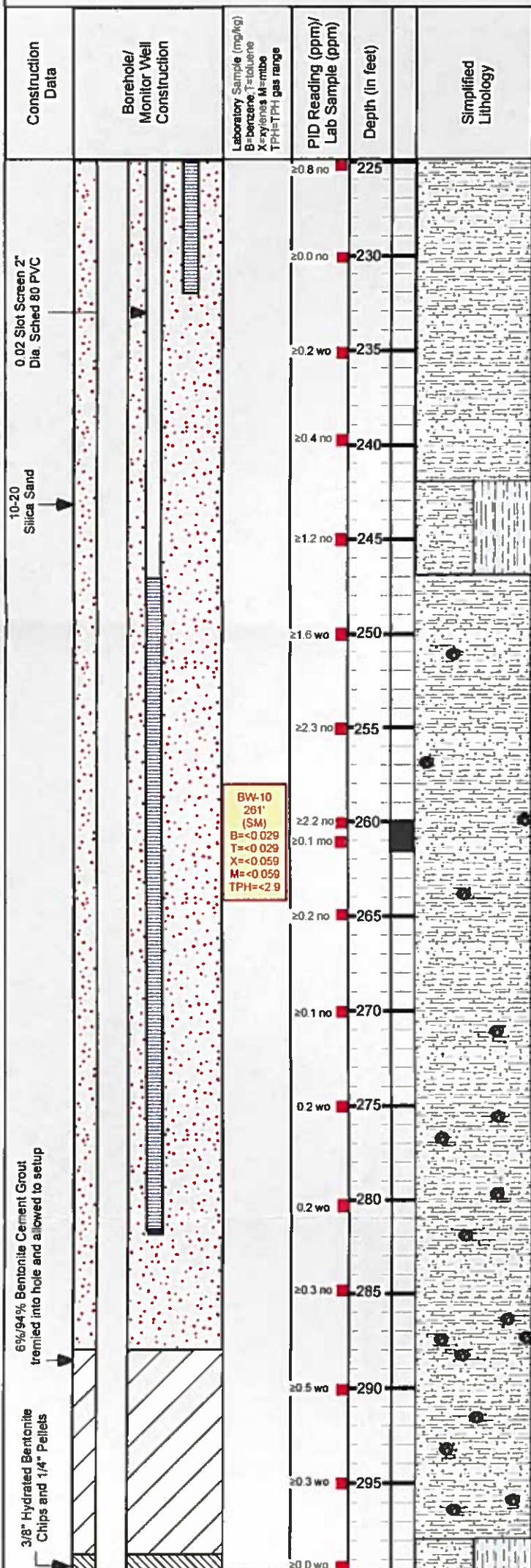
Borehole ID: BW-10

page 4 of 5

DATE OF DRILLING: 12/1-4/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 9 5/8"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: ~326'
 TOTAL DEPTH: 360'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 192'-232'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 247'-282'
 DEEP WELL: 4" Sched 80 PVC; Screen 306'-346'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION



242'-247' Cuttings (SM/ML) (7.5YR) silt-very fine sand mixture with gradational contacts, minor stage 2+ calcium carbonate at top of interval.

247'-260' Cuttings (SM) Silty very fine sand (7.5 YR) light reddish-brown, with some concretions, slightly moist, no apparent hydrocarbon odor.

260.0'-261.5' Split Spoon 1.4' sample. Entire sample is (SM) silty-very fine sand (7.5YR) light-brown, moderate moisture, unconsolidated.

261.5'-298' Cuttings (SM) Silty very fine sand, as above. (7.5 YR) reddish-brown, with abundant 1/2" to 1" diameter concretions below ~275 feet depth, slightly moist, no apparent hydrocarbon odor



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043

ALLSUPS #320

CLIENT: Allsup Petroleum, Inc.

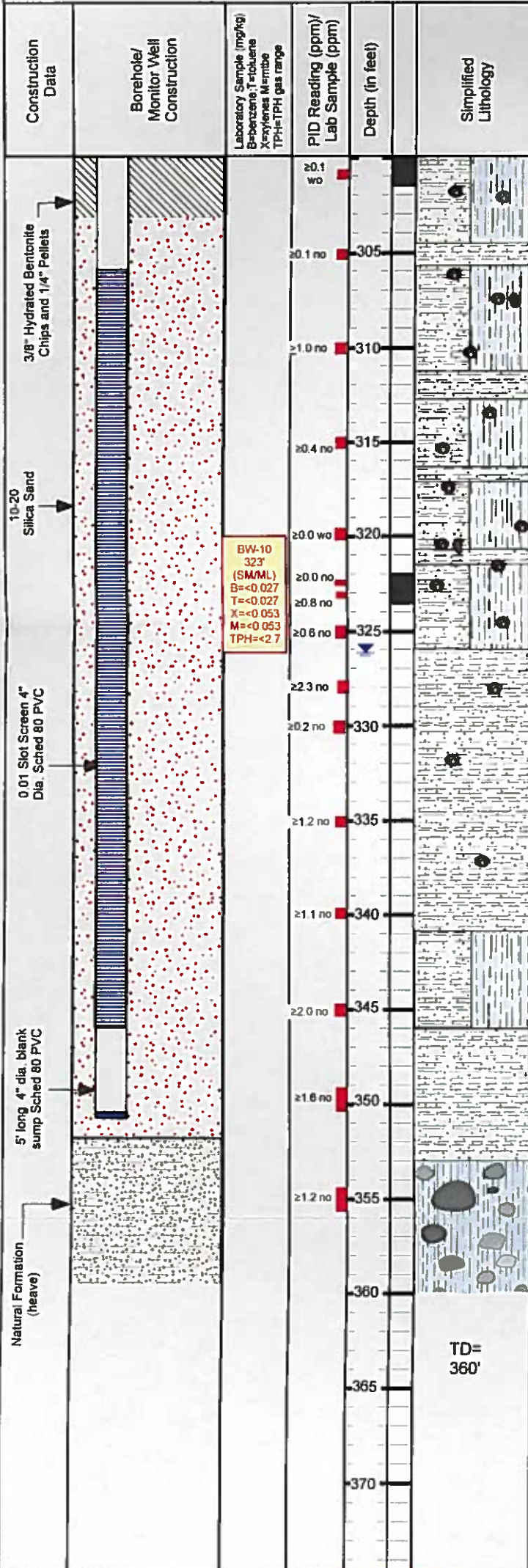
Borehole ID: BW-10

page 5 of 5

DATE OF DRILLING: 12/1-4/15
 LOGGED BY: WJB
 DRILLER: John Chavez/Yellowjacket
 BOREHOLE DIAMETER: 9 5/8"
 DRILLING METHOD: ARCH
 SAMPLING METHOD: Cuttings/Split Spoon
 TOP OF CASING ELEV: na
 DEPTH TO WATER: ~326'
 TOTAL DEPTH: 360'
 SHALLOW WELL: 2" Sched 80 PVC; Screen 192'-232'
 INTERMEDIATE WELL: 2" Sched 80 PVC; Screen 247'-282'
 DEEP WELL: 4" Sched 80 PVC; Screen 306'-346'
 SURFACE COMPLETION: 18"X18" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION



298'-326' Cuttings (SM/ML) silt-very fine sand mixture, (7.5YR) medium brown, unconsolidated, moisture increases below ~ 308 ft depth. no apparent hydrocarbon odor, concretions common. Localized (SM) zones with lesser silt. Contacts are gradational. H₂O saturated at 326 feet depth.

300.0'-301.5' Split Spoon 1.4' of sample. Entire core is (SM/ML) Silt-very fine sand mixture (7.5YR) reddish-brown, unconsolidated, moist, with ~5% concretions from 1/2" to 3/4" across. Some moisture; no apparent hydrocarbon odor.

<Stopped drilling at 322' 12/2/15 at 17:30, let hole sit overnight-collected split spoon 12/3/15 at 8:38. Borehole under slight vacuum.>

322.0'-323.5' Split Spoon 1.5' of sample. Entire core is (SM/ML) Silt-very fine sand (7.5YR) light reddish-brown, unconsolidated, moist, minor concretions. No apparent hydrocarbon odor.

326'-341' Cuttings (SM) Silty very fine to fine sand (7.5YR) light reddish-brown with some concretions, H₂O saturated, no apparent hydrocarbon odor.

341'-346' Cuttings (SM/ML) Silt-very fine sand,(7.5YR) brown, cuttings are wet/soupy. No apparent hydrocarbon odor. Hole making abundant water in upper portions of this interval.

346'-353' Cuttings (SM) Silty very fine sand (7.5YR) light brown, H₂O saturated, no apparent hydrocarbon odor.

353'-360' Cuttings (GM) Silty very fine sand matrix surrounding ~30% to 40% 1/2" to 1" subrounded SAS and quartzite gravels. (7.5YR) light brown, H₂O saturated, no apparent hydrocarbon odor. Borehole making abundant groundwater in this interval. Driller went an extra five feet to clean out hole prior to setting well.



BROWN ENVIRONMENTAL, INC

P.O. BOX 886 PLACITAS, NM 87043



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

November 25, 2015

Bill Brown

Brown Environmental Inc.

P. O. Box 886

Placitas, NM 87043

TEL: (505) 934-7707

FAX (505) 858-0707

RE: Allsup 320

OrderNo.: 1511994

Dear Bill Brown:

Hall Environmental Analysis Laboratory received 10 sample(s) on 11/23/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1511994

Date Reported: 11/25/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.

Client Sample ID: BW-8-81' (SM)

Project: Allsups 320

Collection Date: 11/11/2015 11:40:00 AM

Lab ID: 1511994-001

Matrix: MEOH (SOIL)

Received Date: 11/23/2015 10:04:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	11/24/2015 11:52:48 AM	22473
Surr: BFB	78.8	66.2-112		%REC	1	11/24/2015 11:52:48 AM	22473
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.066		mg/Kg	1	11/24/2015 11:52:48 AM	22473
Benzene	ND	0.033		mg/Kg	1	11/24/2015 11:52:48 AM	22473
Toluene	ND	0.033		mg/Kg	1	11/24/2015 11:52:48 AM	22473
Ethylbenzene	ND	0.033		mg/Kg	1	11/24/2015 11:52:48 AM	22473
Xylenes, Total	ND	0.066		mg/Kg	1	11/24/2015 11:52:48 AM	22473
Surr: 4-Bromofluorobenzene	98.4	80-120		%REC	1	11/24/2015 11:52:48 AM	22473

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

Qualifiers:	• Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
 Project: Allsups 320
 Lab ID: 1511994-002

Client Sample ID: BW-8-141' (SM)
 Collection Date: 11/11/2015 3:10:00 PM
 Received Date: 11/23/2015 10:04:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	11/24/2015 12:17:29 PM	22473
Surr: BFB	82.7	66.2-112		%REC	1	11/24/2015 12:17:29 PM	22473
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.064		mg/Kg	1	11/24/2015 12:17:29 PM	22473
Benzene	ND	0.032		mg/Kg	1	11/24/2015 12:17:29 PM	22473
Toluene	ND	0.032		mg/Kg	1	11/24/2015 12:17:29 PM	22473
Ethylbenzene	ND	0.032		mg/Kg	1	11/24/2015 12:17:29 PM	22473
Xylenes, Total	ND	0.064		mg/Kg	1	11/24/2015 12:17:29 PM	22473
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	11/24/2015 12:17:29 PM	22473

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
 Project: Allsups 320
 Lab ID: 1511994-003

Client Sample ID: BW-8-241'(SM/ML)
 Collection Date: 11/12/2015 2:00:00 PM
 Matrix: MEOH (SOIL) Received Date: 11/23/2015 10:04:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	11/24/2015 12:42:09 PM	22473
Surr: BFB	87.3	66.2-112		%REC	1	11/24/2015 12:42:09 PM	22473
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.063		mg/Kg	1	11/24/2015 12:42:09 PM	22473
Benzene	ND	0.032		mg/Kg	1	11/24/2015 12:42:09 PM	22473
Toluene	0.072	0.032		mg/Kg	1	11/24/2015 12:42:09 PM	22473
Ethylbenzene	ND	0.032		mg/Kg	1	11/24/2015 12:42:09 PM	22473
Xylenes, Total	0.14	0.063		mg/Kg	1	11/24/2015 12:42:09 PM	22473
Surr: 4-Bromofluorobenzene	113	80-120		%REC	1	11/24/2015 12:42:09 PM	22473

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
 Project: Allsups 320
 Lab ID: 1511994-004

Client Sample ID: BW-8-281'(SM)
 Collection Date: 11/12/2015 4:48:00 PM
 Matrix: MEOH (SOIL) Received Date: 11/23/2015 10:04:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.0		mg/Kg	1	11/24/2015 1:06:48 PM	22473
Surr: BFB	81.2	66.2-112		%REC	1	11/24/2015 1:06:48 PM	22473
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.061		mg/Kg	1	11/24/2015 1:06:48 PM	22473
Benzene	ND	0.030		mg/Kg	1	11/24/2015 1:06:48 PM	22473
Toluene	ND	0.030		mg/Kg	1	11/24/2015 1:06:48 PM	22473
Ethylbenzene	ND	0.030		mg/Kg	1	11/24/2015 1:06:48 PM	22473
Xylenes, Total	ND	0.061		mg/Kg	1	11/24/2015 1:06:48 PM	22473
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	11/24/2015 1:06:48 PM	22473

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

Qualifiers:	• Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc. Client Sample ID: BW-8-321'(SM/ML)
 Project: Allsup 320 Collection Date: 11/12/2015 7:02:00 PM
 Lab ID: 1511994-005 Matrix: MEOH (SOIL) Received Date: 11/23/2015 10:04:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	11/24/2015 1:31:26 PM	A30448
Surr: BFB	82.2	66.2-112		%REC	1	11/24/2015 1:31:26 PM	A30448
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.070		mg/Kg	1	11/24/2015 1:31:26 PM	B30448
Benzene	ND	0.035		mg/Kg	1	11/24/2015 1:31:26 PM	B30448
Toluene	ND	0.035		mg/Kg	1	11/24/2015 1:31:26 PM	B30448
Ethylbenzene	ND	0.035		mg/Kg	1	11/24/2015 1:31:26 PM	B30448
Xylenes, Total	ND	0.070		mg/Kg	1	11/24/2015 1:31:26 PM	B30448
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	11/24/2015 1:31:26 PM	B30448

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

- | | | |
|--------------------|---|---|
| Qualifiers: | * Value exceeds Maximum Contaminant Level | B Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P Sample pH Not in Range |
| R | RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | |

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
 Project: Allsups 320
 Lab ID: 1511994-006

Client Sample ID: BW-9-141'(SM/ML)
 Collection Date: 11/19/2015 8:10:00 AM
 Matrix: MEOH (SOIL) Received Date: 11/23/2015 10:04:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	11/25/2015 3:23:46 AM	A30448
Surr: BFB	74.4	66.2-112		%REC	1	11/25/2015 3:23:46 AM	A30448
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.084		mg/Kg	1	11/25/2015 3:23:46 AM	B30448
Benzene	ND	0.042		mg/Kg	1	11/25/2015 3:23:46 AM	B30448
Toluene	ND	0.042		mg/Kg	1	11/25/2015 3:23:46 AM	B30448
Ethylbenzene	ND	0.042		mg/Kg	1	11/25/2015 3:23:46 AM	B30448
Xylenes, Total	ND	0.084		mg/Kg	1	11/25/2015 3:23:46 AM	B30448
Surr: 4-Bromofluorobenzene	92.8	80-120		%REC	1	11/25/2015 3:23:46 AM	B30448

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc. Client Sample ID: BW-9-241'(SM/ML)
 Project: Allsups 320 Collection Date: 11/19/2015 1:30:00 PM
 Lab ID: 1511994-007 Matrix: MEOH (SOIL) Received Date: 11/23/2015 10:04:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	11/25/2015 3:48:02 AM	A30448
Surr: BFB	77.3	66.2-112		%REC	1	11/25/2015 3:48:02 AM	A30448
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.065		mg/Kg	1	11/25/2015 3:48:02 AM	B30448
Benzene	ND	0.033		mg/Kg	1	11/25/2015 3:48:02 AM	B30448
Toluene	ND	0.033		mg/Kg	1	11/25/2015 3:48:02 AM	B30448
Ethylbenzene	ND	0.033		mg/Kg	1	11/25/2015 3:48:02 AM	B30448
Xylenes, Total	ND	0.065		mg/Kg	1	11/25/2015 3:48:02 AM	B30448
Surr: 4-Bromofluorobenzene	97.2	80-120		%REC	1	11/25/2015 3:48:02 AM	B30448

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc. Client Sample ID: BW-9-281'(SM/ML)
 Project: Allsups 320 Collection Date: 11/19/2015 3:26:00 PM
 Lab ID: 1511994-008 Matrix: MEOH (SOIL) Received Date: 11/23/2015 10:04:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	11/25/2015 4:12:14 AM	A30448
Surr: BFB	74.7	66.2-112		%REC	1	11/25/2015 4:12:14 AM	A30448
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.072		mg/Kg	1	11/25/2015 4:12:14 AM	B30448
Benzene	ND	0.036		mg/Kg	1	11/25/2015 4:12:14 AM	B30448
Toluene	ND	0.036		mg/Kg	1	11/25/2015 4:12:14 AM	B30448
Ethylbenzene	ND	0.036		mg/Kg	1	11/25/2015 4:12:14 AM	B30448
Xylenes, Total	ND	0.072		mg/Kg	1	11/25/2015 4:12:14 AM	B30448
Surr: 4-Bromofluorobenzene	93.2	80-120		%REC	1	11/25/2015 4:12:14 AM	B30448

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

Qualifiers:	• Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc. Client Sample ID: BW-9-321' (SM/ML)
 Project: Allsups 320 Collection Date: 11/20/2015 8:30:00 AM
 Lab ID: 1511994-009 Matrix: MEOH (SOIL) Received Date: 11/23/2015 10:04:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	11/25/2015 4:36:25 AM	A30448
Surr: BFB	78.0	66.2-112		%REC	1	11/25/2015 4:36:25 AM	A30448
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.068		mg/Kg	1	11/25/2015 4:36:25 AM	B30448
Benzene	ND	0.034		mg/Kg	1	11/25/2015 4:36:25 AM	B30448
Toluene	ND	0.034		mg/Kg	1	11/25/2015 4:36:25 AM	B30448
Ethylbenzene	ND	0.034		mg/Kg	1	11/25/2015 4:36:25 AM	B30448
Xylenes, Total	ND	0.068		mg/Kg	1	11/25/2015 4:36:25 AM	B30448
Surr: 4-Bromofluorobenzene	98.9	80-120		%REC	1	11/25/2015 4:36:25 AM	B30448

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc. Client Sample ID: MeOH Blank
 Project: Allsups 320 Collection Date:
 Lab ID: 1511994-010 Matrix: MEOH BLAN Received Date: 11/23/2015 10:04:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/25/2015 5:00:50 AM	A30448
Surr: BFB	77.2	66.2-112		%REC	1	11/25/2015 5:00:50 AM	A30448
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	11/25/2015 5:00:50 AM	B30448
Benzene	ND	0.050		mg/Kg	1	11/25/2015 5:00:50 AM	B30448
Toluene	ND	0.050		mg/Kg	1	11/25/2015 5:00:50 AM	B30448
Ethylbenzene	ND	0.050		mg/Kg	1	11/25/2015 5:00:50 AM	B30448
Xylenes, Total	ND	0.10		mg/Kg	1	11/25/2015 5:00:50 AM	B30448
Surr: 4-Bromofluorobenzene	97.5	80-120		%REC	1	11/25/2015 5:00:50 AM	B30448

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

Qualifiers:	* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511994
25-Nov-15

Client: Brown Environmental Inc.
Project: Allsup 320

Sample ID	MB-22473	SampType	MBLK	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	PBS	Batch ID	22473	RunNo	30448					
Prep Date	11/23/2015	Analysis Date	11/24/2015	SeqNo	929762	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	890		1000		88.8	66.2	112			

Sample ID	LCS-22473	SampType	LCS	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	LCSS	Batch ID	22473	RunNo	30448					
Prep Date	11/23/2015	Analysis Date	11/24/2015	SeqNo	929763	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	110	79.6	122			
Surr: BFB	1000		1000		104	66.2	112			

Sample ID	5ML RB	SampType	MBLK	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	PBS	Batch ID	A30448	RunNo	30448					
Prep Date:		Analysis Date	11/24/2015	SeqNo	929783	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	760		1000		76.4	66.2	112			

Sample ID	2.5UG GRO LCS	SampType	LCS	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	LCSS	Batch ID	A30448	RunNo	30448					
Prep Date:		Analysis Date	11/24/2015	SeqNo	929784	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.0	79.6	122			
Surr: BFB	1000		1000		100	66.2	112			

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511994

25-Nov-15

Client: Brown Environmental Inc.

Project: Allsup's 320

Sample ID	MB-22473	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	22473	RunNo:	30448					
Prep Date:	11/23/2015	Analysis Date:	11/24/2015	SeqNo:	929804	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
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-22473	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	22473	RunNo:	30448					
Prep Date:	11/23/2015	Analysis Date:	11/24/2015	SeqNo:	929816	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.1	0.10	1.000	0	107	67.2	121			
Benzene	0.98	0.050	1.000	0	98.2	80	120			
Toluene	0.93	0.050	1.000	0	93.1	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.0	80	120			
Surr: 4-Bromofluorobenzene	1.4		1.000		137	80	120			S

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B30448	RunNo:	30448					
Prep Date:		Analysis Date:	11/24/2015	SeqNo:	929827	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.4	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B30448	RunNo:	30448					
Prep Date:		Analysis Date:	11/24/2015	SeqNo:	929828	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.1	0.10	1.000	0	106	67.2	121			
Benzene	1.0	0.050	1.000	0	101	80	120			
Toluene	0.94	0.050	1.000	0	93.6	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.5	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511994
25-Nov-15

Client: Brown Environmental Inc.
Project: Allsups 320

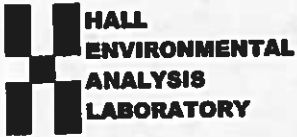
Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B30448	RunNo:	30448					
Prep Date:		Analysis Date:	11/24/2015	SeqNo:	929828					
				Units:	mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	2.8	0.10	3.000	0	92.3	80	120			
Sur: 4-Bromofluorobenzene	1.2		1.000		124	80	120			S

Sample ID	1511994-005AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BW-8-321(SM/ML)	Batch ID:	B30448	RunNo:	30448					
Prep Date:		Analysis Date:	11/24/2015	SeqNo:	929830					
				Units:	mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.73	0.070	0.7022	0	103	53.6	133			
Benzene	0.71	0.035	0.7022	0.01868	98.9	69.6	136			
Toluene	0.69	0.035	0.7022	0.03434	93.3	76.2	134			
Ethylbenzene	0.67	0.035	0.7022	0.004564	95.1	75.8	137			
Xylenes, Total	2.0	0.070	2.107	0.03820	91.8	78.9	133			
Sur: 4-Bromofluorobenzene	0.80		0.7022		115	80	120			

Sample ID	1511994-005AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BW-8-321(SM/ML)	Batch ID:	B30448	RunNo:	30448					
Prep Date:		Analysis Date:	11/24/2015	SeqNo:	929831					
				Units:	mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.74	0.070	0.7022	0	106	53.6	133	1.98	20	
Benzene	0.72	0.035	0.7022	0.01868	99.5	69.6	136	0.579	20	
Toluene	0.71	0.035	0.7022	0.03434	96.7	76.2	134	3.39	20	
Ethylbenzene	0.72	0.035	0.7022	0.004564	102	75.8	137	6.68	20	
Xylenes, Total	2.1	0.070	2.107	0.03820	97.6	78.9	133	6.00	20	
Sur: 4-Bromofluorobenzene	0.92		0.7022		132	80	120	0	0	S

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit



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

Sample Log-In Check List

Client Name: Brown Env

Work Order Number: 1511994

RcptNo: 1

Received by/date: [Signature] 11/23/15

Logged By: Ashley Gallegos 11/23/2015 10:04:00 AM [Signature]

Completed By: Ashley Gallegos 11/23/2015 10:15:32 AM [Signature]

Reviewed By: [Signature] 11/23/15

Chain of Custody

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? Client

Log In

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) properly 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? Yes No
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
13. Are matrices correctly identified on Chain of Custody? Yes No
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

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 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 Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.9	Good	Not Present			

Hall-UI-Custody Record

Client: Brown Environmental Inc.

Mailing Address: P.O. Box 886

PLACITAS, NM 87043

Phone #: 505 934-7707

email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other

EDD (Type)

Turn-Around Time:

Standard Rush

Project Name:

AWS 320

Project #:

1070

Project Manager:

Willem Brown

Sampler:

W. Brown

Office: Yes No

Sample Temperature: 15/19/14

Date Time Matrix

Sample Request ID

Container Type and #

Preservative Type

HEAT No.

Analysis Request

TPH 8015B (GRO / DRO / MRO)

BTEX + MTBE + TPH (Gas only)

BTEX + MTBE + TMBs (8021)

TPH (Method 418.1)

EDB (Method 504.1)

PAH's (8310 or 8270 SIMS)

RCRA 8 Metals

Anions (F⁻, Cl⁻, NO₃⁻, NO₂⁻, PO₄³⁻, SO₄²⁻)

8081 Pesticides / 8082 PCBs

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

Received by:

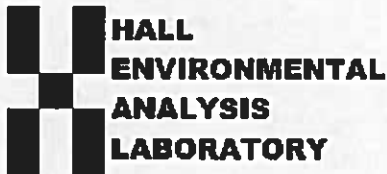
Date Time

Remarks:

Received by:

Date Time

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



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

December 11, 2015

Bill Brown
Brown Environmental Inc.
P. O. Box 886
Placitas, NM 87043
TEL: (505) 934-7707
FAX (505) 858-0707

RE: Allsup #320

OrderNo.: 1512277

Dear Bill Brown:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/7/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
 Project: Allsups #320
 Lab ID: 1512277-001

Client Sample ID: BW-10-141' (SM/ML)
 Collection Date: 12/2/2015 8:16:00 AM
 Received Date: 12/7/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	12/9/2015 9:11:33 PM	22678
Surr: BFB	89.0	66.2-112		%REC	1	12/9/2015 9:11:33 PM	22678
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.083		mg/Kg	1	12/9/2015 9:11:33 PM	22678
Benzene	ND	0.041		mg/Kg	1	12/9/2015 9:11:33 PM	22678
Toluene	ND	0.041		mg/Kg	1	12/9/2015 9:11:33 PM	22678
Ethylbenzene	ND	0.041		mg/Kg	1	12/9/2015 9:11:33 PM	22678
Xylenes, Total	ND	0.083		mg/Kg	1	12/9/2015 9:11:33 PM	22678
Surr: 4-Bromofluorobenzene	115	80-120		%REC	1	12/9/2015 9:11:33 PM	22678

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

Qualifiers:	• Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
 Project: Allsups #320
 Lab ID: 1512277-002

Client Sample ID: BW-10-201' (SM)
 Collection Date: 12/2/2015 10:50:00 AM
 Matrix: MEOH (SOIL) Received Date: 12/7/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.8		mg/Kg	1	12/9/2015 9:36:07 PM	22678
Surr: BFB	88.7	66.2-112		%REC	1	12/9/2015 9:36:07 PM	22678
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.056		mg/Kg	1	12/9/2015 9:36:07 PM	22678
Benzene	ND	0.028		mg/Kg	1	12/9/2015 9:36:07 PM	22678
Toluene	ND	0.028		mg/Kg	1	12/9/2015 9:36:07 PM	22678
Ethylbenzene	ND	0.028		mg/Kg	1	12/9/2015 9:36:07 PM	22678
Xylenes, Total	ND	0.056		mg/Kg	1	12/9/2015 9:36:07 PM	22678
Surr: 4-Bromofluorobenzene	113	80-120		%REC	1	12/9/2015 9:36:07 PM	22678

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
 Project: Allsups #320
 Lab ID: 1512277-003

Client Sample ID: BW-10-261' SM
 Collection Date: 12/2/2015 3:02:00 PM
 Matrix: MEOH (SOIL) Received Date: 12/7/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.9		mg/Kg	1	12/9/2015 10:00:35 PM	22678
Surr: BFB	85.2	66.2-112		%REC	1	12/9/2015 10:00:35 PM	22678
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.059		mg/Kg	1	12/9/2015 10:00:35 PM	22678
Benzene	ND	0.029		mg/Kg	1	12/9/2015 10:00:35 PM	22678
Toluene	ND	0.029		mg/Kg	1	12/9/2015 10:00:35 PM	22678
Ethylbenzene	ND	0.029		mg/Kg	1	12/9/2015 10:00:35 PM	22678
Xylenes, Total	ND	0.059		mg/Kg	1	12/9/2015 10:00:35 PM	22678
Surr: 4-Bromofluorobenzene	110	80-120		%REC	1	12/9/2015 10:00:35 PM	22678

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

Qualifiers:	• Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1512277
 Date Reported: 12/11/2015

CLIENT: Brown Environmental Inc.

Client Sample ID: BW-10-323' (SM/ML)

Project: Allsups #320

Collection Date: 12/3/2015 8:39:00 AM

Lab ID: 1512277-004

Matrix: MEOH (SOIL)

Received Date: 12/7/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.7		mg/Kg	1	12/9/2015 10:25:14 PM	22678
Surr: BFB	86.9	66.2-112		%REC	1	12/9/2015 10:25:14 PM	22678
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.053		mg/Kg	1	12/9/2015 10:25:14 PM	22678
Benzene	ND	0.027		mg/Kg	1	12/9/2015 10:25:14 PM	22678
Toluene	ND	0.027		mg/Kg	1	12/9/2015 10:25:14 PM	22678
Ethylbenzene	ND	0.027		mg/Kg	1	12/9/2015 10:25:14 PM	22678
Xylenes, Total	ND	0.053		mg/Kg	1	12/9/2015 10:25:14 PM	22678
Surr: 4-Bromofluorobenzene	112	80-120		%REC	1	12/9/2015 10:25:14 PM	22678

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.

Client Sample ID: MeOH Blank

Project: Allsups #320

Collection Date:

Lab ID: 1512277-005

Matrix: MEOH BLAN

Received Date: 12/7/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	12/9/2015 10:49:54 PM	22678
Benzene	ND	0.050		mg/Kg	1	12/9/2015 10:49:54 PM	22678
Toluene	ND	0.050		mg/Kg	1	12/9/2015 10:49:54 PM	22678
Ethylbenzene	ND	0.050		mg/Kg	1	12/9/2015 10:49:54 PM	22678
Xylenes, Total	ND	0.10		mg/Kg	1	12/9/2015 10:49:54 PM	22678
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	12/9/2015 10:49:54 PM	22678

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512277

11-Dec-15

Client: Brown Environmental Inc.

Project: Allsups #320

Sample ID	MB-22678	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	22678	RunNo:	30727					
Prep Date:	12/8/2015	Analysis Date:	12/9/2015	SeqNo:	938888	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	870		1000		87.4	66.2	112			

Sample ID	LCS-22678	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	22678	RunNo:	30727					
Prep Date:	12/8/2015	Analysis Date:	12/9/2015	SeqNo:	938889	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	83.6	79.6	122			
Surr: BFB	1100		1000		107	66.2	112			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1512277
 11-Dec-15

Client: Brown Environmental Inc.
Project: Allsups #320

Sample ID	MB-22678	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	22678	RunNo:	30727					
Prep Date:	12/8/2015	Analysis Date:	12/9/2015	SeqNo:	938921	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		114	80	120			

Sample ID	LCS-22678	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	22678	RunNo:	30727					
Prep Date:	12/8/2015	Analysis Date:	12/9/2015	SeqNo:	938922	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.91	0.10	1.000	0	90.5	67.2	121			
Benzene	0.88	0.050	1.000	0	87.8	80	120			
Toluene	0.88	0.050	1.000	0	88.5	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.1	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.2	80	120			
Surr: 4-Bromofluorobenzene	1.3		1.000		134	80	120			S

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: **Brown Env**

Work Order Number: **1512277**

RcptNo: **1**

Received by/date:

[Signature]

12/07/15

Logged By: **Lindsay Mangin**

12/7/2015 12:15:00 PM

[Signature]

Completed By: **Lindsay Mangin**

12/7/2015 12:41:50 PM

[Signature]

Reviewed By:

[Signature]

12/07/15

Chain of Custody

- 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? Client

Log In

- 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) properly 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? Yes No
- 12. Does paperwork match bottle labels? Yes No # of preserved bottles checked for pH: (<2 or >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? 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 Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Not Present			

Chain-of-Custody Record

Client: BROWN ENVIRONMENTAL INC.

Project Name: Audits #320

Mailing Address: PO Box 886

Location: PARAMS, NM 87043

Phone #: 505-934-7707

Project Manager: William Brown

Sampler: G. Brown

Sample Temperature: 15.22

Container Type and #

Preservative Type

HEALING

1 + 402 ml - UNUSUAL

2020 mL VIALS - METHANOL - 001

002

003

004

McOIT Blank

12/07/15

Received by: [Signature]

Date: 12/07/15

Received by: [Signature]

Date: 12/07/15

Remarks:

Turn-Around Time:

Standard Rush

Project Name:

Audits #320

Project #:

1070

Project Manager:

William Brown

Sampler:

G. Brown

Sample Temperature:

15.22

Container Type and #

Preservative Type

HEALING

1 + 402 ml - UNUSUAL

2020 mL VIALS - METHANOL - 001

002

003

004

McOIT Blank

12/07/15

Received by: [Signature]

Date: 12/07/15

Received by: [Signature]

Date: 12/07/15

Remarks:

Analysis Request

BTEX + MTBE + TMB's (8021)

BTEX + MTBE + TPH (Gas only)

TPH 8015B (GRO / DRO / MRO)

TPH (Method 418.1)

EDB (Method 504.1)

PAH's (8310 or 8270 SIMS)

RCRA 8 Metals

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

Date:

Time:

Relinquished by:

Time:

Relinquished by:

Date:

Time:

Relinquished by:

Time:

Relinquished by:

Date:

Time:

Relinquished by:

Time:

Relinquished by:

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Relinquished by:

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Date:

Time:

Relinquished by:

Time:

Relinquished by:

Date:

Time:

Relinquished by:

Time:

Relinquished by:

Date:

Time:

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