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MINIMUM SITE ASSESSMENT REPORT ADDENDUM

ALLSUPS #320 FACILITY
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

May 2012

Minimum Site Assessment-
Preliminary Investigation Addendum Report

Allsups #320 Facility
Clovis, New Mexico

BEI Job No. 1070
WPID #16239
DID#16239-1
Facility #31013
RID #4623

Submitted to:

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

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

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1.0 EXECUTIVE SUMMARY

On behalf of Allsups Petroleum, Inc., in March of 2011, Brown Environmental, Inc. (BEI) conducted a Minimum Site Assessment-Preliminary Investigation (MSA) at the Allsups #320 facility located at the intersection of Prince Street and 21st Street in Clovis, New Mexico (Figure 1). The MSA was conducted to evaluate the extent of hydrocarbon releases from the former underground storage tank (UST) systems removed from the Site in January 2011. The UST removal was conducted as part of a total remodeling and upgrade of the facility by Allsups, during which a much larger facility was constructed on the Site. Figure 2 highlights the locations of both the old and the new service station/convenience store facilities and UST systems. According to available records, the Site has been the location of a gasoline service station since at least 1988. Prior to purchase by Allsups in 2000, the facility was a Target Gas Station.

During the 2011 MSA, three borings were advanced and sampled to depths of up to 209 feet below surface grade (bsg) using a hollow-stem auger (HSA) drilling rig. Although groundwater was not encountered during drilling, elevated levels of soil hydrocarbons were detected to the base of the deepest borehole. As a result, the New Mexico Environment Department-Petroleum Storage Tank (NMED) required installation and sampling of a nested monitor well to determine the vertical extent of soil hydrocarbons and whether groundwater at the Site had been affected.

BEI installed nested well BW-1 at the Site in February 2012 at the location shown in Figure 2 using an air-rotary casing hammer (ARCH) drilling rig. After an extended equilibration period, groundwater samples were collected from the well in April 2012. This MSA Addendum Report documents the results of the nested well installation and sampling.

The nested BW-1 monitor well consists of three separate wells with screen intervals set at 80 feet to 160 feet bsg (2-inch diameter), 190 feet to 270 feet (2-inch diameter), and 295 feet to 345 feet bsg (4-inch diameter). A detailed corelog and well completion diagram is included in Appendix A.

Retrieved soil samples collected from BW-1 and the earlier MSA boreholes identified three primary Lithologic Units at the Site, which are highlighted in the cross section shown on Figure 4 for the location shown on Figure 3. Lithologic Unit I consists predominantly of silt and very fine sand with lesser amounts of clayey sand and extends from the land surface to approximately 20

to 30 feet bsg. Minor to moderate stage 1 to 2 discontinuous calcium carbonate (caliche) cemented zones are present towards the bottom of this Unit. Lithologic Unit II consists primarily of silty sand with prominent continuous stage 3 to 4 caliche extending to approximately 67 feet bsg. Lithologic Unit III extends below Unit II to a depth of greater than 345 feet and consists of almost uniform, massive, very fine sand with trace amounts of silt. Several thin sandstone layers were encountered near the base of the BW-1 borehole and carbonate-cemented sand nodules are found on a discontinuous basis below approximately 250 feet bsg.

Based on the combined drilling at the Site, a vertically extensive vapor-phase gasoline plume is present extending to the water table. Unfortunately, the ARCH method of drilling needed to extend borehole BW-1 to 345 feet bsg caused aeration of sediments during advancement. Headspace results obtained from soil samples collected during advancement of BW-1 and boreholes B-1, B-2, and BW-3 are presented in Appendix A and/or on Figure 4.

Depth to groundwater in well BW-1 was approximately 324 feet bsg during the April 2012 sampling event. Groundwater flow direction below the Site is unknown. Six City of Portales municipal wells are reportedly located within one mile of the facility and are screened in the shallow portions of the regional aquifer. Results of the Groundwater sampling event are presented in Figure 5. Benzene was identified at a levels of up to 240 parts per billion (ppb). Other gasoline components were also identified in groundwater samples but at levels below the New Mexico Water Quality Control Commission (WQCC) Standards. The elevated levels of benzene in relation to the other dissolved-phase gasoline constituents in well BW-1 suggests chemical partitioning is occurring in the subsurface and that the leading edge of the hydrocarbon plume has migrated to groundwater.

Based on the requirements of the New Mexico Petroleum Storage Tank Regulations (PSTR), two additional wells are needed at the Site to characterize the direction of groundwater flow and to more fully characterize the extent of soil and groundwater hydrocarbons.

2.0 INTRODUCTION

2.1 BACKGROUND/SITE HISTORY

The Allsups #320 Facility is located in Clovis, New Mexico. Allsups purchased the facility after Re-Spec, Inc. (Re-Spec) performed a limited site assessment (LSA) in 1999. During the LSA, five borings were reportedly advanced at the Site at the approximate locations highlighted in Figure 2. Elevated PID readings were reported from borehole SB-4 at depths of 25 and 35 feet bsg. The results were submitted by NSync Environmental (NSync) to the New Mexico Environment Department-Petroleum Storage Tank Bureau (NMED) in the form of a 14-day report in May 2001.

Prior to the 2011 station upgrade, three 8,000 gallon gasoline-containing USTs were present at the Site at the approximate locations shown in Figure 2. This older set of tanks was reportedly installed in 1988 by the previous owner (NSync, 2001). Allsups removed the former UST systems including piping and dispensers on January 24 and 25, 2011. A release notification was submitted to the NMED the following day. Mr. Bill Bryant of the NMED was present during the UST systems removal. BEI collected 12 confirmatory headspace and laboratory soil samples from the locations selected by Mr. Bryant, which are shown on Figure 2. Elevated PID and soil laboratory readings were observed on select samples collected from beneath the tank excavation (Figure 2). No signs of hydrocarbon releases were observed in the vicinity of the former underground piping and dispenser islands.

In March 2011, BEI completed an MSA-PI at the Site by advancing and sampling three soil borings to depths of between 69 and 209 feet (Figures 2 and 4). Based on the results, NMED required Allsups/BEI to install and sample nested well BW-1 (discussed herein).

2.2 SCOPE OF WORK

BEI's original scope of work for this phase of the project consisted of three primary tasks based on the requirements of the PSTR. These were later modified in the field based on conditions encountered in the subsurface and problems with volatilization of hydrocarbons in both soil and groundwater during the ARCH drilling process.

- Install and sample one nested monitor well and prepare and submit and summary report to NMED.
- (Optional) Install and sample two single completion wells if groundwater contamination was encountered at the Site. Analyze collected data and prepare and

submit a MSA-PI Report pursuant to the PSTR 20.5.12.18. This task was deferred until the BW-1 could be sampled for groundwater analysis.

- Properly dispose of investigative-derived waste (IDW).

3.0 PHYSICAL SETTING

3.1 PHYSIOGRAPHY

The Site is located at the intersection of Prince Avenue and 21st Street in Clovis, New Mexico. Site elevation is approximately 4,280 feet above mean sea level. Topography in the site vicinity generally slopes gently to the south and southeast. Several small lakes are located between 0.5 miles and 1 mile from the Site (Figure 1).

3.2 LAND USE

A BEI representative performed a drive-by inspection of the surrounding area and the air photograph in Figure 1 was analyzed as part of a land use survey. In general, the areas immediately surrounding the Site are characterized by commercial use. A shopping mall is located to the east and south with an IHOP restaurant located immediately east of the Site. Several businesses are located to the west including LA Nails located in a former service station. Walgreens and Citizens Bank are located to the north. Residential housing is located further to the east and west of the Site with continued commercial usage extending north and south along Prince Street.

Six City of Clovis public water supply wells were reportedly present within the one-mile search radius. These wells are reportedly screened in the shallow portions of the regional aquifer. The nearest well is Well #5 located approximately 2,700 feet to the west. Depth to groundwater was reported at approximately 300 feet bsg (NSync, 2001). Several small lakes are located within 1-mile of the Site.

3.3 HYDROGEOLOGIC SETTING

During the BEI MSA investigations, four boreholes, B-1, B-2, B-3, and BW-1 were advanced at the Site to depths of 69 feet, 69, feet, 209 feet, and 345 feet bsg, respectively, at the locations shown in Figure 3. Retrieved soil samples from BEI advanced boreholes identified three primary Lithologic Units at the Site. These Units are highlighted in the cross section shown in Figure 4 and the BW-1 corelog in Appendix A. Lithologic Unit I consists predominantly of silt and very fine sand with lesser amounts of clayey sand. This Unit extends from the land surface to approximately 20 to 30 feet bsg and transitions into the underlying Unit II. Minor to moderate stage 1 to 2 discontinuous caliche zones are present towards the bottom of Lithologic Unit I. Lithologic Unit II consists primarily of silty sand with prominent continuous stage 3 to 4 caliche

extending from the base of Lithologic Unit I to approximately 67 feet bsg. The dense cemented carbonate in this interval was locally laminar and also fractured in nature and core barrel refusal was experienced at several locations in this Unit during drilling. Lithologic Unit III extends from below Unit II to a depth of greater than 345 feet and consists of massive, fine grained sand with trace amounts of silt. Minor disseminated carbonate was observed in this Unit. Bedding surfaces observed in the split spoons appeared at or nearly horizontal in nature when present. Several thin sandstone layers were encountered near the base of the BW-1 borehole and carbonate cemented sand nodules are found on a discontinuous basis below approximately 250 feet bsg.

Depth to groundwater is approximately 324 feet bsg. Because only one well is present at the Site the direction of groundwater flow cannot be determined. Based on discussions with local water well drillers, the regional groundwater has been falling several feet per year for several decades in the Site vicinity. Multiple high yield City of Portales municipal wells are located west of the Site, which may affect groundwater flow at the Site.

4.0 FIELD AND LABORATORY SAMPLING METHODS AND PROCEDURES

4.1 GENERAL

This section describes the methods and procedures for the following project activities:

- Soil Boring Advancement and Monitor Well Completion
- Subsurface Soil Sampling and Analysis
- Groundwater Sampling

As per the requirements of CFR 1910.120, BEI prepared a site-specific Health and Safety Plan prior to initiation of field activities at the Site.

4.2 SOIL BORING AND MONITOR WELL INSTALLATION

One soil boring, BW-1, was advanced in the Site vicinity in February 2012 using a Speedstar 50k air-rotary casing hammer (ARCH) drilling rig equipped with a Stratex™ hammer and operated by Water Development Corporation, Inc. (WDC). The Borehole lithologic log and monitor well completion diagram are located in Appendix A. The shallow depth well (80 to 160 feet bsg) and the intermediate depth well (190 to 270 feet bsg) were both constructed of 2-inch diameter schedule 80 PVC with 0.02-inch slotted well screens and blank casing. The deep depth well (295 to 345 feet bsg) was constructed of 4-inch diameter schedule 80 PVC with 0.01-inch slotted well screen and blank casing. A 10-20 silica sandpack was emplaced in the borehole across each of the well screens. Hydrated bentonite pellets and a 6%/94% bentonite-cement grout were used to isolate the screened intervals of the wells clusters as shown on the well completion diagrams. Bentonite was hydrated in approximately one to two-foot lifts by adding water. A 6%/94%bentonite-cement grout was emplaced from the top of the upper bentonite seal to just below the land surface in two separate lifts, followed by a 12-inch diameter manway and concrete apron. A compression plug and lock was inserted in the top of each PVC well casing.

The borehole was logged by observing drilling cuttings and through the collection of split-spoon samples in discrete locations. Split-spoon samplers were decontaminated between sample runs using an alconox and tap water rinse. Retrieved sediments were logged by a BEI Geologist using the Unified Soil Classification System (USCS) method.

Drill cuttings were temporarily stored on-site in a 20-yard^3 plastic-lined rolloff container for later removal by Gandy Marley, Inc. to their permitted landfarm in Tatum, New Mexico for final disposition. Waste disposal manifests are included in Appendix B.

4.3 SOIL SAMPLING AND ANALYSIS

During drilling activities, retrieved sediment samples were collected from the borehole and analyzed in the field for total ionizable volatile compounds (TIVC) using a RAE-2000 photoionization detector (PID) utilizing a 10.6 eV lamp. 100 ppm/v isobutylene span gas and ambient air were used to calibrate the PID prior to use.

Results of the field headspace analysis are presented on the borehole log in Appendix A. In addition, sediment samples were also collected using the PSTR Methanol Extraction Method at four discrete locations. Results of the laboratory analyses are presented in Table 1 and Appendix C. These samples were hand delivered on ice to Hall Environmental Laboratory Inc. (Hall) in Albuquerque, New Mexico for laboratory analyses. Laboratory soil samples were analyzed for one or more of the following parameters:

- Total petroleum hydrocarbons $(TPH)_{gasoline\ range}$ using EPA Method 8015 modified.
- Benzene, toluene, ethyl benzene, and total xylenes (BTEX), tri-methyl benzenes (TMBs), and methyl tertiary butyl ether (MTBE) using EPA Method 8021.

During the Investigation, all soil samples were handled using strict Chain-of-Custody procedures. Laboratory reports including chain-of-custody documentation are presented in Appendix C.

4.4 GROUNDWATER SAMPLING AND ANALYSIS

On April 13, 2012, groundwater samples were collected from monitor well BW-1 for laboratory analysis. Groundwater laboratory analytical results for are presented in Figure 5 and Appendix C.

Prior to sampling, the water level in the well was measured and also gauged for the presence of LNAPL. Temperature, pH, and conductivity measurements were taken during well purging to document well stabilization. Approximately 50 gallons of water was removed from the well initially by swabbing and bailing. Subsequently, a Grundfos downhole pump was lowered into

the well and approximately 300 gallons of water was purged from the well. A total of approximately 9 well volumes were removed prior to collection of groundwater samples. The pump was decontaminated prior to use by steam cleaning and using a double alconox and a double tap water rinse.

Two sets of groundwater samples were collected from the well from the pump discharge at the surface and one set of groundwater samples was collected with a dedicated disposable bailer. Collected samples were stored in 40 milliliter vials preserved with mercuric chloride. Samples were collected using strict chain-of-custody procedures, stored on ice in a cooler, and hand-delivered to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. Purge water was discharged to an on-site paved surface to allow volatilization of any VOCs per NMED guidance documents.

Laboratory groundwater samples were analyzed for the following parameters:

- VOCs including BTEX, TMBs, and MTBE using EPA Method 8260.

5.0 RESULTS OF THE INVESTIGATION

5.1 HYDROCARBON DISTRIBUTION IN SOIL

Table 1 and Appendix A present summaries of field headspace and/or laboratory analytical results for soil samples collected during BEI subsurface drilling operations at the Site. The magnitude and extent of soil headspace concentrations in cross-sectional view is also presented in partial form in Figure 4. In general, soil hydrocarbons at the Site appear to be vertically extensive and predominantly in the vapor-phase.

Between the confirmatory soil sampling conducted during the UST removal and the subsequent soil boring advancement, a total of 25 soil samples were collected for laboratory analysis. Maximum TPH concentrations measured at the Site were 2,770 milligrams/kilogram (mg/kg) in a sample collected from a depth of 15 feet bsg beneath the northeast corner of the former tank pit (Figure 2). The only samples with reported benzene values exceeding the laboratory method detection limits (MDLs) were also collected from directly beneath the former tank vault.

With only four soil borings advanced at the Site to depths of 69, 69, 209, and 345 feet bsg, the horizontal extent of the subsurface hydrocarbon plume cannot be fully determined. A further complicating factor involves the nature of drilling methodologies used at the Site. The first three borings (B-1, B-2, and B-3) were advanced in March 2011 using hollow-stem auger (HSA) drilling techniques and did not involve aeration of volatile hydrocarbon compounds during the sample collection process. As a result, both laboratory and field headspace analysis of retrieved sediments are generally representative of actual subsurface conditions. However, during the drilling of BW-1, ARCH drilling methods were used. Significant aeration of subsurface sediments was documented during the drilling process and return of drill cuttings to the surface. Headspace analysis of retrieved cuttings typically did not exceed 3 ppm/v on a PID.

As would be expected with the presence of vapor-phase hydrocarbons, PID readings were generally higher on split spoon samples, however, they were still generally less than 100 ppm/v with important exceptions. The split spoon sample from 239 to 240 feet bsg was collected after shutting down the rig overnight and allowing the hole to equilibrate. A reading of 1,182 ppm/v was obtained on this split spoon sample. The highest levels of soil contamination identified during the two BEI MSA drilling events was in borehole BW-1 @ 239 feet as determined by PID readings and laboratory analysis. Headspace readings on cuttings obtained from this depth during the active drilling process were less than 3 ppm/v demonstrating the significant stripping

of hydrocarbons from the samples during the drilling process.

It is clear based on the combined results of the HSA drilling highlighted in Figure 4 and the ARCH drilling highlighted in Appendix A that the latter method resulted in successful installation of a nested deep completion well at the Site, however, it is not appropriate for characterization of soil contaminant levels. Better characterization of actual hydrocarbon levels in the subsurface can be obtained using HSA techniques to the maximum practicable depth for this technique. During groundwater sampling of BW-1d, vapors emanating from the wellbore exceeded 700 ppm/v on a PID. Conducting a short-term soil vacuum extraction pilot test on each of the BW-1 well screens could provide additional characterization of subsurface hydrocarbon concentrations and composition.

5.2 HYDROCARBON DISTRIBUTION IN GROUNDWATER

During the groundwater purging and sampling event conducted on April 14, 2012, water samples were collected from both the downhole pump discharge and using a bailer attached to a water level probe. Samples collected from the pump discharge showed only trace levels of BTEX (Appendix B). Samples collected using a bailer sample only the upper three feet of the groundwater column and were significantly higher. Benzene was detected at 240 ppb. Low levels of TEX, TMBs, MTBE and EDC were also identified at the concentrations highlighted on Figure 5.

The horizontal extent of the dissolved-phase hydrocarbon plume is unknown. However, the presence of elevated benzene in relation to other gasoline/TEX compounds suggests chemical partitioning is occurring in the subsurface as the soil plume migrates downwards toward the water table. Product was not identified in BW-1d during the sampling/gauging event or during drilling.

5.3 HYDROCARBON RESIDUAL SPILL MASS ESTIMATES

Not enough information is available to calculate residual hydrocarbon spill mass estimates at this time.

6.0 CONCLUSIONS/RECOMENDATIONS

Based on the limited data collected during the two MSA events, the following conclusions are presented:

- Available data suggest hydrocarbon releases at the Site are from the vicinity of the former USTs.

- Analysis of laboratory chromatograms and hydrocarbon range breakdowns indicate the hydrocarbons identified in soils at the Site are consistent with weathered gasoline.

- Site geology as observed in retrieved soil samples can be subdivided into three primary Lithologic Units. Shallow sediments are typically silty sand to clayey silty sand. A prominent caliche zone is present at the Site from approximately 20 to 30 feet bsg to approximately 67 feet bsg. Deeper sediments consist of a nearly uniform massive fine grained sand with trace silt extending to 345 feet bsg.

- Depth to groundwater in BW-1d is approximately 324 feet bsg. The direction of groundwater flow is unknown but may be toward the municipal wells located primarily to the west and west-southwest of the Site.

- An extensive vapor-phase gasoline plume is present beneath the Site extending to the water table. The horizontal extent of soil hydrocarbons is unknown.

- Groundwater samples collected from BW-1d contained up to 240 ppb of benzene. Other gasoline compounds were present at lower levels not exceeding WQCC standards.

- Six municipal wells are reported within one mile of the Site and are screened in the shallow portions of the regional aquifer.

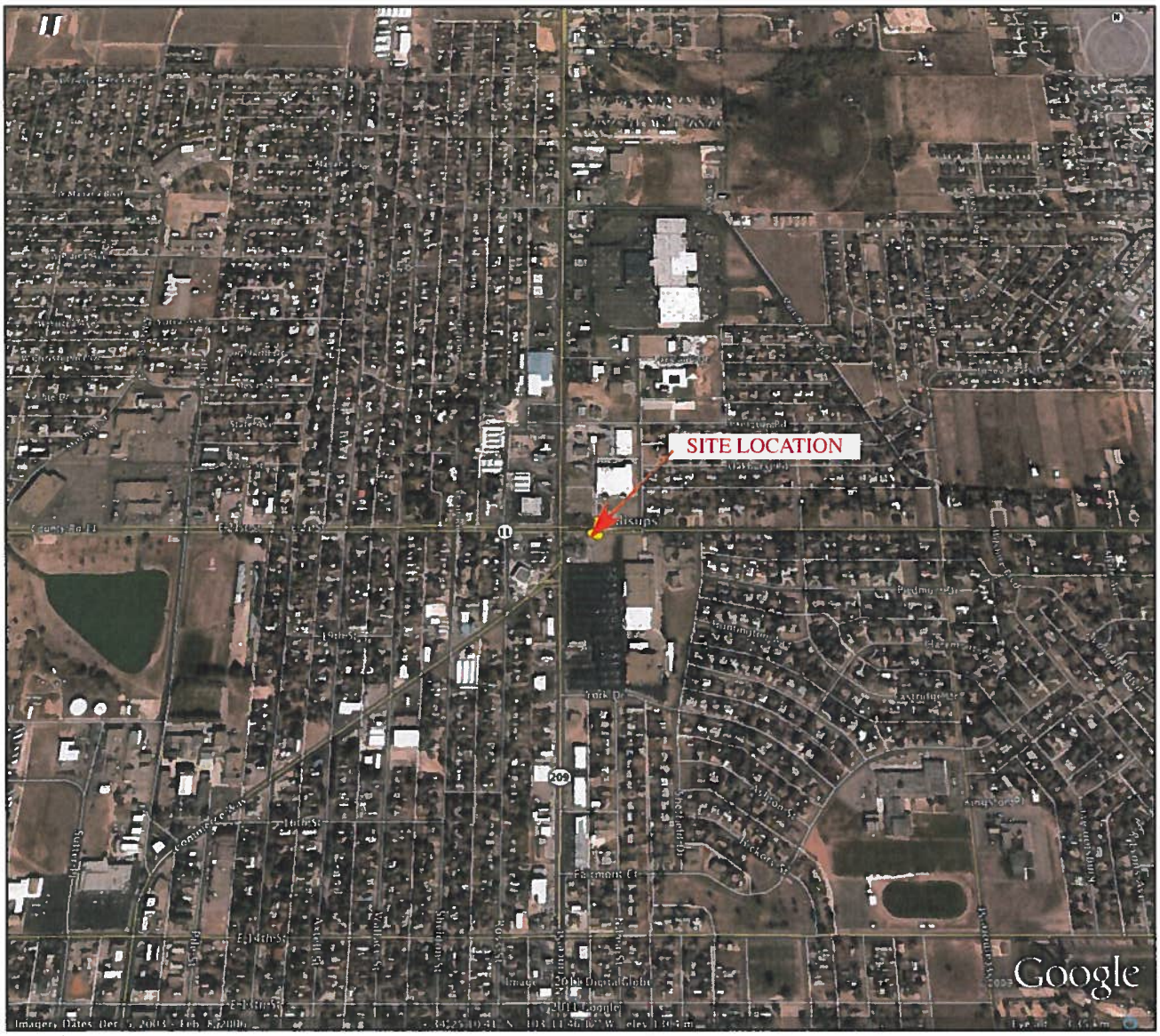
BEI recommends advancement and sampling of two additional well clusters to better characterize the magnitude and extent of soil and groundwater contamination and to determine the direction of groundwater flow beneath the Site. We also recommend conducting short-term SVE pilot tests on the wells to better evaluate subsurface hydrocarbon distribution.

7.0 STATEMENT OF FAMILIARITY

We are personally familiar with the information presented in this report and it is accurate and complete to the best of our knowledge.

Brown Environmental, Inc.

William J. Brown, PG
Vice President



EXPLANATION:

Downloaded from Google Earth Maps,
Image @ 2009 DigitalGlobe @ 2011 Tele Atlas

NORTH

scale

0 0.25 0.5 mile

Site Vicinity Map

Allsups #320 Facility
2021 North Prince Street
Portales, New Mexico 88130

BROWN ENVIRONMENTAL, INC.
6701 ACADEMY ROAD, N.E., SUITE 244
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Drawn by:	WJB	5/12	Client: Allsups Petroleum
Drafted by:	EMB	5/12	Job #: 1070
Reviewed by:	WJB	5/12	Figure: 1

TABLE 1
SUMMARY OF SOIL LABORATORY ANALYTICAL DATA ALLSUPS #320 FACILITY
CLOVIS, NEW MEXICO

LOCATION OF SAMPLE	SAMPLE DATE	LABORATORY ANAYLTICAL METHOD	TPH GASOLINE RANGE ORGANICS (GRO) (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)	METHYL TERTIARY BUTYL ETHER (MTBE) (mg/kg)
Tank #1 North 15'	1/11	8015/8021	2770	4.5	85	46	470	<5.0
Tank #1 South 13'	1/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
Tank #2 North 15'	1/11	8015/8021	27.7	0.076	0.33	0.57	3.2	<0.10
Tank #2 South 13'	1/11	8015/8021	10.1	<0.050	<0.050	<0.050	0.28	<0.10
Tank #3 North 12'	1/11	8015/8021	19.4	<0.050	<0.050	0.081	1.0	<0.10
Tank #3 South 13'	1/11	8015/8021	381	0.82	19	11	56	<1.0
Product Line #1 4'	1/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
SW Dispenser 3'	1/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
NW Dispenser 3'	1/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
NE Dispenser 3'	1/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
SE Dispenser 3'	1/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
BW-1-37' (Caliche)	3/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
BW-1-63' (SM)	3/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
BW-2-40' (Caliche)	3/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
BW-2-69' (SM)	3/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
BW-3-54' (SM)	3/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
BW-3-73-74' (SM)	3/11	8015/8021	<5.0	<0.050	<0.050	<0.050	0.12	<0.10
BW-3-104' (SM)	3/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
BW-3-159' (SM)	3/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	0.10
BW-3-189' (SM)	3/11	8015/8021	<5.0	<0.050	<0.050	<0.050	0.15	0.11
BW-3-209' (SM)	3/11	8015/8021	<5.0	<0.050	<0.050	<0.050	<0.050	<0.10
BW-1-219' (SM)	2/12	8015/8021	<5.0*	<0.050*	<0.050*	<0.050*	<0.10*	0.21*
BW-1-239' (SM/ML)	2/12	8015/8021	25.6*	<0.050*	0.17*	0.16*	2.0*	<0.10*
BW-1-289' (SM)	2/12	8015/8021	<5.0*	<0.050*	<0.050*	<0.050*	<0.10*	<0.10*
BW-1-309' (SM)	2/12	8015/8021	<5.0*	<0.050*	<0.050*	<0.050*	<0.10*	<0.10*

*=sample collected from split spoon during ARCH drilling and may have been aerated

C.D. – DP-1041

Gandy Marley, Inc.

P.O. BOX 1658 • ROSWELL, NM 88202

LOAD INSPECTION FORM NO. 15276

f Receipt: 2-21-12 Time of Receipt 10:30 AM (PM) Cell Placement: UST

tity 10 yards T/CY: _____ Description: _____

Address of Generator: ~~Allsups~~ Brown and Brown

n of Materials (if different) ALLsups

rter Name: R Marley LLC SCC ID No. _____

f Laboratory Performing Sample Analysis _____

(EPA Method 1311) _____ BTEX _____ MTBE _____ TPH _____ Non-Hazardous _____ Exempt _____

Verification of No Free Liquids _____ Paint Filter Liquids Test Performed _____

tion of Property Completed Manifest _____ Generator Manifest Number _____

condition to Gandy Marley, Inc.'s acceptance of the materials shipped as represented on this Load Inspection Form, Generator represents and warrants that the waste material herewith is exempt from the Resource Conservation and Recovery Act of 1976, as amended from time to time, 40 U.S.C. Section 6901, et seq., The New Mexico Health fety Code, section 361.001, et seq., and regulations related thereto, OR has been characterized as non-hazardous material by virtue of appropriate laboratory analysis done rdance with EPA-approved testing methods.

her, as a condition to Gandy Marley, Inc.'s acceptance of the materials shipped as represented on this Load Inspection Form, Transporter represents and warrants that only erial delivered by Generator to Transporter is now delivered by Transporter to Gandy Marley, Inc.'s facility for disposal.

WILL CERTIFY that the above Transporter loaded the material as represented on this Load Inspection Form at the above described location, and that it was tendered by bove described Generator. THIS WILL CERTIFY that no additional materials were added to this load, and that the material was delivered without incident.

rter: David Males — Print Name

David Males — Signature

nployee: _____ Print Name

_____ Signature

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

February 27, 2012

Bill Brown

Brown Environmental Inc.
6739 Academy Road NE Suite 254
Albuquerque, NM 87109
TEL: (505) 934-7707
FAX (505) 858-0707

RE: Allsups #320 OrderNo.: 1202745

Dear Bill Brown:

Hall Environmental Analysis Laboratory received 4 sample(s) on 2/22/2012 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative. Analytical results designated with a "J" qualifier are estimated and represent a detection above the Method Detection Limit (MDL) and less than the Reporting Limit (PQL). These analytes are not reviewed nor narrated as to whether they are laboratory artifacts.

Quality control data is within laboratory defined or method specified acceptance limits except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
Project: Allsups #320
Lab ID: 1202745-002

Client Sample ID: BW-1-219' (SM)
Collection Date: 2/16/2012 4:28:00 PM
Matrix: MEOH (SOIL) **Received Date:** 2/22/2012 11:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.00		mg/Kg	1	2/23/2012 7:11:37 PM
% GRO Hydrocarbons: C05-C6	ND	0		%	1	2/23/2012 7:11:37 PM
% GRO Hydrocarbons: C06-C7	ND	0		%	1	2/23/2012 7:11:37 PM
% GRO Hydrocarbons: C07-C8	ND	0		%	1	2/23/2012 7:11:37 PM
% GRO Hydrocarbons: C08-C9	ND	0		%	1	2/23/2012 7:11:37 PM
% GRO Hydrocarbons: C09-C10	ND	0		%	1	2/23/2012 7:11:37 PM
% GRO Hydrocarbons: C10-C11	ND	0		%	1	2/23/2012 7:11:37 PM
% GRO Hydrocarbons: C11-C12	ND	0		%	1	2/23/2012 7:11:37 PM
% GRO Hydrocarbons: C12-C14	ND	0		%	1	2/23/2012 7:11:37 PM
% GRO Hydrocarbons: C14+	ND	0		%	1	2/23/2012 7:11:37 PM
Surr: BFB	89.5	69.7-121		%REC	1	2/23/2012 7:11:37 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Methyl tert-butyl ether (MTBE)	0.21	0.10		mg/Kg	1	2/23/2012 3:37:39 PM
Benzene	ND	0.050		mg/Kg	1	2/23/2012 3:37:39 PM
Toluene	ND	0.050		mg/Kg	1	2/23/2012 3:37:39 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/23/2012 3:37:39 PM
Xylenes, Total	ND	0.10		mg/Kg	1	2/23/2012 3:37:39 PM
Surr: 4-Bromofluorobenzene	113	85.3-139		%REC	1	2/23/2012 3:37:39 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
Project: Allsups #320
Lab ID: 1202745-004

Client Sample ID: BW-1-309' (SM)
Collection Date: 2/18/2012 12:38:00 PM
Matrix: MEOH (SOIL) **Received Date:** 2/22/2012 11:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.00		mg/Kg	1	2/23/2012 5:38:39 PM
% GRO Hydrocarbons: C05-C6	ND	0		%	1	2/23/2012 5:38:39 PM
% GRO Hydrocarbons: C06-C7	ND	0		%	1	2/23/2012 5:38:39 PM
% GRO Hydrocarbons: C07-C8	ND	0		%	1	2/23/2012 5:38:39 PM
% GRO Hydrocarbons: C08-C9	ND	0		%	1	2/23/2012 5:38:39 PM
% GRO Hydrocarbons: C09-C10	ND	0		%	1	2/23/2012 5:38:39 PM
% GRO Hydrocarbons: C10-C11	ND	0		%	1	2/23/2012 5:38:39 PM
% GRO Hydrocarbons: C11-C12	ND	0		%	1	2/23/2012 5:38:39 PM
% GRO Hydrocarbons: C12-C14	ND	0		%	1	2/23/2012 5:38:39 PM
% GRO Hydrocarbons: C14+	ND	0		%	1	2/23/2012 5:38:39 PM
Surr: BFB	112	69.7-121		%REC	1	2/23/2012 5:38:39 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	2/23/2012 5:38:39 PM
Benzene	ND	0.050		mg/Kg	1	2/23/2012 5:38:39 PM
Toluene	ND	0.050		mg/Kg	1	2/23/2012 5:38:39 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/23/2012 5:38:39 PM
Xylenes, Total	ND	0.10		mg/Kg	1	2/23/2012 5:38:39 PM
Surr: 4-Bromofluorobenzene	110	85.3-139		%REC	1	2/23/2012 5:38:39 PM

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1202745**

27-Feb-12

Client: Brown Environmental Inc.

Project: Allsups #320

Sample ID **5ML-RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R1092**	RunNo: **1092**
Prep Date:	Analysis Date: **2/23/2012**	SeqNo: **31662** 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	1.0		1.000		101	85.3	139			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R1092**	RunNo: **1092**
Prep Date:	Analysis Date: **2/23/2012**	SeqNo: **31666** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.2	0.10	1.000	0	122	65.5	229			
Benzene	1.0	0.050	1.000	0	104	83.3	107			
Toluene	1.1	0.050	1.000	0	107	74.3	115			
Ethylbenzene	1.0	0.050	1.000	0	102	80.9	122			
Xylenes, Total	3.1	0.10	3.000	0	103	85.2	123			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.3	85.3	139			

Sample ID **1202778-001A MS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BatchQC**	Batch ID: **R1092**	RunNo: **1092**
Prep Date:	Analysis Date: **2/23/2012**	SeqNo: **31667** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.2	0.10	1.000	0	116	61.3	215			
Benzene	0.98	0.050	1.000	0	98.3	67.2	113			
Toluene	0.94	0.050	1.000	0	93.9	62.1	116			
Ethylbenzene	0.99	0.050	1.000	0	99.4	67.9	127			
Xylenes, Total	3.1	0.10	3.000	0	102	60.6	134			
Surr: 4-Bromofluorobenzene	1.1		1.000		113	85.3	139			

Sample ID **1202778-001A MSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BatchQC**	Batch ID: **R1092**	RunNo: **1092**
Prep Date:	Analysis Date: **2/23/2012**	SeqNo: **31668** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.2	0.10	1.000	0	118	61.3	215	1.91	19.6	
Benzene	0.97	0.050	1.000	0	96.8	67.2	113	1.56	14.3	
Toluene	0.93	0.050	1.000	0	92.8	62.1	116	1.17	15.9	
Ethylbenzene	0.97	0.050	1.000	0	97.3	67.9	127	2.15	14.4	
Xylenes, Total	3.0	0.10	3.000	0	101	60.6	134	1.42	12.6	
Surr: 4-Bromofluorobenzene	1.1		1.000		112	85.3	139	0	0	

Qualifiers:

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

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: BROWN ENVIRONMENTAL, INC

6739 ACADEMY ROAD NE STE 254

Mailing Address: ALBUQUERQUE, NM 87109

Phone #: 858-1818

email or Fax#: 858-0707

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: MUSLPS #320

Project #: 1070

Project Manager: WILLIAM BROWN

Sampler: W. BROWN

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0°

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No 1202745	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
1/17/12	8:13	SOIL	BW-1-239'SM/ML	2 20 mL 1402	PRESERVATIVE IN PRES	-1		X														
1/16/12	16:28	"	BW-1-219(SM)	"	"	-2		X														
1/18/12	9:40	"	BW-1-289'(SM)	"	"	-3		X														
1/19/12	12:38	"	BW-1-309'(SM)	"	"	-4		X														

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/22/12	11:30		Michelle Garcia	1/22/12	11:32
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: PLEASE PROVIDE H/C RANGES.

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

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

April 25, 2012

Bill Brown

Brown Environmental Inc.
6739 Academy Road NE Suite 254
Albuquerque, NM 87109
TEL: (505) 934-7707
FAX (505) 858-0707

RE: Allsups #320 OrderNo.: 1204595

Dear Bill Brown:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/16/2012 for the analyses presented in the following report.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
Project: Allsups #320
Lab ID: 1204595-001 **Matrix:** AQUEOUS

Client Sample ID: BW-1d pump
Collection Date: 4/13/2012 5:15:00 PM
Received Date: 4/16/2012 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Isopropylbenzene	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/20/2012 2:22:36 PM
Methylene Chloride	ND	3.0		µg/L	1	4/20/2012 2:22:36 PM
n-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
n-Propylbenzene	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
sec-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
Styrene	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
tert-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/20/2012 2:22:36 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
trans-1,2-DCE	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/20/2012 2:22:36 PM
Vinyl chloride	ND	1.0		µg/L	1	4/20/2012 2:22:36 PM
Xylenes, Total	ND	1.5		µg/L	1	4/20/2012 2:22:36 PM
Surr: 1,2-Dichloroethane-d4	107	70-130		%REC	1	4/20/2012 2:22:36 PM
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	4/20/2012 2:22:36 PM
Surr: Dibromofluoromethane	97.5	69.8-130		%REC	1	4/20/2012 2:22:36 PM
Surr: Toluene-d8	98.8	70-130		%REC	1	4/20/2012 2:22:36 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
Project: Allsups #320
Lab ID: 1204595-002 **Matrix:** AQUEOUS

Client Sample ID: BW-2d pump
Collection Date: 4/13/2012 5:20:00 PM
Received Date: 4/16/2012 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Isopropylbenzene	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/20/2012 2:50:32 PM
Methylene Chloride	ND	3.0		µg/L	1	4/20/2012 2:50:32 PM
n-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
n-Propylbenzene	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
sec-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
Styrene	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
tert-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/20/2012 2:50:32 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
trans-1,2-DCE	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/20/2012 2:50:32 PM
Vinyl chloride	ND	1.0		µg/L	1	4/20/2012 2:50:32 PM
Xylenes, Total	ND	1.5		µg/L	1	4/20/2012 2:50:32 PM
Surr: 1,2-Dichloroethane-d4	113	70-130		%REC	1	4/20/2012 2:50:32 PM
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	4/20/2012 2:50:32 PM
Surr: Dibromofluoromethane	102	69.8-130		%REC	1	4/20/2012 2:50:32 PM
Surr: Toluene-d8	97.4	70-130		%REC	1	4/20/2012 2:50:32 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
Project: Allsups #320
Lab ID: 1204595-003 **Matrix:** AQUEOUS

Client Sample ID: BW-1d
Collection Date: 4/13/2012 7:20:00 PM
Received Date: 4/16/2012 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Isopropylbenzene	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/20/2012 12:31:16 PM
Methylene Chloride	ND	3.0		µg/L	1	4/20/2012 12:31:16 PM
n-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
n-Propylbenzene	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
sec-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
Styrene	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
tert-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/20/2012 12:31:16 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
trans-1,2-DCE	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/20/2012 12:31:16 PM
Vinyl chloride	ND	1.0		µg/L	1	4/20/2012 12:31:16 PM
Xylenes, Total	20	1.5		µg/L	1	4/20/2012 12:31:16 PM
Surr: 1,2-Dichloroethane-d4	107	70-130		%REC	1	4/20/2012 12:31:16 PM
Surr: 4-Bromofluorobenzene	106	70-130		%REC	1	4/20/2012 12:31:16 PM
Surr: Dibromofluoromethane	95.4	69.8-130		%REC	1	4/20/2012 12:31:16 PM
Surr: Toluene-d8	94.5	70-130		%REC	1	4/20/2012 12:31:16 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Brown Environmental Inc.
Project: Allsups #320
Lab ID: 1204595-004

Client Sample ID: Trip Blank
Collection Date:
Matrix: AQUEOUS
Received Date: 4/16/2012 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Isopropylbenzene	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/20/2012 3:18:16 PM
Methylene Chloride	ND	3.0		µg/L	1	4/20/2012 3:18:16 PM
n-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
n-Propylbenzene	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
sec-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
Styrene	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
tert-Butylbenzene	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/20/2012 3:18:16 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
trans-1,2-DCE	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/20/2012 3:18:16 PM
Vinyl chloride	ND	1.0		µg/L	1	4/20/2012 3:18:16 PM
Xylenes, Total	ND	1.5		µg/L	1	4/20/2012 3:18:16 PM
Surr: 1,2-Dichloroethane-d4	116	70-130		%REC	1	4/20/2012 3:18:16 PM
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	4/20/2012 3:18:16 PM
Surr: Dibromofluoromethane	101	69.8-130		%REC	1	4/20/2012 3:18:16 PM
Surr: Toluene-d8	97.6	70-130		%REC	1	4/20/2012 3:18:16 PM

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204595**

25-Apr-12

Client: Brown Environmental Inc.

Project: Allsups #320

Sample ID **5ml-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R2305**	RunNo: **2305**
Prep Date:	Analysis Date: **4/20/2012**	SeqNo: **64037** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	13		10.00		125	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		112	69.8	130			
Surr: Toluene-d8	9.4		10.00		94.0	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R2305**	RunNo: **2305**
Prep Date:	Analysis Date: **4/20/2012**	SeqNo: **64039** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	118	84.1	126			
Toluene	20	1.0	20.00	0	97.8	80	120			
Chlorobenzene	18	1.0	20.00	0	92.1	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	83	130			
Trichloroethene (TCE)	22	1.0	20.00	0	109	76.2	119			
Surr: 1,2-Dichloroethane-d4	12		10.00		115	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Brown Env Work Order Number: 1204595

Received by/date: AT 04/16/12

Logged By: Anne Thorne 4/16/2012 8:40:00 AM Anne Thorne

Completed By: Anne Thorne 4/16/2012 Anne Thorne

Reviewed By: 04/16/12

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

18. Additional remarks:

Per PF add "d" to ea Sample ID /AT 04/16/12

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

21ST AVENUE

Autoparts

KFC

Walgreens

OE

OE

NORTH

Fast Bucks
(old station)

I-HOP
restaurant

NEW
CANOPY

Sonic

NW dispensers
@ 3' depth
1.7 ppm/v
TPH=<5.0

NE dispenser @ 3' depth
1.6 ppm/v
TPH=<5.0

old building
demolished

dispensers

dispensers

SW dispenser
@ 3' depth
0.9 ppm/v
TPH=<5.0

SE dispense
@3' depth
25.1 ppm/v
TPH=<5.0

ALLSUP #320
New building

B-2

Product Line sample
#1 @4' depth
26.4 ppm/v
TPH=<5.0

PRINCE
STREET

Tank #2 North
@15' depth
197ppm/v
TPH=27.7

Former Tank Hold
and Excavation
Area

Tank #3 North
@ 12' = 788 ppm/v
TPH=19.4

@14'=1,800ppm/v

#3 #2 #1

B-3

B-1

Tank #1 North
@ 15' depth
>10,000
ppm/v
TPH=2,770

NM Bank & Trust

OE UW

NEW
USTS

Tank #3 South
@ 13' depth
>10,000
ppm/v
TPH=381

Tank #1 South
@ 13' depth
1.3 ppm/v
@13' TPH=<5.0

PROPERTY BOUNDARY

BW-1

Tank #2 South
@ 13' depth
442 ppm/v
TPH=10.1

Dominos Pizza

mall parking lot

EXPLANATION

BW-1 Monitor Well Location (2-12)

B-1 Soil Boring Location (3-11)

Soil Sample Locations (1-11)

Building

Concrete

Tank #3 South
@ 13' depth
>10,000
ppm/v
TPH=381

Location of Sample

Photoionization Detector Headspace Reading (in ppm/v)

Total Petroleum Hydrocarbons (TPH) (in mg/kg)

0 30 ft

Scale

NORTH

SITE MAP WITH UST EXCAVATION CONFIRMATORY SOIL SAMPLE DATA AND BOREHOLE/MONITOR WELL DRILLING LOCATIONS

Allsups Store #320
Clovis, New Mexico

BROWN ENVIRONMENTAL, INC.
6739 Academy Road NE, NE., Suite 254
Albuquerque, NM 87109
Phone: (505) 858-1818 Fax: (505) 858-0707

Drawn by:	WJB	5/12	Client: Allsups
Drafted by:	EMB	5/12	Job #1070
Reviewed by:	WJB	5/12	Figure: 2

21ST AVENUE

Walgreens

KFC

Autoparts

OE

OE

NORTH

Fast Bucks (old station)

I-HOP restaurant

Sonic

NEW CANOPY

old building demolished

dispensers

dispensers

ALLSUP #320
New building

A

B-2

PRINCE STREET

Former Tank Hold and Excavation Area

#3 #2 #1

A'

B-3

B-1

NM Bank & Trust

OE UW

NEW USTS

BW-1

PROPERTY BOUNDARY

Dominos Pizza

mall parking lot

EXPLANATION

BW-1 Monitor Well Location (2-12)

B-1 Soil Boring Location (3-11)

Building

Concrete

A — A' Cross Section Location

0 30 ft Scale

NORTH

SITE MAP WITH CROSS SECTION LOCATION

Allsups Store #320
Clovis, New Mexico

BROWN ENVIRONMENTAL, INC.
6739 Academy Road NE, NE., Suite 254
Albuquerque, NM 87109
Phone: (505) 858-1818 Fax: (505) 858-0707

Drawn by:	WJB	5/12	Client: Allsups
Drafted by:	EMB	5/12	Job #1070
Reviewed by:	WJB	5/12	Figure: 3

NORTH

EAST

A

A'

Depth in ft

Elevation in ft msl

former fuel dispensers

BEND IN SECTION

Former Allsups #320 USTs

B-2

B-1

B-3

0

20

40

60

80

100

120

140

160

180

200

220

~4,280

~4,260

~4,240

~4,220

~4,200

~4,180

~4,160

~4,140

~4,120

~4,100

~4,080

~4,060

LITHOLOGIC UNIT I

LITHOLOGIC UNIT II

LITHOLOGIC UNIT III

B-2: 0.6 no; 0.6 no; 0.4 no; 0.7 no; 1.4 no; 0.9 no; 0.6 no; 3.1 no; 4.1 no; 4.3 no; 13.7 wo; 9.6 wo; 8.3 wo; 1.4 no; 7.3 wo; 7.4 wo; 3.0 no; 2.7 no

B-2 40' Caliche 11:04 — B=nd X=nd M=nd TPHg=nd

B-2 69' (SM) 11:30 — B=nd X=nd M=nd TPHg=nd

TD=69'

B-1: 0.3 no; 0.3 no; 0.3 no; 1.4 no; 1.8 no; 6.9 no; caliche zone; 150 mo; 211 mo; 347 mo; 84 w-mo; 283 mo; 140 mo; 286 m-so; 192 mo; 312 m-so; 229 mo; 220 mo; 45 wo; 109 wo; 50.1 w-mo; 47 wo; 52 wo

B-1 37' Caliche 13:20 — B=nd X=0.17 M=nd TPHg=nd

B-1 63' (SM) 14:35 — B=nd M=nd X=nd TPHg=nd

TD=69'

B-3: 0.9 no; 0.8 no; 0.9 no; 0.0 no; 2.3 no; 0.4 no; 8.5 no; 69 wo; 191 mo; 197 mo; 152 mo; 201 mo; 184 mo; 357 m-so; 317 m-so; 441 so; 357 m-so; 661 so; 801 so; 456 so; 339 so; 804 so; 615 so; 391 so; 562 vso; 802 vso; 889 vso; 429 vso; 671 vso; 433 vso; 968 vso; 498 vso; 591 vso; 349 vso; 109 mo; 121 mo; 331 so; 348 so; 312 so; 367 so; 267 so; 195 mo; 233 mo; 94.9 mo; 122 mo; 94 w-mo; 89 w-mo; 85 w-mo; 123 mo; 94 w-mo; 127 mo; 134 mo; 157 mo; 205 mo; 131 mo; 185 mo; 280 mo; 375 m-so; 343 so; 304 m-so; 478 so; 373 so; 442 so; 440 so; 241 so; 494 so; 481 so; 470 so; 253 mo; 408 so; 208 mo

B-3 54" (SM) 15:30 — B=nd X=nd M=nd TPHg=nd

BW-3 73-74' (SM 16:15) — B=nd X=0.12 M=nd TPHg=nd

BW-3 104' (SM) 17:55 — B=nd X=nd M-nd TPHg=nd

BW-3 159' (SM) 10:10 — B=nd X=nd M-0.10 TPHg=nd

BW-3 189' (SM) 15:15 — B=nd X=0.15 M=0.11 TPHg=nd

BW-3 209' (SM) 17:01 — B=nd X=nd M=nd TPHg=nd

TD=209'

>100 ppm/v Headspace Concentrations

Note: This cross section is an interpretation of limited available data. Actual subsurface conditions may vary.

EXPLANATION

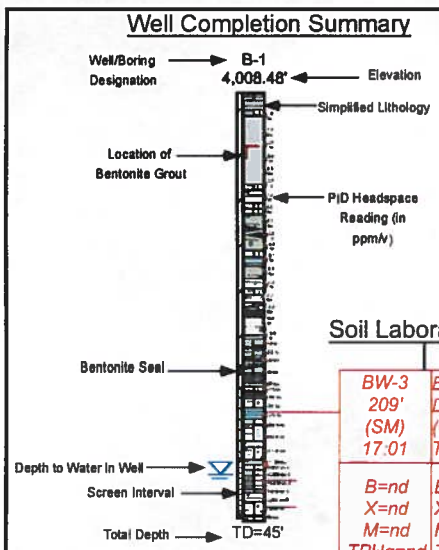
Lithology

- SC Clayey Sand
- SCL Sandy Clay
- CL Clay - plastic, dense
- CH Fat Clay - highly plastic
- SW Poorly Sorted Sand
- SP Well Sorted Sand
- SM Silty Sand
- Pedogenic Carbonate
- GM Silty Gravel
- GC Gravelly Silt
- MSS Mudstone-Siltstone - Chinle or Chinle derived
- SAS Sandstone - Chinle or Chinle derived

Soil Vapor Hydrocarbons

>100 ppm/v — TIVC Headspace >100 ppm/v

Well Completion Summary



Soil Laboratory Analytical Data

BW-3 209' (SM) 17:01	Borehole ID; Depth of Sample; (Geologic Symbol); Time of collection
B=nd X=nd M=nd TPHg=nd	B= Benzne; X=Total Xylenes; M=MTBE; TPHg=TPH gasoline range

SIMPLIFIED GEOLOGIC AND HYDROCARBON CONTAMINANT CROSS SECTION A-A'

ALLSUPS #320 FACILITY CLOVIS, NM

Drawn by:	WJB	5/12	Client: NMED
Drafted by:	EMB	5/12	Job #1070
Reviewed by:	WJB	5/12	Figure: 4

BROWN ENVIRONMENTAL, INC
8739 Academy Road NE, Suite 254
Albuquerque, New Mexico 87109
Phone: (505) 858-1818 Fax: 858-0707

21ST AVENUE

Walgreens

KFC

Autoparts

NORTH

Fast Bucks (old station)

I-HOP restaurant

NEW CANOPY

Sonic

old building demolished

dispensers

dispensers

ALLSUP #320
New building

PRINCE STREET

B-2

Former Tank Hold and Excavation Area

#3 #2 #1

B-3

B-1

NM Bank & Trust

NEW USTS

PROPERTY BOUNDARY

BW-1

4/12
B = 240
T = 61
E = 4.5
X = 20
TB = 6.3
EC = 3.5
EB = <1.0
M = 1.6
N = <10

Dominos Pizza

mall parking lot

EXPLANATION

BW-1 Monitor Well Location (2-12)

B-1 Soil Boring Location (3-11)

Building

Concrete

GROUNDWATER QUALITY DATA

4/12	4/12= date of sampling
B = 240	B = benzene
T = 61	T = toluene
E = 4.5	E = ethyl benzene
X = 20	X = total xylenes
TB = 6.3	TB = tri-methyl benzenes
EC = 3.5	EC = 1,2 dichloroethane
EB = <1.0	EB = 1,2 dibromoethane
M = 1.6	M = methyl tertiary butyl ether
N = <10	N= naphthalenes +mono methyl naphthalenes

all concentrations in parts per billion (ppb)
NS = Not Sampled

0 30 ft
Scale

NORTH

GROUNDWATER QUALITY MAP- 4-12 SAMPLING EVENT

Allsups Store #320
Clovis, New Mexico

BROWN ENVIRONMENTAL, INC.
6739 Academy Road NE, NE., Suite 254
Albuquerque, NM 87109
Phone: (505) 858-1818 Fax: (505) 858-0707

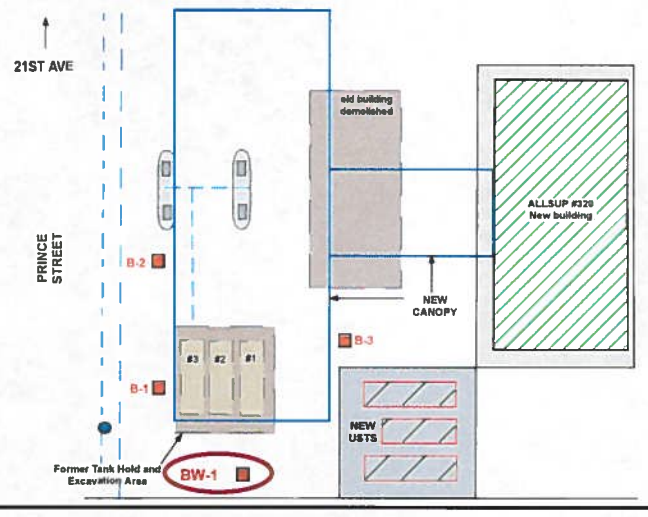
Drawn by:	WJB	5/12	Client: Allsups
Drafted by:	EMB	5/12	Job #1070
Reviewed by:	WJB	5/12	Figure: 5

ALLSUPS #320

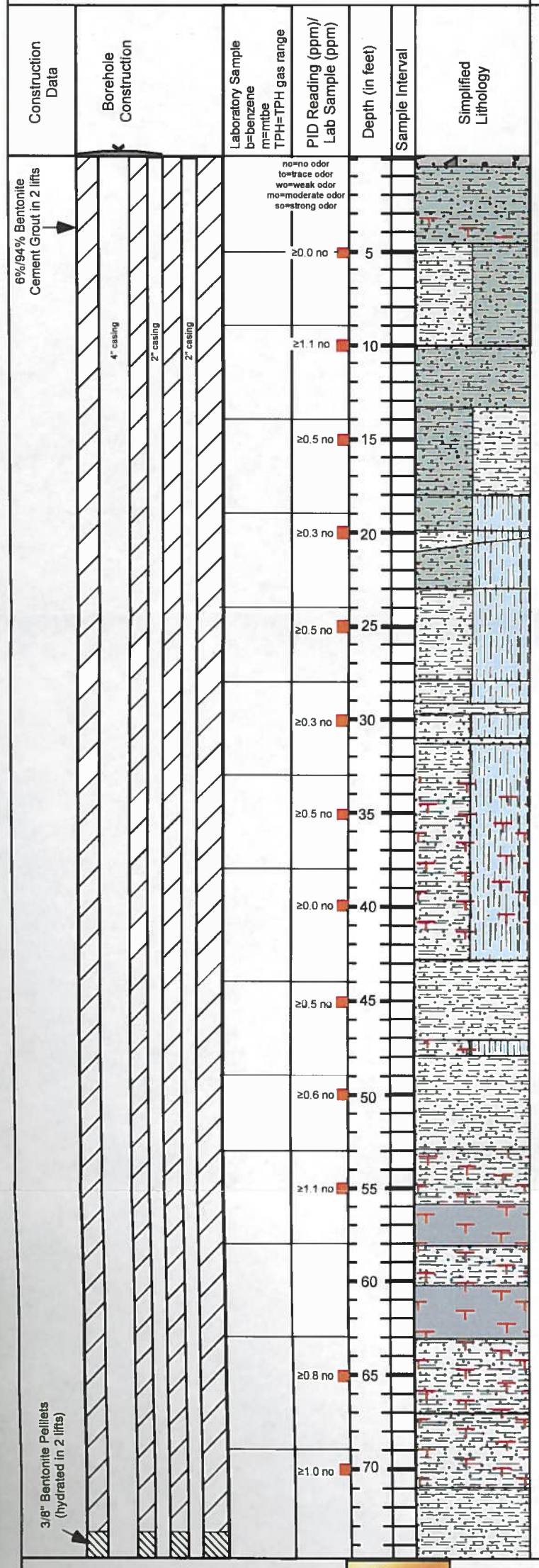
CLIENT: Allsups Petroleum, Inc.

Borehole ID: BW-1 (s,i,d) page 1 of 5

DATE OF DRILLING:	2/12
LOGGED BY:	WJB
DRILLER:	Del Leavitt/WDC
BOREHOLE DIAMETER:	9 5/8"
DRILLING METHOD:	ARCH - Stratex / Air Rotary
SAMPLING METHOD:	Cuttings/Split Spoons
TOP OF CASING ELEV:	not surveyed
DEPTH TO WATER:	322.4'
TOTAL DEPTH:	345'
SHALLOW WELL	2" Sched 80 PVC; Screen 80'-160'
INTERMEDIATE WELL	2" Sched 80 PVC; Screen 180'-270'
DEEP WELL	4" Sched 80 PVC; Screen 295'-345'
SURFACE COMPLETION:	12"X12" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION



Surface Conditions: 0-0.4' reinforced concrete

0.0'-5' PostHole 0.0'-5.0' Post-holed borehole in 5 star pattern to clear drilling location. 0.4'-1.0' Base course. 1.0'-2.5' (**SC**) Clayey very fine sand, dark brown, moderately plastic, no apparent hydrocarbon odor. 2.5'-4.5' Stage 3 pedogenic calcium carbonate in (**SC**) clayey very fine sand matrix. 4.5'-5.0' (**SM/SC**) Clayey silty very fine sand with Stage 2 calcium carbonate, no apparent hydrocarbon odor.

5'-10' Cuttings (**SM/SC**) with Stage 2+ calcium carbonate, light tan-brown, moist, plastic, no apparent hydrocarbon odor.

10'-18' Cuttings (**SC**) Clayey very fine sand, plastic, light brown grading to (**SC/SM**) at base, Stage 1 calcium carbonate, disseminated, no apparent hydrocarbon odor, slightly moist.

18'-23' Cuttings (**SC/ML**) Clay, silt, very fine sand with localized (**SM/ML**) intervals, light brown (**10YR**) no apparent hydrocarbon odor, slightly moist to moist.

23'-28' Cuttings (**SM/ML**) Light reddish-brown to tan-red, localized Stage 1-2 calcium carbonate, no apparent hydrocarbon odor.

28'-33' Cuttings (**SM/ML**) with (**SM**) very fine silty sand intervals up to 1+ foot thick, (**5YR**) reddish brown with minor carbonate.

33'-43' Cuttings Stage 3 to 3+ calcium carbonate in (**SM/ML**) matrix, dense, driller using hammer to break through zone, light white reddish brown to light tan, slightly moist, no apparent hydrocarbon odor, localized zones with less calcium carbonate.

43'-47' Cuttings Cuttings (**SM**) Light tan to tan-white silty sand; Stage 1 to 2 calcium carbonate, slightly moist, no apparent hydrocarbon odor.

47'-48' Cuttings Stage 3 calcium carbonate zone (**SM/ML**) matrix.

48'-53' Cuttings (**SM**) Light reddish brown (**7.5YR**) silty very fine sand, only trace localized calcium carbonate, slightly moist to moist, unconsolidated, no apparent hydrocarbon odor.

56'-68' Cuttings (**SM**) As above but with Stage 2 calcium carbonate cement.

56'-58' Cuttings (**SM**) Very hard Stage 4 laminar calcium carbonate zone, need to use under reamer bit to advance casing through this zone.

56'-67' Cuttings Interbedded Stage 4 very hard laminar caliche and Stage 3 calcium carbonate in (**SM**) silty very fine sand matrix.

67'-71' Cuttings Stage 3 to 2 calcium carbonate cemented (**SM**), hard drilling, slightly moist, no apparent hydrocarbon odor, (**10YR**) tan-brown.

* or ≥ = reading/lab results likely underestimate actual concentrations due to aeration of sample during drilling

BROWN ENVIRONMENTAL, INC

6739 ACADEMY ROAD, NE SUITE 254, ALBUQUERQUE, NEW MEXICO 87109

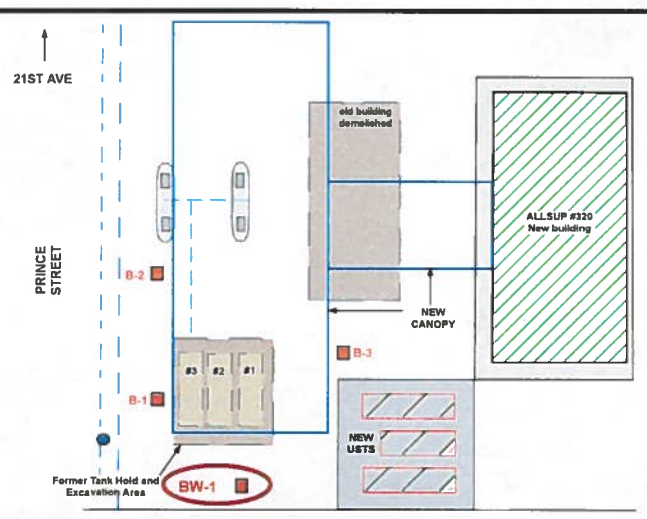
PHONE: (505) 858-1818 FAX: (505) 858-0707

ALLSUPS #320

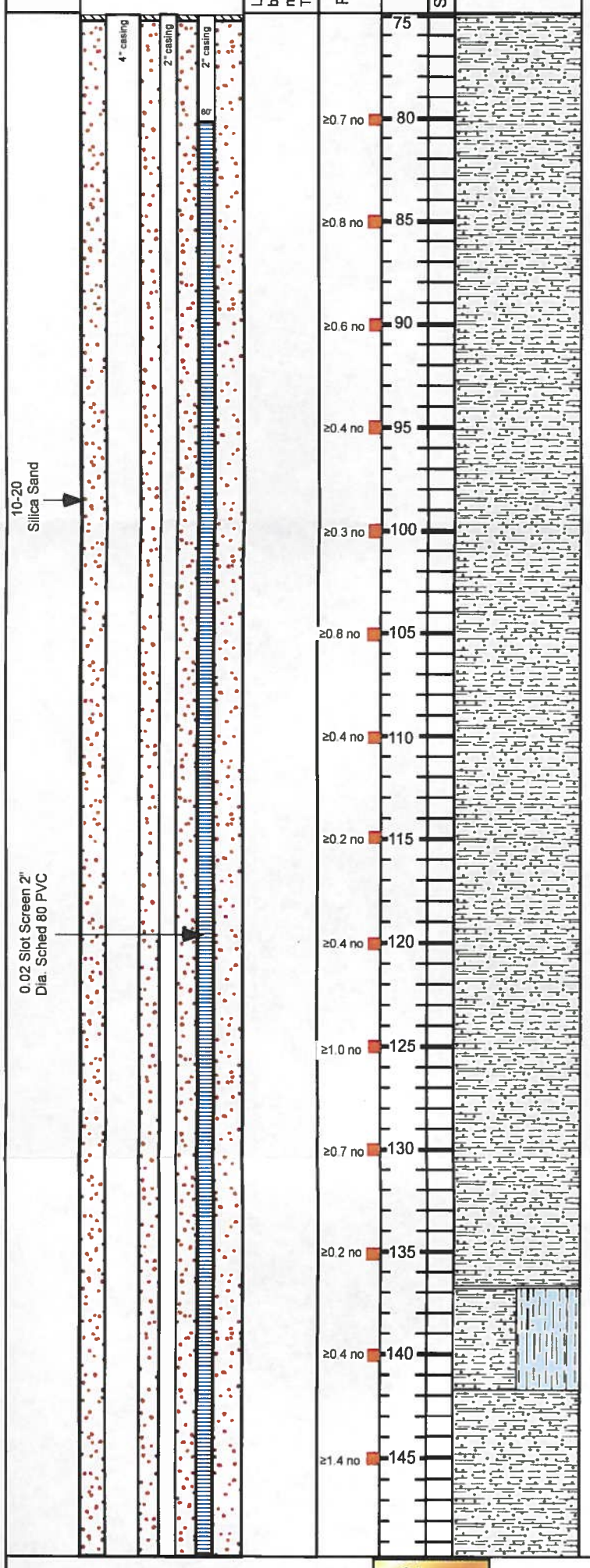
CLIENT: Allsups Petroleum, Inc.

Borehole ID: BW-1 (s,i,d)

DATE OF DRILLING:	2/12
LOGGED BY:	WJB
DRILLER:	Del Leavitt/WDC
BOREHOLE DIAMETER:	9 5/8"
DRILLING METHOD:	ARCH - Stratex / Air Rotary
SAMPLING METHOD:	Cuttings/Split Spoons
TOP OF CASING ELEV:	not surveyed
DEPTH TO WATER:	322.4'
TOTAL DEPTH:	345'
SHALLOW WELL	2" Sched 80 PVC; Screen 80'-160'
INTERMEDIATE WELL	2" Sched 80 PVC; Screen 180'-270'
DEEP WELL	4" Sched 80 PVC; Screen 295'-345'
SURFACE COMPLETION:	12"X12" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION



71'-82' Cuttings (**SM**) Tan-brown silty very fine sand, slightly moist, unconsolidated, no apparent hydrocarbon odor, easy drilling.

82'-102' Cuttings (**SM**) (**10YR**) Tan-light brown unconsolidated silty very fine sand, some moisture - more than above but not water saturated, no apparent hydrocarbon odor.

102'-113' Cuttings (**SM**) Silty very fine to fine sand as above with minor localized disseminated calcium carbonate zones (≤Stage 2), some moisture as above, no apparent hydrocarbon odor.

113'-120' Cuttings (**SM**) Silty very fine sand, better sorting in this interval, slightly moist - less than above, unconsolidated, no calcium carbonate, no apparent hydrocarbon odor.

120'-137' Cuttings (**SM**) Same as overlying interval but greater moisture content, no apparent hydrocarbon odor.

137'-141' Cuttings (**SM/ML**) Silt-very fine sand (**10YR**) unconsolidated, finer grained than above, slightly moist, no apparent hydrocarbon odor.

* or ≥ = reading/lab results likely underestimate actual concentrations due to aeration of sample during drilling

BROWN ENVIRONMENTAL, INC

6739 ACADEMY ROAD, NE SUITE 254, ALBUQUERQUE, NEW MEXICO 87109

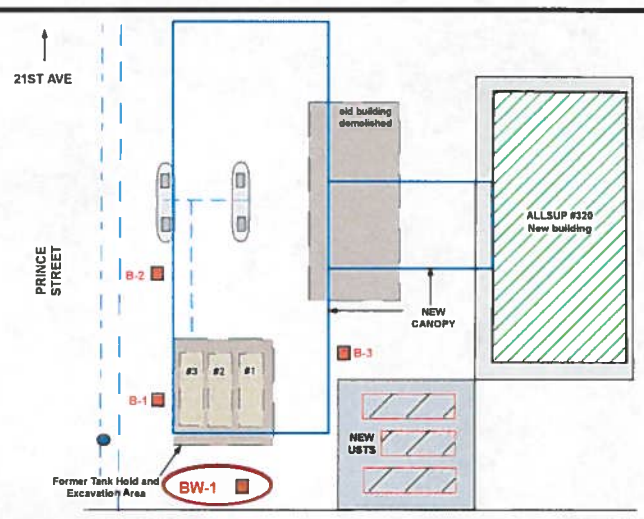
PHONE: (505) 858-1818 FAX: (505) 858-0707

ALLSUPS #320

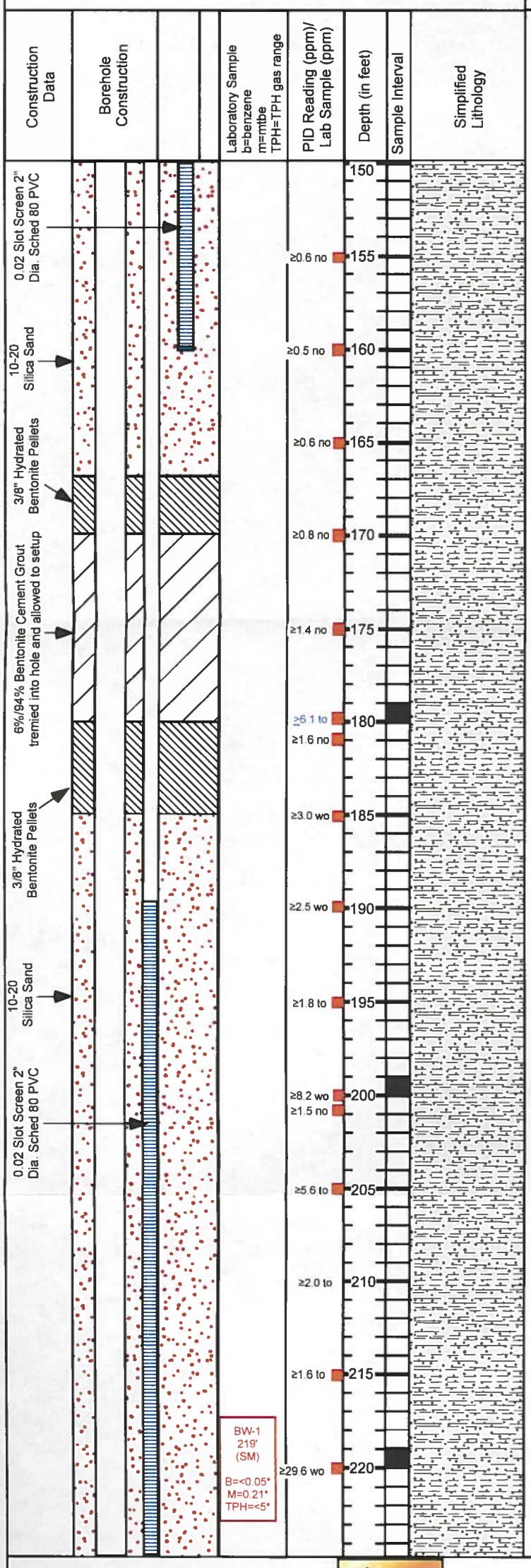
CLIENT: Allsups Petroleum, Inc.

Borehole ID: BW-1 (s,i,d) page 3 of 5

DATE OF DRILLING:	2/12
LOGGED BY:	WJB
DRILLER:	Del Leavitt/WDC
BOREHOLE DIAMETER:	9 5/8"
DRILLING METHOD:	ARCH - Stratex / Air Rotary
SAMPLING METHOD:	Cuttings/Split Spoons
TOP OF CASING ELEV:	not surveyed
DEPTH TO WATER:	322.4'
TOTAL DEPTH:	345'
SHALLOW WELL	2" Sched 80 PVC; Screen 80'-160'
INTERMEDIATE WELL	2" Sched 80 PVC; Screen 180'-270'
DEEP WELL	4" Sched 80 PVC; Screen 295'-345'
SURFACE COMPLETION:	12"X12" Manway w/Concrete Pad



USCS - LITHOLOGIC DESCRIPTION



141'-148' Cuttings (**SM**) (**10YR**) Light brown silty very fine to fine sand, unconsolidated to locally weakly cemented with disseminated calcium carbonate.

148'-172' Cuttings (**SM**) Silty very fine sand, better sorting, slightly moist.

172'-179' Cuttings (**SM**) Tan-brown, less well sorted than above, unconsolidated, slightly moist, silty very fine to fine sand, trace hydrocarbon odor (?).

179.0'-180.0' Split Spoon 0.8' sample. (**SM**) Silty very fine to fine sand, unconsolidated, slightly moist, very weak hydrocarbon odor.

180'-199' Cuttings (**SM**) Silt-very fine sand with some moisture, unconsolidated, (**10YR**) tan-brown, well sorted, trace hydrocarbon odor in interval.

199.0'-200.0' Split Spoon 0.3' sample on second try. (**SM**) Tan brown (**10YR**) very fine sand, well sorted, slightly moist, weak apparent hydrocarbon odor, not enough sample for lab.

200'-202' Cuttings Same as above.

202'-206' Cuttings Zone with greater moisture.

206'-213' Core Barrel (**SM**) (**10YR**) Tan-brown as above, well sorted, slightly moist, silty very fine sand, unconsolidated, weak to trace hydrocarbon odor.

213'-219' Cuttings (**SM**) With greater moisture.

219.0'-220.0' Split Spoon 0.7' sample. (**SM**) Silt-very fine sand, some moisture, weak degraded hydrocarbon odor, (**10YR**) tan-brown, unconsolidated.

* or ≥ = reading/lab results likely underestimate actual concentrations due to aeration of sample during drilling

BROWN ENVIRONMENTAL, INC

6739 ACADEMY ROAD, NE SUITE 254, ALBUQUERQUE, NEW MEXICO 87109

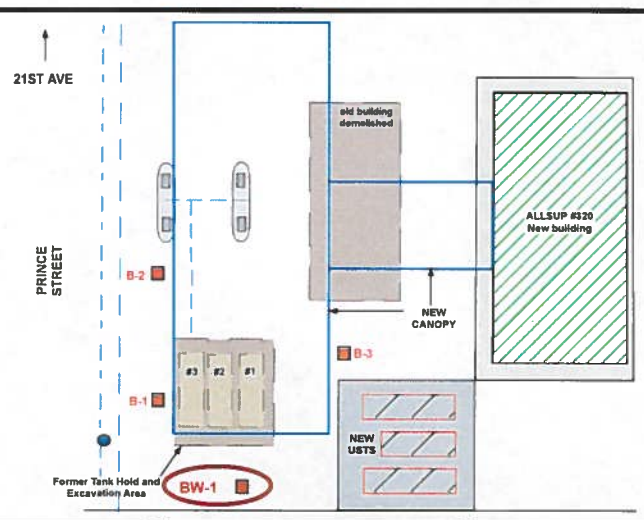
PHONE: (505) 858-1818 FAX: (505) 858-0707

ALLSUPS #320

CLIENT: Allsups Petroleum, Inc.

Borehole ID: BW-1 (s,i,d)

DATE OF DRILLING:	2/12
LOGGED BY:	WJB
DRILLER:	Del Leavitt/WDC
BOREHOLE DIAMETER:	9 5/8"
DRILLING METHOD:	ARCH - Stratex / Air Rotary
SAMPLING METHOD:	Cuttings/Split Spoons
TOP OF CASING ELEV:	not surveyed
DEPTH TO WATER:	322.4'
TOTAL DEPTH:	345'
SHALLOW WELL	2" Sched 80 PVC; Screen 80'-160'
INTERMEDIATE WELL	2" Sched 80 PVC; Screen 180'-270'
DEEP WELL	4" Sched 80 PVC; Screen 295'-345'
SURFACE COMPLETION:	12"X12" Manway w/Concrete Pad



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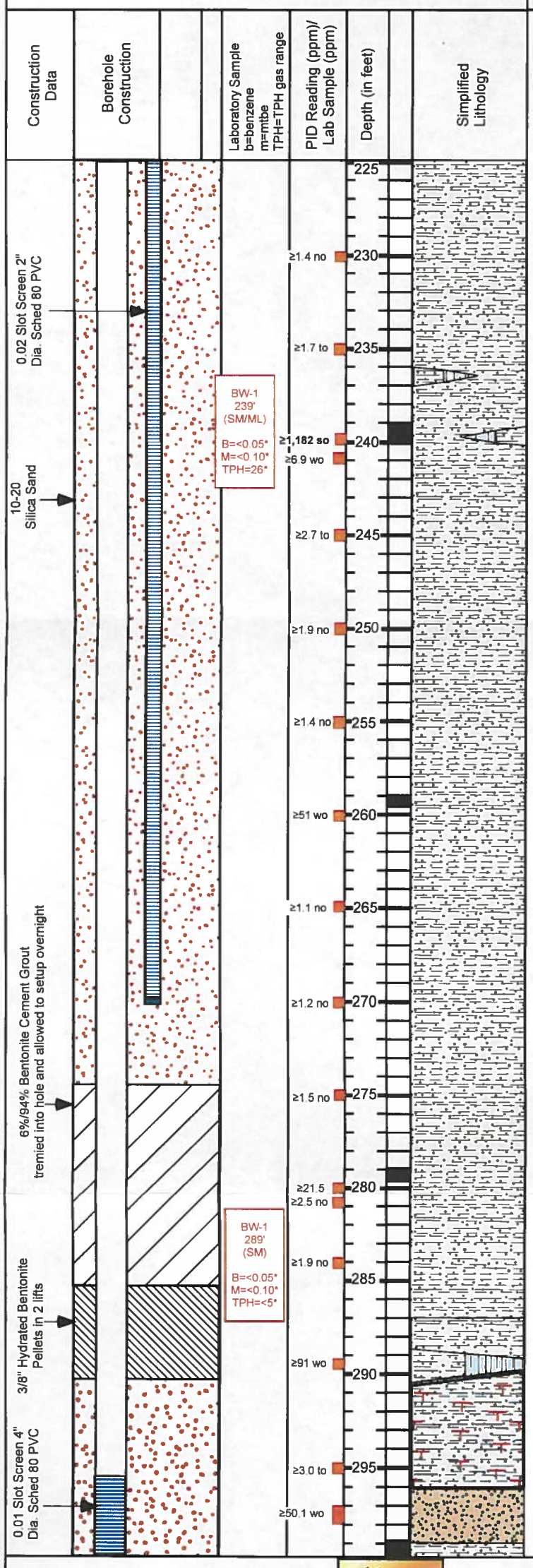

220.0'-239.0' Core Barrel (**SM**) As above with some moisture, unconsolidated, localized drier intervals.

Hole sat overnight prior to collection of split spoon at 239'

239.0'-240.0' Split Spoon 0.6' sample. (**SM/ML**) Silty very fine sand, some moisture to (**SM**) localized calcium carbonate nodules, strong weathered hydrocarbon odor. *NOTE: lab sample collected from headspace jar due to lack of sample volume.*

240'-247' Cuttings (**SM**) As above with localized siltier zones, weak to trace hydrocarbon odor on cuttings, air from the rig is stripping out volatiles.

Rig down at 8:35 - broken wireline to hammer.

247.0'-249' Cuttings (**SM**) With some caliche.

248'-unable to collect split spoon on 2 tries due to refusal, caliche zone?

Blowout hole at 17:50 = PID ≥340 ppm/v - strong hydrocarbon odor, rapidly dropped to ≤5 ppm/v with fresh air.

249'-279' Cuttings (**SM**) As above, local zones with greater moisture, localized calcium carbonate nodules set in unconsolidated (**SM**) matrix estimated ~1-2% of interval, harder drilling in lower 10'.

259.0'-259.5' Split Spoon 0.4' sample. (**SM**) As above with rounded calcium carbonate cemented (**SM**) clasts to 1.5", these are hanging up in split spoon, had to run sampler twice for any recovery, weak hydrocarbon odor, some moisture, hole sat for ~30 minutes prior to sample collection.

267'-269' Cuttings Harder drilling, calcium carbonate (?) cemented zone (?), cuttings are unconsolidated, slightly moist, drier than surrounding zones.

271'-279' Cuttings Higher moisture interval.

279.0'-279.5' Split Spoon 0.25' sample. (**SM**) Silty very fine sand, weak hydrocarbon odor, some moisture.

279'-280' Cuttings Some moisture, weak hydrocarbon odor.

280'-287' Cuttings (**SM**) Slightly moist to dry, silty very fine sand with moderate calcium carbonate nodules which decrease with depth.

289' - Stop drilling for 2/17/12 at 20:04. Started again at 8:45 on 2/18/12.

289' - 290 0.8' sample. (**SM/ML**) Tan brown (**10YR**) silty very fine sand with localized poorly cemented calcium carbonate nodules to 2/3" in size, rounded, moist, unconsolidated, weak to moderate degraded hydrocarbon odor at bottom.

Blew hole out at 289' after collecting split spoon and letting hole sit overnight, at 10:25 am PID = 403 ppm/v on vapors from cyclone.

287'-296' (**SM**) and (**SM/ML**), more abundant silt in this zone, otherwise same as above.

296'-299' (**SAS**) Carbonate cemented sandstone, matrix is (**SM**) silty fine to very fine sand, tan-brown to tan-gray.

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ALLSUPS #320

CLIENT: Allsups Petroleum, Inc.

Borehole ID: BW-1 (s,i,d) page 5 of 5

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TOTAL DEPTH:	345'
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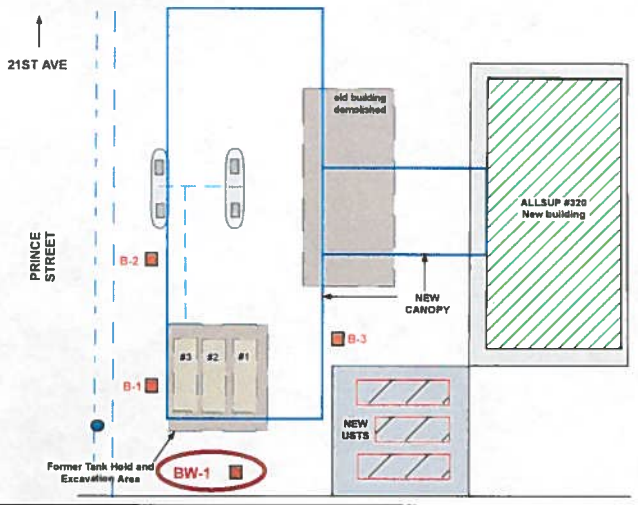

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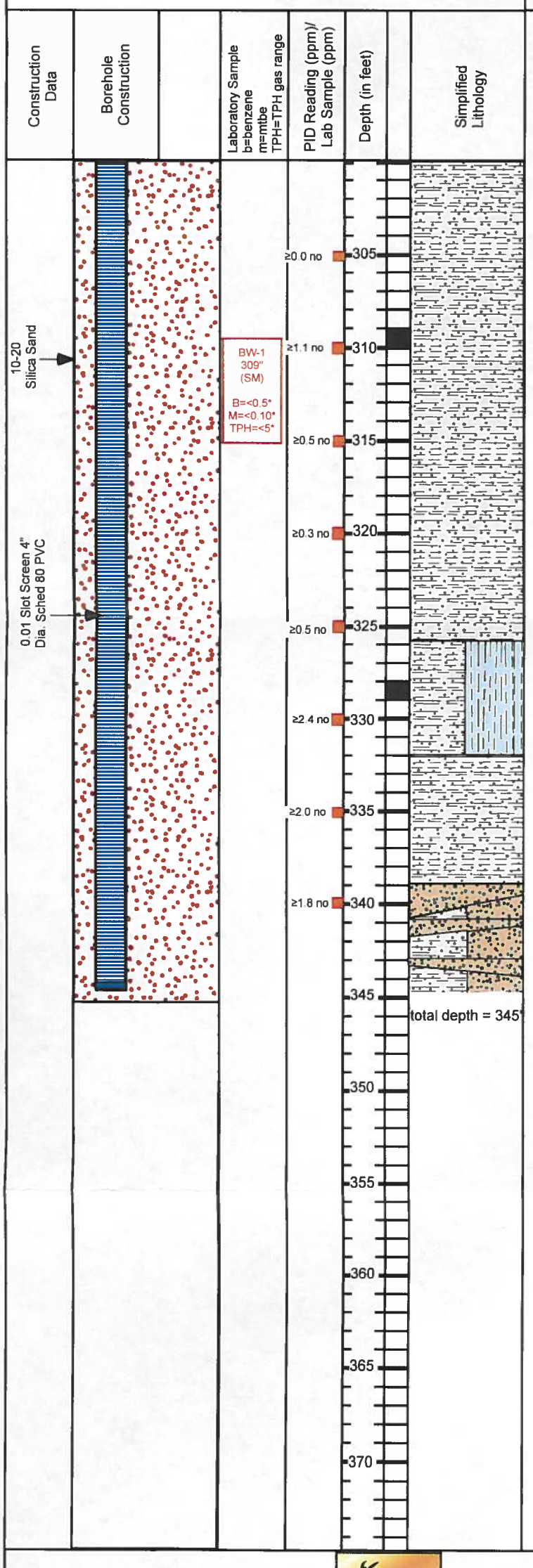

299.0'-309.0' Core Barrel (**SM**) Silty very fine sand as above, slightly moist, some calcium carbonate clasts (<1%), no apparent hydrocarbon odor in cuttings.

309.0'-310.0' Split Spoon 0.9' sample. 0.0'-0.9' (**SM**) tan-brown, moist, unconsolidated, silty very fine to fine sand, no apparent hydrocarbon odor.

309.0'-326.0' Cuttings (**SM**) As above, localized calcium carbonate cemented (**SAS**) gravel clasts from 314'-318', moist, no apparent hydrocarbon odor, unconsolidated.

326'-328' Cuttings (**SM/ML**) Silt to very fine sand.

328.0'-329.0' Split Spoon 1.0' sample. Entire core is water saturated (**SM/ML**) tan-brown, unconsolidated, no apparent hydrocarbon odor, (**10YR**) light brown.

329'-339' Cuttings (**SM/ML**) grading to (**SM**) below ~332', hole making some water initially.

339'-345' Cuttings (**SAS**)/(**SM**) calcium carbonate cemented, fine sandstone with (**SM**) interbeds, water saturated, no apparent hydrocarbon odor.

Stop drilling for 2/18/12 at 16:50. TD = 345'

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