BW-8

PAB Services Salty Dog Brine Station

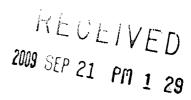
Monitor Well Installation &

Groundwater Monitoring Report

September 18, 2009



September 18, 2009



Mr. Jim Griswold New Mexico Oil Conservation Division Environmental Bureau 1220 South St. Francis Drive Santa Fe, NM 87505

Re: Monitor Well Installation and Groundwater Monitoring Report

Dear Mr. Griswold:

On behalf of PAB Services, Inc., Daniel B. Stephens & Associates, Inc. (DBS&A) is pleased to submit the enclosed Monitor Well Installation and Groundwater Monitoring Report for the Salty Dog brine station located in Lea County, New Mexico. The report documents field investigation activities conducted at the site in March and April 2009 in partial fulfillment of the requirements set forth in Section 15 of the New Mexico Oil Conservation Division (OCD) Settlement Agreement & Stipulated Revised Final Order (Order), dated August 6, 2008.

Please don't hesitate to call me at (505) 353-9130 if you have any questions or require additional information.

Sincerely,

DANIEL B. STEPHENS & ASSOCIATES, INC.

Michael D. McVey Senior Hydrogeologist

1:0.7

Enclosures

cc: James Millett, PAB Services Inc.

Monitoring Well Installation and Groundwater Monitoring Report Salty Dog Brine Station Lea County, New Mexico

Prepared for New Mexico Energy, Minerals and Natural

Resources Department

Oil Conservation Division, Environmental Bureau

September 18, 2009



Daniel B. Stephens & Associates, Inc.

6020 Academy NE, Suite 100 • Albuquerque, New Mexico 87109



Table of Contents

1.			n		
	1.1	Back	ground	2	
	1.2	Previo	ous Work Conducted by DBS&A at the Site	3	
		1.2.1	Comprehensive Site Plan	3	
		1.2.2	Groundwater Monitoring	3	
		1.2.3	Brine Pond Removal	4	
	1.3	Purpo	se	6	
	1.4	Proje	ct Scope	6	
2.	Field Investigation			7	
	2.1 Soil Boring				
		2.1.1	Brine Pond	7	
		2.1.2	Brine Well	8	
		2.1.3	Playa Lake	8	
	2.2	Grour	ndwater Investigation	8	
		2.2.1	Monitor Well Installation	9	
		2.2.2	Survey	. 11	
		2.2.3	Groundwater Sampling	. 12	
3.	Ana	lytical	Program	. 13	
	3.1 Soil Analysis				
	3.2	Grour	ndwater Analysis	. 13	
4.	Res	ults		. 14	
	4.1	Soil		. 14	
		4.1.1	Brine Pond	. 14	
		4.1.2	Brine Well	. 14	
		4.1.3	Playa Lake	. 15	
	4.2	Grour	ndwater	. 15	
5.	Sun	nmary	and Conclusions	. 16	
	5.1 Site Conditions				
		5.1.1	Soil	. 16	
		5.1.2	Groundwater	. 16	



Table of Contents (Continued)

	5.1.2 Groundwater	15
5.2	Conclusions	16

List of Figures

Figure

- 1 Site Location Map
- 2 Chloride Concentrations in Groundwater
- 3 Brine Pond Area Chloride Concentrations in Soil
- 4 Playa Lake and Brine Well Area Chloride Concentrations in Soil
- 5 Brine Pond Area Chloride Concentrations in Groundwater
- 6 Playa Lake and Brine Well Area Chloride Concentrations in Groundwater
- 7 Brine Pond Area Potentiometric Surface Elevations
- 8 Playa Lake and Brine Well Area Potentiometric Surface Elevations
- 9 Potentiometric Surface Elevations

List of Tables

Table

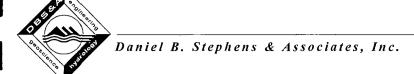
- 1 Summary of Chloride Soil Analytical Data
- 2 Summary of DBS-9 Total Petroleum Hydrocarbons Soil Analytical Data
- 3 Summary of Historical Fluid Level Measurements
- 4 Summary of Chloride Groundwater Analytical Data
- 5 Summary of DBS-9 Total Petroleum Hydrocarbons Groundwater Analytical Data



List of Appendices

Appendix

- A Soil Boring Logs and Well Completion Diagrams
- B Laboratory Reports
- C Well Data Forms
- D Survey Report



1. Introduction

Daniel B. Stephens & Associates, Inc. (DBS&A) has prepared this monitor well installation and groundwater monitoring report for submission to the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (OCD) on behalf of PAB Services, Inc. (PAB) for the Salty Dog brine station (Site). The Site is located in Lea County in southeastern New Mexico, approximately 12 miles west of Hobbs on the south side of the Hobbs/Carlsbad Highway (Figure 1). Formally, the Site is located in the in the J Unit of Section 5, Township 19 South, Range 36 East. This report summarizes field investigation activities conducted at the Site in March and April 2009.

1.1 Background

On May 18, 2008, OCD issued Administrative Compliance Order (ACO), NM-OCD-2008-02, to Mr. Peter Bergstein (d/b/a "Salty Dog, Inc.") (OCD, 2008a). After issuance of the ACO, OCD and Mr. Bergstein engaged in settlement discussions to resolve the outstanding issues addressed by the ACO. The OCD and Mr. Bergstein agreed to a Settlement Agreement & Stipulated Revised Final Order (Order), NM-OCD 2008-2A (OCD, 2008b), for the purpose of resolving the violations outlined in the ACO.

The Order requires Mr. Bergstein to complete certain actions to address environmental compliance-related issues at the Site in accordance with milestone deliverable dates agreed upon by the OCD and PAB. Specifically, among other things, the Order requires PAB to address contamination resulting from documented releases in 1999, 2002, and 2005, as well as releases at the brine loading/unloading area.

The ACO provides a description of each of these releases, which are summarized here. The 1999 release was caused by a hole in the casing of the Salty Dog brine well and resulted in contamination of the fresh water well on "Snyder Ranches," adjacent to the Site. The 2002 release was caused by a leaking tank in the vicinity of the brine well, and the 2005 release was caused by a rupture in the brine supply pipeline. The 2002 and 2005 releases were noted to have entered a fresh water playa located just north of the brine well.



1.2 Previous Work Conducted by DBS&A at the Site

To date, DBS&A has performed the following activities under contract to PAB: (1) preparation of a Comprehensive Site Plan, (2) groundwater monitoring, and (3) removal of the brine pond. Each of these activities is summarized below.

1.2.1 Comprehensive Site Plan

In September 2008, DBS&A submitted a Comprehensive Site Plan (Plan) to OCD addressing the requirements set forth in Section 15 of the Order (DBS&A, 2008). The Plan presented a proposed project schedule and individual specifications/proposals for addressing the environmental compliance-related issues at the Site. The Plan formed the basis for future investigation, characterization, and remediation of the Site.

1.2.2 Groundwater Monitoring

In June 2008, DBS&A completed groundwater monitoring at the Site. Groundwater samples were collected from existing monitor wells PMW-1, MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6, and from the ranch headquarters water supply well and the brine station fresh water supply (Figure 2). A groundwater sample was not collected from the mobile home located west of the brine well because the mobile home and the ranch headquarters use the same water supply well.

Prior to sampling, the depth to water was measured in each of the seven monitor wells listed above. Water levels were not measured in the ranch headquarters water supply well and the brine station fresh water supply well because of the presence of permanent submersible downhole pumps that blocked access to the wells. DBS&A could not determine groundwater elevations in the existing site wells nor could a potentiometric surface map be developed because an official survey from a New Mexico licensed land surveyor had not been completed at the Site. However, based on regional groundwater data and information contained in previous reports provided by PAB, DBS&A assumed that the direction of groundwater flow beneath the Site is to the southeast.

Laboratory results showed that chloride concentrations increased in six of the seven existing groundwater monitor wells (PMW-1, MW-1, MW-2, MW-3, MW-4, and MW-5) and in the brine station fresh water well since the wells were last sampled by employees of Salty Dog in May



Daniel B. Stephens & Associates, Inc.

2008. In six of the nine samples collected (PMW-1, MW-2, MW-3, MW-4, MW-5, and the brine station fresh water supply well), chloride concentrations exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard of 250 mg/L (Figure 2).

The groundwater monitoring results indicated that the extent of the chloride groundwater plume in the vicinity of the brine pond has not been delineated. To the south, in the area of the brine well, the chloride groundwater plume extends from the brine well downgradient to monitor wells MW-4 and MW-5. Assuming a southeasterly groundwater flow direction, the plume is bounded downgradient by monitor well MW-6. The cross-gradient extent of the plume, however, has not been delineated (Figure 2).

Based on the findings, DBS&A recommended that the extent of the chloride groundwater plume in the vicinity of the brine pond be delineated, and that the cross-gradient extent of the chloride groundwater plume downgradient of the brine well be delineated.

1.2.3 Brine Pond Removal

In October 2008, the brine pond was removed in accordance with the OCD Order. Employees of Salty Dog pumped all of the aqueous brine from the pond into aboveground frac tanks located on-site. A trackhoe was then used to excavate the accumulated salt from the interior of the pond. The excavated salt was loaded into sealed bins and dump trucks and transported to Sundance Services, Inc. (Sundance) in Eunice, New Mexico for disposal. After the salt was removed from the pond interior, the underlying liner was removed and an additional six inches of the clay beneath the liner was excavated. The liner and soil excavated from beneath the liner were transported to Sundance for disposal. A total of 2,128 cubic yards of salt and contaminated soil were hauled to Sundance for disposal.

DBS&A completed soil sampling beneath the former brine pond and in the former brine loading area located on east side of the pond in November 2008. A 30-foot by 30-foot grid was laid out over an area measuring 180 feet (north-south) by 240 feet (east-west). The gridded area encompassed: (1) the entire extent of the former brine pond (including the berms and a distance of approximately 10 feet outside of the berms) and (2) the former brine loading area. A total of 76 composite soil samples were submitted for laboratory analysis. At each sample location, a backhoe was used to excavate soil to the maximum attainable depth. Sixty-one soil samples



were collected from depths of 4 feet below ground surface (ft bgs) or less and 15 samples were collected from depths greater than 4 ft bgs. Excavation to depths greater than 3 to 4 ft bgs was limited in most cases by the presence of caliche in the shallow subsurface.

Soil samples collected from the bucket of the backhoe during excavation were composited in a stainless steel bowl and then placed in laboratory-provided four-ounce glass jars. The samples were submitted to the laboratory for chloride analysis using U.S. Environmental Protection Agency (EPA) method 300.0.

Laboratory results showed significant concentrations of chloride in the shallow interval (0 to 4 ft bgs) beneath the former brine pond and brine loading area. Although the number of samples collected at greater depths (i.e., greater than 4 ft bgs) were limited due to the presence of caliche in the shallow subsurface at the site, the results from the samples that were collected in this deeper interval indicated that there is not a noticeable difference in chloride concentration from 0 to 4 ft bgs and 4 to 8 ft bgs. It is anticipated, based on the concentrations of chloride observed in the soils beneath the former pond and loading area, that these concentrations do not decrease significantly in the vadose zone and that the concentrations exceed the OCD standard of 500 mg/kg (site with groundwater less than 100 ft bgs) throughout the vadose zone to the water table at approximately 60 ft bgs. This conclusion was supported by the June 2008 sampling of monitor well PMW-1, located at the southeast corner (downgradient) of the brine pond, where the chloride concentration in groundwater was 12,700 mg/L.

Based on the findings, DBS&A recommended that the chloride-contaminated soils be left in place, but the potential for leaching and migration of chloride to the water table be reduced by limiting the infiltration of surface water and precipitation in the source area. To accomplish this, DBS&A and PAB propose to level the entire extent of the former brine pond and brine loading area, backfill and compact the former brine pond to grade, and cover the entire area with concrete. A new brine tank battery, brine loading area, and truck turnaround will then be constructed in this area as detailed in Section 3.6 of the Comprehensive Site Plan.

DBS&A also recommended that the extent of the chloride groundwater plume in the vicinity of the former brine pond and brine loading area be delineated as detailed in Sections 3.1.1.1 and 3.1.1.2



of the Plan by installing five groundwater monitor wells, one nested well, and ongoing quarterly groundwater monitoring and reporting.

1.3 Purpose

The purpose of the field investigation was to determine the magnitude and extent of impacts to soil and groundwater from the 1999, 2002, 2005, and the brine loading/unloading releases. The investigation was performed in accordance with the requirements of the Order and Sections 3.1, 3.2, and 3.3 of the Plan, approved by the OCD on September 17, 2008.

This report constitutes the first of three milestone deliverables: (1) Monitor Well Installation and Ground Water Monitoring report, (2) Recovery Well Installation and Pump Test report, and (3) Conceptual Remedial Design.

1.4 Project Scope

The Order identified three areas of primary concern (AOPC) requiring investigation and/or further delineation of the extent of contamination: (1) the brine loading/unloading area and brine pond, (2) the brine well, and (3) the playa.

To address the AOPCs and groundwater quality at the site, DBS&A completed a field investigation program that included the installation of nine groundwater monitor wells and two nested wells. DBS&A also instituted an analytical program to assess the likely contaminants of concern (COCs) in soil and groundwater at the Site. Finally, DBS&A prepared this report documenting the investigation.

Sections 2 and 3 of this report detail the field investigation and analytical program, respectively. Section 4 presents the results of the investigation, and Section 5 provides DBS&A's summary and conclusions.



2. Field Investigation

Subsurface conditions and groundwater quality were evaluated by the installation of nine monitor wells and two nested wells, and the collection of soil and groundwater samples in each of the three AOPCs. Samples of soil and groundwater were submitted to the selected analytical laboratory for chemical analysis based on the identified COCs. Descriptions of the soil and groundwater field investigation programs are presented below.

2.1 Soil Boring

The soil investigation program included the installation of 11 soil borings, which were later completed as monitor wells to assess groundwater quality. Details of monitor well installation and construction are discussed in Section 2.2 below. The drilling was performed by Peterson Drilling and Testing, Inc. of Amarillo, Texas, a New Mexico licensed drilling company, using air rotary drilling technology. All of the borings were advanced to a total depth of 83 ft bgs. The locations of the borings were predetermined by DBS&A prior to the field investigation (DBS&A, 2008).

All field work was performed under the supervision of a licensed professional geologist. Soil samples were collected during drilling using a split spoon for laboratory analysis. Samples collected for laboratory analysis from the borings were placed in an ice-filled cooler immediately after collection and remained on ice until they were delivered to the analytical laboratory. Chain-of-custody documentation accompanied the samples at all times. Investigation derived waste was stockpiled on visqueen and properly disposed of at a licensed facility after completion of the field investigation.

A description of the field investigation in each of the three AOPCs is provided below.

2.1.1 Brine Pond

Six soil borings, designated DBS-1 through DBS-5 and NW-1, were installed in the vicinity of the brine pond (Figure 3). Soil cuttings and split spoon samples were used during drilling for lithologic description. Soil samples were collected for laboratory analysis at 10-foot intervals



Daniel B. Stephens & Associates, Inc.

during drilling to quantify the chloride concentration profile with depth. Soil boring logs showing the subsurface geology at each location are provided in Appendix A. Laboratory results from soil samples collected during drilling are summarized in Table 1. Complete laboratory reports for the soil samples are provided in Appendix B.

2.1.2 Brine Well

Four soil borings designated DBS-6 through DBS-8 and NW-2, were installed downgradient of the brine well (Figure 4). Soil samples were collected at 10-foot intervals during drilling for laboratory analysis as described above. Soil cuttings and split spoon samples were used during drilling for lithologic description. Soil boring logs showing the subsurface geology at each location are provided in Appendix A. Laboratory results from soil samples collected during drilling are summarized in Table 1. Complete laboratory reports for the soil samples are provided in Appendix B.

2.1.3 Playa Lake

One soil boring, designated DBS-9, was installed in the fresh water playa lake located just north of the brine well (Figure 4). Soil samples were collected at 10-foot intervals during drilling for laboratory analysis as described above. Soil cuttings and split spoon samples were used during drilling for lithologic description. The soil boring log showing the subsurface geology is provided in Appendix A. Laboratory results of soil samples collected during drilling are summarized in Table 1. Complete laboratory reports for the soil samples are provided in Appendix B.

2.2 Groundwater Investigation

The groundwater investigation included the installation of nine monitor wells and two nested wells, and the collection of groundwater samples for laboratory analysis. The wells were completed at predetermined locations, as specified in Sections 3.1 and 3.2 of the Plan (DBS&A, 2008). The locations specified in the Plan were selected to delineate the extent of the chloride groundwater plume in the vicinity of the brine pond, the cross-gradient extent of the chloride plume resulting from the 1999 release at the brine well, and to determine if groundwater beneath the playa was impacted as a result of the 2002 and 2005 releases. All of the wells



were constructed in accordance with the New Mexico Environment Department Ground Water Quality Bureau Monitoring Well Construction Guidelines, Revision 1.0, dated July 2008.

2.2.1 Monitor Well Installation

2.2.1.1 Brine Pond

Soil borings DBS-1 through DBS-5 were advanced to approximately 20 ft below the water table and completed as 2-inch-diameter groundwater monitor wells (Figure 5). The wells were installed in upgradient, downgradient, and cross-gradient locations to delineate the extent of the chloride plume as follows:

- DBS-1: approximately 200 feet downgradient (southeast) of the brine pond
- DBS-2: approximately 200 feet cross-gradient (east) of the brine pond
- DBS-3: approximately 200 feet cross-gradient (south-southwest) of the brine pond
- DBS-4: approximately 400 feet downgradient (southeast) of the brine pond
- DBS-5: approximately 300 feet upgradient (northwest) of the brine pond

The wells were constructed of 20 feet of 2-inch-diameter, 0.020-inch slot, flush-threaded, machine-cut, Schedule 40 (SCH 40) polyvinyl chloride (PVC) well screen with a 2-foot sump. Blank 2-inch-diameter, SCH 40 PVC casing extended to approximately 2.5 feet above the ground surface. The screens were placed so that approximately five feet would be above the water table and 15 feet below. The filter pack consisted of 8-16 silica sand, placed by a tremie pipe, extending from the bottom of the boring to approximately 3 feet above the well screen. A 3-foot-thick bentonite pellet seal (hydrated) was then placed above the sand pack, and the annular space above the bentonite seal was filled with a cement/bentonite grout to the surface. The wells were completed aboveground with a protective steel well vault and a 3-foot by 3-foot by 4-inch-thick concrete pad and bollards at each corner. The well construction diagrams for DBS-1 through DBS-5 are provided in Appendix A.

Nested well NW-1 was drilled to the red beds (base of the Ogallala Formation) approximately 150 feet downgradient (southeast) of the former brine pond (Figure 5). NW-1 was installed to determine if a chloride density gradient exists with depth in the saturated zone. The well will enable DBS&A to evaluate vertical hydraulic and concentration gradients at a single location to



ensure that future recovery wells are screened properly. The well consists of three 2-inch-diameter monitor wells installed in one 10-inch-diameter soil boring with separate shallow (s), intermediate (m), and deep (d) screens. The screens are separated from each other in the boring by a bentonite seal.

The deep well consists of 20 feet of 2-inch-diameter 0.020-inch slot, flush-threaded, machine-cut, SCH 40 PVC well screen with a 2-foot sump. Blank 2-inch SCH 40 PVC casing extends to approximately 2.5 feet above the ground surface. The screen was placed from approximately 149 ft bgs to 169 ft bgs. The filter pack (8-16 silica sand) was placed by a tremie pipe from the bottom of the boring to approximately 4 feet above the top of the screen. A bentonite pellet seal (hydrated) was then placed above the sand pack.

The middle well consists of 20 feet of 2-inch-diameter 0.020-inch slot, flush-threaded, machine-cut, SCH 40 PVC well screen with a 2-foot sump. Blank 2-inch SCH 40 PVC casing extends to approximately 2.5 feet above the ground surface. The screen was placed from approximately 99 ft bgs to 119 ft bgs. The filter pack (8-16 silica sand) was placed by a tremie pipe from the bottom of the boring to approximately 4 feet above the top of the screen. A bentonite pellet seal (hydrated) was then placed above the sand pack.

The shallow well consists of 20 feet of 2-inch-diameter 0.020-inch slot, flush-threaded, machine-cut, SCH 40 PVC well screen with a 2-foot sump. The well is screened across the water table from approximately 52 ft bgs to 72 ft bgs. Blank 2-inch SCH 40 PVC casing extends to approximately 2.5 feet above the ground surface. The filter pack (8-16 silica sand) was placed by a tremie pipe from the bottom of the boring to approximately 2 feet above the top of the screen. A bentonite pellet seal (hydrated) was then placed above the sand pack. The remaining open annular space above the bentonite seal was then filled with a cement/bentonite grout to the surface.

The well was completed aboveground with a protective steel well vault and a 3-foot by 4-inch-thick concrete pad and bollards at each corner. The well construction diagram for NW-1 is provided in Appendix A.



2.2.1.2 Brine Well

Soil borings DBS-6 through DBS-8 were advanced to approximately 20 ft below the water table and completed as 2-inch-diameter groundwater monitor wells (Figure 6). The wells were installed to delineate the cross-gradient extent of the chloride plume as follows:

- DBS-6: approximately 300 feet north of existing monitor well MW-4
- DBS-7: approximately 200 feet south of existing monitor well MW-4
- DBS-8: approximately 300 feet southwest of existing monitor well MW-4

The wells were constructed as described above in Section 2.2.1.1 for wells DBS-1 through DBS-5. The well construction diagrams for DBS-6 through DBS-8 are provided in Appendix A.

Nested well NW-2 was drilled to the red beds approximately 20 feet upgradient (northwest) of monitor well MW-4 (Figure 6). NW-2, like NW-1, was installed to determine if a chloride density gradient exists with depth in the saturated zone. The well was constructed in similar manner to NW-1 with three 2-inch-diameter monitor wells installed in one 10-inch-diameter soil boring with separate shallow (s), intermediate (m), and deep (d) screens. The well was completed aboveground with a protective steel well vault and a 3-foot by 3-foot by 4-inch-thick concrete pad and bollards at each corner. The well construction diagram for NW-2 is provided in Appendix A.

2.2.1.3 Playa Lake

Soil boring DBS-9 was advanced to approximately 20 ft below the water table and completed as 2-inch-diameter groundwater monitor well (Figure 6). The well was installed to determine if groundwater beneath the playa was impacted from releases which occurred in the past. The well was constructed as described above in Section 2.2.1.1. The well construction diagram for DBS-9 is provided in Appendix A.

After completion, each of the newly installed monitor wells was developed by pumping until temperature, pH, and conductivity stabilized and turbidity was reduced to the extent practicable (Appendix C).

2.2.2 Survey

After drilling and installation of the monitor wells was completed, a survey was completed. Each of the newly installed monitor wells, as well as the existing monitor wells, was surveyed by



Daniel B. Stephens & Associates, Inc.

Pettigrew & Associates of Hobbs, New Mexico, a licensed New Mexico land surveyor. The top of casing elevations of each of the wells was surveyed to a North American Vertical Datum, 1988 (NAVD88), and the x-y coordinates of each well was surveyed to a North American Datum, 1983 (NAD83) in a state plane coordinate system. Survey results are provided in Appendix D.

2.2.3 Groundwater Sampling

Groundwater samples were collected from each of the newly installed monitor wells and the existing monitor wells for laboratory analysis. Before sampling, fluid levels in each well were gauged using a decontaminated electronic water level meter. After gauging, each well was purged of a minimum of three casing volumes using a pump. Field parameters of pH, specific conductivity, and temperature were monitored during purging to ensure that stagnant water was removed from the well (Appendix C). Groundwater samples were then collected from each well and transferred into laboratory-prepared sample containers. Immediately after the samples were collected, they were placed in an ice-filled cooler and remained on ice until they were delivered to the laboratory for analysis. Chain-of-custody documentation accompanied the samples at all times.



3. Analytical Program

The analytical program included analysis of soil and groundwater media. Samples were submitted to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico for analysis. Copies of the soil and groundwater laboratory analytical reports are included in Appendix B.

3.1 Soil Analysis

Soil samples were analyzed for chloride using U.S. Environmental Protection Agency (EPA) method 300.0. A total of 89 soil samples were submitted for laboratory analysis from the eleven soil borings installed during the field investigation. In addition, the samples collected from boring DBS-9 were also analyzed for total petroleum hydrocarbons (TPH) in accordance with EPA method 418.1.

3.2 Groundwater Analysis

Groundwater samples were analyzed for chloride using EPA method 300.0. In addition, samples collected from boring DBS-9 only were analyzed for TPH (gasoline range organics [GRO], diesel range organics [DRO], and motor oil range organics [MRO]) in accordance with EPA method 8015B. A total of 21 groundwater samples were submitted for laboratory analysis. Nine samples from newly installed monitor wells DBS-1 through DBS-9, six from the two newly installed nested wells (NW-1 [s], NW-1 [m], NM-1 [d], NW-2 [s], NW-2 [m], NW-2 [d]), and six from the existing wells (PMW-1, MW-2, MW-3, MW-4, MW-5, and MW-6).



4. Results

4.1 Soil

A summary of chloride concentrations with depth in the soil borings installed during the field investigation is provided in Table 1. TPH results for boring DBS-9 are provided in Table 2. The soil analytical results are also shown graphically on Figures 3 and 4.

4.1.1 Brine Pond

Of the six borings installed at the brine pond, only three borings contained concentrations of chloride in excess of the OCD standard of 500 mg/kg. In boring DBS-1, located approximately 200 ft southeast of the former brine pond, samples collected from the 10-12 ft bgs and 30-32 ft bgs intervals yielded chloride concentrations of 3,600 and 1,400 mg/kg, respectively. Below 32 ft bgs, chloride concentrations decreased from 380 to 18 mg/kg (Table 1, Figure 3).

In boring DBS-2, located approximately 200 feet east of the former brine loading/unloading area, samples collected from the 0-2 ft bgs and 10-12 ft bgs intervals yielded chloride concentrations of 2,000 and 940 mg/kg, respectively. Below 12 ft bgs, chloride concentrations decreased from 42 to 5.8 mg/kg (Table 1, Figure 3).

Soil boring NW-1, located approximately 70 ft southeast of the former brine pond, showed chloride concentrations exceeding the OCD standard of 500 mg/kg in all of the samples collected from the boring. Measured chloride concentrations ranged from 800 to 3,600 mg/kg (Table 1, Figure 3). No notable decrease in chloride concentration occurred with depth.

4.1.2 Brine Well

No chloride concentrations in the soil samples collected from borings DBS-6, DBS-7, DBS-8, and NW-2, installed downgradient of the brine well, exceeded the OCD standard of 500 mg/kg (Table 1, Figure 4). Measured chloride concentrations ranged from 1.8 to 240 mg/kg.



4.1.3 Playa Lake

Soil samples collected from boring DBS-9 showed elevated chloride concentrations in three samples. In samples collected from the 10-12 ft bgs, 20-22 ft bgs, and 40-42 ft bgs intervals, measured chloride concentrations were 4,100, 560, and 550 mg/kg, respectively (Table 1, Figure 4). Below 42 ft bgs, chloride concentrations decreased from 160 to 9.7 mg/kg.

Soil samples from boring DBS-9 were also analyzed for TPH. In samples collected from the 10-12 ft bgs, 20-22 ft bgs, 30-32 ft bgs, 40-42 ft bgs, and 50-52 ft bgs intervals, measured TPH concentrations were 36, 220, 64, 40, and 82 mg/kg, respectively (Table 2). Below 52 ft bgs, TPH concentrations were below the laboratory reporting limit.

4.2 Groundwater

Table 3 provides water level measurements and corresponding groundwater elevations for each of the newly installed and existing monitor wells. These data were used to generate the potentiometric surface maps for the brine pond and brine well/playa lake areas shown on Figures 7 and 8. The groundwater data were combined for the two areas above and a Site potentiometric surface map was generated (Figure 9). The direction of groundwater flow beneath the Site is to the southeast; the average hydraulic gradient beneath the Site is relatively flat at 0.004 foot per foot.

Groundwater analytical results for chloride are provided in Tables 4 and 5 and shown graphically on Figures 5 and 6. Of the 21 groundwater samples submitted for chloride analysis, 12 samples exceeded the NMWQCC Standard of 250 mg/L for chloride. The samples exceeding the standard were: DBS-1 (320 mg/L), DBS-6 (380 mg/L), DBS-7 (570 mg/L), NW-1(s) (630 mg/L), NW-2(s) (410 mg/L), NW-2(m) (570 mg/L), NW-2(d) (4,700 mg/L), PMW-1 (11,000 mg/L), MW-2 (1,200 mg/L), MW-3 (17,000 mg/L), MW-4 (6,600 mg/L), and MW-5 (1,300 mg/L).

Groundwater samples submitted from DBS-9 for TPH GRO, DRO, and MRO analysis were all below the laboratory reporting limits.



5. Summary and Conclusions

5.1 Site Conditions

5.1.1 Soil

Chloride concentrations in soil were generally below the OCD standard of 500 mg/kg. Three exceptions were noted at the brine pond in borings DBS-1, DBS-2, and NW-1. All three of these borings contained chloride concentrations in excess of 500 mg/kg in two or more samples. The chloride concentrations exceeding 500 mg/kg in borings DBS-1 and DBS-2 were limited to the upper 32 ft in DBS-1 and the upper 12 ft in DBS-2. The chloride concentrations in NW-1, however, exceeded 500 mg/kg in all of the soil samples submitted from the boring.

TPH results from soil samples submitted from boring DBS-9 showed concentrations ranging from 36 to 220 mg/kg from 10 ft bgs to 52 ft bgs. Below 52 ft bgs, TPH concentrations were below the laboratory reporting limit. The sample collected from the 20-22 ft bgs interval exceeded the New Mexico Environment Petroleum Storage Tank Bureau action level of 100 mg/kg.

5.1.2 Groundwater

The chloride groundwater plume was delineated during the field investigation at the brine pond and brine well areas. At the brine pond, the highest chloride concentration in groundwater was encountered in monitor well PMW-1 11,000 mg/L, just downgradient of the former brine pond and brine loading/unloading area. Downgradient of PMW-1, the chloride concentration decreases two orders of magnitude in NW-1(s) (630 mg/L) and decreases by half again in DBS-1 (320 mg/L). The downgradient extent of the plume is bounded by monitor well DBS-4 (38 mg/L) and the cross-gradient extent is bounded by monitor wells DBS-2 (14 mg/L) and DBS-3 (36 mg/L). The upgradient monitor well contained a chloride concentration of 65 mg/L.

At the brine well location, the highest chloride concentration (17,000 mg/L) in groundwater was encountered in monitor well MW-3 (17,000 mg/L), located approximately 550 ft downgradient of the brine well. Downgradient of MW-4, the chloride concentration decreases one order of



Daniel B. Stephens & Associates, Inc.

magnitude in MW-4 (6,600 mg/L) and continues to decrease further downgradient in MW-5 (1,300 mg/L) and DBS-7 (570 mg/L). The downgradient extent of the plume was not delineated, as the farthest downgradient monitor wells, MW-5 and MW-7, contain chloride concentrations exceeding the NMWQCC standard of 250 mg/L. The cross-gradient extent of the plume was bounded to the south by monitor well DBS-8 (58 mg/L), while the cross-gradient extent of the plume was not defined to the north by DBS-6 (380 mg/L).

The groundwater sample collected from DBS-9 located in the playa was below the NMWQCC standard for chloride (210 mg/L), and below the laboratory reporting limits for TPH. GRO, DRO, and MRO.

5.2 Conclusions

Overall, the extent of the chloride groundwater plumes have been delineated at the brine pond, brine well, and playa. Although the chloride plume at the brine well has not been definitively defined by the field investigation, the chloride concentrations in the farthest downgradient and northernmost cross-gradient wells are low enough to suggest that the wells were installed in the outer fringe of the plume.

DBS&A recommends that recovery wells be installed at the brine pond and the brine well areas and that pump tests be performed on the wells so that a remedial approach for the Site can be developed.



References

- DBS&A. 2008. Comprehensive Site Plan, Salty Dog Brine Station, Lea County, New Mexico. Prepared for the New Mexico Energy, Minerals, and Natural Resources Department, Oil Conservation Division, Environmental Bureau, Santa Fe, New Mexico. September 5, 2008.
- New Mexico Energy, Minerals and Natural Resources Department. 2008. Notification of Compliance/Enforcement Action-Administrative Compliance Order, ACO 2008-02. Directed to Pieter Bergstein d/b/a Salty Dog, Inc. (OGRID 184208). May 20, 2008.
- State of New Mexico New Oil Conservation Division, Constituent Agency of the Water Quality Control Commission In the Matter of Pieter Bergstein d/b/a "Salty Dog, Inc., (OGRID 184208). 2008. Settlement Agreement and Stipulated Revised Final Order NM-OCD 2008-2A. August 6, 2008.

Figures



Water supply well

Source: RGIS aerial photograph dated July 2005



SALTY DOG BRINE STATION
Site Location Map



MW-4 Well designation

5,730 Chloride concentration (mg/L)

- Existing monitor well
- Water supply well

Chloride concentration contour (dashed where inferred)

Note: Bold denotes concentration that exceeds the NMWQCC standard

Daniel B. Stephens & Associates, Inc., JN ES08.0118.01

Source: RGIS aerial photograph dated July 2005

SALTY DOG BRINE STATION
Chloride Concentrations
in Groundwater

Day 07/09

Figure 2

PROJECTS/ES08.0118.01 SALTY DOG INC/GIS/MXDS/G

(0-2) Sample depth (ft bgs)

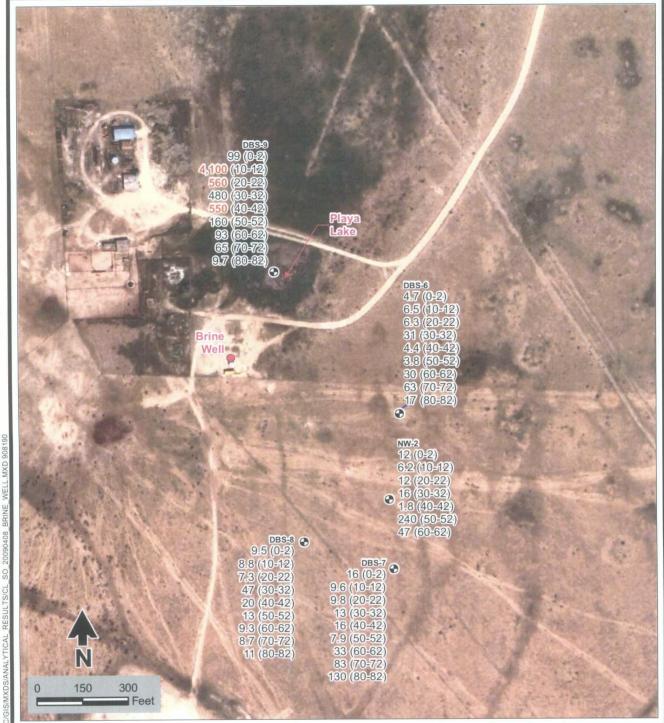
Monitor well location

BOLD indicates concentration equal to or greater than the applicable OCD standard.

SALTY DOG BRINE STATION

Brine Pond Area Chloride Concentrations in Soil March 23, 24, 25, and 31, 2009





DBS-9 Well designation

4,100 Chloride concentration (mg/kg)

(0-2) Sample depth (ft bgs)

Monitor well location

BOLD indicates concentration equal to or greater than the applicable OCD standard.

Source: Google Earth aerial photograph dated September 2002

SALTY DOG BRINE STATION

Playa Lake and Brine Well Area Chloride Concentrations in Soil March 26, 27, 30, and April 1, 2009





DBS-1 Well designation

320 Chloride concentration (mg/L)

Monitor well location

BOLD indicates concentration equal to or greater than the NMWQCC standard.

Source: Google Earth aerial photograph dated September 2002

SALTY DOG BRINE STATION

Brine Pond Area
Chloride Concentrations in Groundwater
April 8, 2009





MW-2 Well designation

1,200 Chloride concentration (mg/L)

Monitor well location

BOLD indicates concentration equal to or greater than the NMWQCC standard.

Source: Google Earth aerial photograph dated September 2002

SALTY DOG BRINE STATION

Playa Lake and Brine Well Area Chloride Concentrations in Groundwater April 7 and 8, 2009



DBS-1 Well designation

3754.71 Groundwater elevation, ft msl

Groundwater elevation (ft msl)

Potentiometric surface elevation contour (ft msl)

Source: Google Earth aerial photograph dated September 2002

SALTY DOG BRINE STATION

Brine Pond Area
Potentiometric Surface Elevations
April 8, 2009



MW-2 Well designation

3751.03 Groundwater elevation, ft msl

Groundwater elevation (ft msl)

Potentiometric surface elevation contour (ft msl)

dated September 2002

SALTY DOG BRINE STATION

Playa Lake and Brine Well Area **Potentiometric Surface Elevations** April 7 and 8, 2009



Daniel B. Stephens & Associates, Inc., 05/20/2009 JN ES08.0118.01

DBS-6 Well designation

3749.90 Groundwater elevation, ft msl

Groundwater elevation (ft msl)

Potentiometric surface elevation contour (ft msl)

Source: Google Earth aerial photograph dated September 2002

SALTY DOG BRINE STATION

Potentiometric Surface Elevations April 7 and 8, 2009



Tables



Table 1. Summary of Chloride Soil Analytical Data Salty Dog Brine Station, Lea County, New Mexico Page 1 of 3

		Depth Interval	Chloride		
Monitor Well	Sample Date	(ft bgs)	Concentration (mg/kg) a		
Oil Conservatio	Oil Conservation Division Soil Standard b				
DBS-1	03/25/09	10-12	3600		
	:	20-22	240		
		30-32	1400		
		50-52	380		
		60-62	160		
		70-72	230		
		80-82	18		
DBS-2	03/24/09	0-2	2000		
		10-12	940		
		20-22	39		
		40-42	42		
	ii	50-52	10		
		60-62	7.9		
}:		70-72	7.7		
		80-82	5.8		
DBS-3	03/24/09	0-2	170		
		10-12	58		
		20-22	41		
		30-32	44		
		40-42	35		
		50-52	3.4		
		60-62	8.5		
		80-82	6.6		
DBS-4	03/25/09	0-2	18		
		10-12	54		
		20-22	39		
		30-32	19		
!		40-42	55		
		50-52	75		
		60-62	44		
•		· 70-72	9.7		
		80-82	6.9		
DBS-5	03/23/09	0-2	19		
		10-12	25		

Bold indicates concentrations that exceed the applicable standard.

ft bgs = Feet below ground surface

mg/kg = Milligrams per kilogram

^a All samples analyzed in accordance with EPA method 300.0, unless otherwise noted.

^bOCD standard for a site with groundwater less than 100 feet below ground surface.



Table 1. Summary of Chloride Soil Analytical Data Salty Dog Brine Station, Lea County, New Mexico Page 2 of 3

		Depth Interval	Chloride		
Monitor Well	Sample Date	(ft bgs)	Concentration (mg/kg) a		
Oil Conservatio	Oil Conservation Division Soil Standard b				
DBS-5 (cont.)	03/23/09	20-22	17		
=== = (==:)	00/20/00	40-42	8.5		
		50-52	3.1		
		60-62	18		
		70-72	12		
		80-82	7.5		
DBS-6	03/26/09	0-2	4.7		
		10-12	6.5		
		20-22	6.3		
		30-32	31		
		40-42	4.4		
		50-52	3.8		
	-	60-62	30		
		70-72	63		
		80-82	17		
DBS-7	03/26/09	0-2	16		
		10-12	9.6		
		20-22	9.8		
		30-32	13		
		40-42	16		
		50-52	7.9		
		60-62	33		
		70-72	83		
		80-82	130		
DBS-8	03/26/09	0-2	9.5		
		10-12	8.8		
		20-22	7.3		
		30-32	47		
		40-42	20		
		50-52	13		
		60-62	9.3		
		70-72	8.7		
		80-82	11		
DBS-9	03/30/09	0-2	99		

Bold indicates concentrations that exceed the applicable standard.

^a All samples analyzed in accordance with EPA method 300.0, unless otherwise noted.

b OCD standard for a site with groundwater less than 100 feet below ground surface.

ft bgs = Feet below ground surface

mg/kg = Milligrams per kilogram



Table 1. Summary of Chloride Soil Analytical Data Salty Dog Brine Station, Lea County, New Mexico Page 3 of 3

			<u> </u>
		Depth Interval	Chloride
Monitor Well	Sample Date	(ft bgs)	Concentration (mg/kg) a
Oil Conservation	tandard ^b	500	
DBS-9 (cont.)	03/30/09	10-12	4100
		20-22	560
		30-32	480
		40-42	550
		50-52	160
		60-62	93
		70-72	65
		80-82	9.7
DBS NW-1	03/31/09	10-12	1300
		20-22	3600
		30-32	800
		40-42	2500
		50-52	2400
		60-62	1800
DBS NW-2	04/01/09	0-2	12
		10-12	6.2
		20-22	12
		30-32	16
		40-42	1.8
		50-52	240
		60-62	47

Bold indicates concentrations that exceed the applicable standard.

ft bgs = Feet below ground surface

mg/kg = Milligrams per kilogram

^a All samples analyzed in accordance with EPA method 300.0, unless otherwise noted.

b OCD standard for a site with groundwater less than 100 feet below ground surface.



Table 2. Summary of DBS-9 Total Petroleum Hydrocarbons Soil Analytical Data Salty Dog Brine Station, Lea County, New Mexico
Page 1 of 1

		Depth Interval	TPH
Monitor Well	Sample Date	(ft bgs)	Concentration (mg/kg) a
NMED F	PSTB Action Lev	el	100
DBS-9	03/30/09	0-2	<6.0
		10-12	36
		20-22	220
		30-32	64
		40-42	40
		50-52	82
		60-62	<20
		70-72	<20
		80-82	<20

Bold indicates concentrations that exceed the NMED PSTB action level.

NMED PSTB = New Mexico Environment Department Petroleum Storage Tank Bureau

TPH = Total petroleum hydrocarbons ft bgs = Feet below ground surface mg/kg = Milligrams per kilogram

^a All samples analyzed in accordance with EPA method 418.1



Table 3. Summary of Historical Fluid Level Measurements Salty Dog Brine Station, Lea County, New Mexico Page 1 of 1

Monitor Well	Screen Interval (ft bgs)	Top of Casing Elevation ^a (ft msl)	Date Measured	Depth to Water (ft btoc)	Groundwater Elevation (ft msl)
DBS-1	56.0-76.0	3817.09	04/08/09	62.38	3754.71
DBS-2	58.0-78.0	3820.50	04/08/09	65.45	3755.05
DBS-3	56.0-76.72	3816.66	04/08/09	60.67	3755.99
DBS-4	56.0-76.0	3820.37	04/08/09	66.27	3754.10
DBS-5	56.9-76.9	3820.37	04/08/09	62.99	3757.67
DBS-6	56.7-76.7	3812.65	04/07/09	62.75	3749.90
DBS-7	55.1-75.1	3810.21	04/07/09	61.74	3748.47
DBS-8	55.2-75.2	3810.70	04/07/09	61.20	3749.50
DBS-9	48.0-68.0	3806.26	04/08/09	53.93	3752.33
NW-1(s)	52.95-72.95	3817.33	04/08/09	62.35	3754.98
NW-1 (m)	99.31-119.31	3817.35	04/08/09	62.25	3755.10
NW-1 (d)	149.45-169.45	3817.35	04/08/09	62.04	3755.31
NW-2 (s)	53.35-73.35	3812.50	04/08/09	63.08	3749.42
NW-2 (m)	93.72-113.72	3812.45	04/08/09	63.27	3749.18
NW-2 (d)	126.87-146.87	3812.46	04/08/09	66.41	3746.05
PMW-1	63-78	3821.17	06/23/08	67.51	3753.66
			04/08/09	65.97	3755.20
MW-1	120-140	NA	06/23/08	59.90	NA
MW-2	127-147	3812.68	06/23/08	61.42	3751.26
			04/07/09	61.65	3751.03
MW-3	NA	3812.50	06/23/08	62.06	3750.44
			04/07/09	62.02	3750.03
MW-4	111-131	3811.33	06/23/08	62.12	3749.21
			04/07/09	62.51	3748.82
MW-5	112-132	3808.96	06/23/08	60.60	3748.36
			04/07/09	60.79	3748.17
MW-6	NA	3810.17	06/23/08	62.17	3748.00
			04/07/09	62.41	3747.76

^a Top of casing elevations surveyed by Pettigrew & Assoc. on May 28, 2009.

ft bgs = Feet below ground surface

ft btoc = Feet below top of casing

ft msl = Feet above mean sea level

NA = Not available

Table 4. Summary of Chloride Groundwater Analytical Data Salty Dog Brine Station, Lea County, New Mexico Page 1 of 2

		Chloride
Monitor Well	Date	Concentration (mg/L) a
New Mexico Water Quality Control (250
DBS-1	04/08/09	320
DBS-1	04/08/09	14
DBS-3	04/08/09	36
DBS-4	04/08/09	38
DBS-5	04/08/09	65
DBS-6	04/07/09	380
DBS-7	04/07/08	570
DBS-8	04/07/09	58
DBS-9	04/08/09	210
NW-1 (s)	04/08/09	630
NW-1 (m)	04/08/09	57
NW-1 (d)	04/08/09	38
NW-2 (s)	04/08/09	410
NW-2 (m)	04/08/09	570
NW-2 (d)	04/08/09	4,700
Brine Pit Well (PMW-1)	02/27/08	9,500 b
	05/30/08	8,600 b
	06/23/08	12,700
	04/08/09	11,000
MW-1	05/30/08	75 ^b
	06/23/08	243
MW-2	02/27/08	120 b
	05/30/08	80 b
	06/23/08	1,480
	04/07/09	1,200
MW-3	02/27/08	348 ^b
	05/30/08	360 b
	06/23/08	1,090
	04/07/09	17,000
MW-4	02/27/08	476 b
	05/30/08	512 ^b
	06/23/08	5,730

Bold indicates concentrations that exceed the applicable standard.

mg/L = Milligrams per liter

^a All samples analyzed in accordance to EPA method 300.0, unless otherwise noted.

^b Samples analyzed in accordance to Standard Method 4500-Cl B.



Table 4. Summary of Chloride Groundwater Analytical Data Salty Dog Brine Station, Lea County, New Mexico Page 2 of 2

		Chloride
Monitor Well	Date	Concentration (mg/L) a
New Mexico Water Quality Control	Commission Standard	250
MW-4 (cont.)	04/07/09	6,600
MW-5	02/27/08	1,280 ^b
	05/30/08	1,220 ^b
	06/23/08	1,260
	04/07/09	1,300
MW-6	02/27/08	32 ^b
	05/30/08	36 ^b
	06/23/08	31.4
	04/07/09	25
Ranch Headquarters Water Supply Well	06/23/08	35.4
Brine Station Fresh Water Supply Well	02/27/08	630 ^b
	05/30/08	590 b
	06/23/08	650

Bold indicates concentrations that exceed the applicable standard.

mg/L = Milligrams per liter

^a All samples analyzed in accordance with EPA method 300.0, unless otherwise noted.

Samples analyzed in accordance with Standard Method 4500-Cl B.



Table 5. Summary of DBS-9 Total Petroleum Hydrocarbons Groundwater Analytical Data Salty Dog Brine Station, Lea County, New Mexico Page 1 of 1

TPH	Sample Date	Concentration (mg/L) a
NMWQCC	Standard	None
DRO	04/08/09	<1.0
MRO	04/08/09	<5.0
GRO	04/08/09	<0.05

^a All samples analyzed in accordance with EPA method 8015B.

TPH = Total petroleum hydrocarbon DRO = Diesel Range Organics
mg/L = Milligrams per liter MRO = Motor Oil Range Organics
NMWQCC = New Mexico Water Quality Control Commission GRO = Gasoline Range Organics

Appendices

Appendix A

Soil Boring Logs and Well Completion Diagrams

PO Box 2304 Roswell, NM 88202-2304

FIELD BOREHOLE LOG

BOREHOLE NO.: DBS-1 TOTAL DEPTH: 78.50'

PROJECT INFORMATION	DRILLING INFORMATION

ROJECT: ES08.0118.01.00004 DRILLING CO.: Peterson Drilling Co.

SITE LOCATION: Lea Co., NM DRILLER: Charles Johnson

DB NO.: Salty Dog RIG TYPE: Ingersoll-Rand TH-60

LOGGED BY: CM Barnhill, PG METHOD OF DRILLING: Air Rotary 6 1/4"

ROJECT MANAGER: Mike McVey, PG SAMPLING METHODS: Split Spoon

DATES DRILLED: 03/25/09 HAMMER WT./DROP N/A

PTH SOIL SYMBOLS USCS SOIL DESCRIPTION SAMP. # Rec. PPM BORING COMPLETION DESCRIPTION

				0.0000000000000000000000000000000000000		
-5	GM	GM: Hard Packed Caliche Pad Area of SW Disposal Plant. No Sample.	0'-2'	N/A		Bentonite 53.0' - 5' BG
15-	sw	SW: Tan 5 YR 8/3 Fine Grained Sand, well sorted, minor caliche	10'-12'	0.3		Surface
			20'-22'	0.5		
5 -	SS	SANDSTONE: Hard				
-30-	sw	SW: Tan brown,7.5YR 8/3 medium to fine grained, well sorted, sugarsand. No Odor or staining.	30'-32'	0.3		Bentonite
-40 -	SS	SANDSTONE: Hard cemented tan brown SS.	40'-42'	N/A		
	SW	SW: Tan brown,2.5YR 8/3 to 7 YR 5/4, medium to fine grained, well sorted, sugar	50'-52'	0.5		
-55	នឃ	sand, No Odor or staining, Capillary Fringe 60'-62' BGS.Measured Water at 62.38' from TOC	60'-62'	1.0		8 /16 Sand 78.50' - 53.0' Screen 0.02
-65-	SW		2			Slot 76'-56'
0-			70'-72'	2.0		2' foot. Sump @ 76'-78'
-80	SW		80'-82'	2.0		T.D. 78.50', drilled to 83'

PO Box 2304 Roswell, NM 88202-2304

mbenviro@dfn.com 505\ 622-2012 Fax (505\ 625-0538

FIELD BOREHOLE LOG

BOREHOLE NO.: DBS-2 TOTAL DEPTH: 79.80*

505) 62	?2-2012 Fa.	x (505)	625-053 <u>8</u>					
	PROJECT	INFOR	MATION			DRILLIN	NG INFORMA	TION
ROJEC	T;	ESC	8.0118.01.00004	DRIL	LING C	Ю.:	Peterso	n Drilling Co.
SITE LO	CATION:	Lea	Co., NM	DRIL	LER:		Charles	Johnson
рв но.		Salt	y Dog	RIG	TYPE:		Ingerso	ll-Rand TH-60
OGGED	BY:	CM	I Barnhill, PG	MET	HOD O	F DRILL	_ING: Air Rot	ary 6 1/4"
ROJEC	T MANAGE	R: Mil	ce McVey, PG	SAM	PLING	METHO	DS: Split Sp	oon
DATES D	ORILLED:	03/2	24/09	HAM	MER V	/T./DRC	P N/A	
OTES:	Split Spoor	n Pushed	by TH-60 Drilling Rig.				during drilling n completed well	Page 1 of 1
ЕРТН	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Rec. / feet.	PPM TPH	BORING COMPLETION	WELL DESCRIPTION
		GM	GM: Brown Silt, Sand,Calichemixture.Hard Caprock	0'-2'	0.3			Cement Bentonite 52.8' - 5' BG
15-		รพ	SW: Tan 5 YR 8.3 Fine Grained Sand, well sorted, minor caliche	20'-22'	0.2			Surface
30		55 55	SANDSTONE: Hard cemented tan brown SS. Fn.to med. gr., well sorted. 5YR 8/4	30'-32'	N/A			Bentonite
15		sw ss sw	SW: Tan brown, 7.5YR 6/3 SANDSTONE: Hard SW: Tan brown, 7.5 YR 6/3, medium to fine	40'-42' 50'-52'	Grab 0.5			
55		SW	grained, well sorted, sugar sand. No Odor or staining. Capillary Fringe 60'-62' BGS.Measured Water at 65.45' from TOC	60'-62'	2.0			8 /16 Sand 79.80' - 52.8' Screen 0.02 Slot 78'-58'
		SW		70'-72'	2.0			2' foot. Sump @ 78'-80'
		នឃ		80'-82'	2.0			T.D. 79.80', drilled to 83'

PO Box 2304 Roswell, NM 88202-2304

mbenviro@dfn.com

SITE LOCATION:

DATES DRILLED:

SOIL

B NO.:

LOGGED BY:

505) 622-2012 Fax (505) 625-0538

FIELD BOREHOLE LOG

BOREHOLE NO.: DBS-5 TOTAL DEPTH: 78.901

PROJECT INFORMATION	DRILLING INFORMATION

DRILLING CO.:

ROJECT: ES08.0118.01.00004

Peterson Drilling Co.

Lea Co., NM DRILLER: Charles Johnson

Salty Dog RIG TYPE: Ingersoll-Rand TH-60

CM Barnhill, PG METHOD OF DRILLING: Air Rotary 6 1/4"

OJECT MANAGER: Mike McVey, PG SAMPLING METHODS:

Split Spoon

BORING

03/23/09

HAMMER WT/DROP N/A

Page 1 of 1

TES:

Split Spoon Pushed by TH-60 Drilling Rig.

Water level during drilling Water level in completed well

PPM

WELL

EPTH	SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Rec. / feet.	TPH	COMPLETION	DESCRIPTION
-5		GM	GM: Tan White Caliche mixed with brown silt. Caprock material. @ 6' Sand 7.5YR 8/2	0'-2'	0.4			Bentonite 53.0' - 5' BG
=15-		sw	SW: Tan 5 YR 8/3 Fine Grained Sand, well sorted, minor caliche	10'-12'	0.5			Surface
5-		SS	SANDSTONE: Hard cemented tan brown SS. Fn. to med. gr., well sorted. 5YR 8/4	20'-22'	0.3			
₿5-		នន		30'-32'	N/A			Bentonite
40 -		SW	SW. Tan brown, 2.5YR 8/3 to 7 YR 5/4, medium to fine grained, well sorted, sugar	40'-42'	0.4			
-55 -		รพ รพ	sand. No Odor or staining. Capillary Fringe 60'-62' BGS.Measured Water at 62.99' from TOC	50'-52'	0.4			8 /16 Sand
50 - -65 -		SW		60'-62'	0.5			78.90' - 53.0' Screen 0.02 Slot 76.9'- 56.9'
0 -				70'-72'	1.0			2' foot. Sump @ 76.9'-78'.9
-80 -		SW		80'-82'	2.0			T.D. 78.90', drilled to 83'

PO Box 2304 Roswell, NM 88202-2304

mbenviro@dfn.com

705) 622-2012 Fax (505) 625-0538

FIELD BOREHOLE LOG

BOREHOLE NO.: DBS-3

TOTAL DEPTH: **78.72***

003/0	122-2012 F3	X (303)	023-0330						
PROJECT INFORMATION						DRILLIN	NG INF	ORMAT	ION
ROJE	CT:	ESC	08.0118.01.00004	DRI	LLING C	O.:	F	eterson	Drilling Co.
TE LO	DCATION:	Lea	ı Co., NM	DRI	LLER:		(Charles J	Johnson
)B NO).:	Salt	y Dog	RIG	TYPE:		I	ngersoll	-Rand TH-60
OGGE	ED BY:	CIV	I Barnhill, PG	MET	HOD O	F DRILL	JING: J	Air Rotai	у б 1/4"
ROJE	CT MANAGE	R: Mil	ke McVey, PG	SAN	IPLING I	METHO	DS: §	Split Spoo	on
ATES	DRILLED:	03/2	24/09	HAN	MER V	T./DRC	i P	N/A	
PTES	Split Spoo	n Pushed	by TH-60 Drilling Rig.			ter level d ter level in			Page 1 of 1
EPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Rec. / feet.	PPM TPH		RING PLETION	WELL DESCRIPTION
_									
		GH	GM: Brown Silt, 7.5YR 4/4,Sand,Caliche mixture. Hard Caprock	0'-2'	0.3				Bentonite 53.0
.0 -1		su	SW: Tan 5 YR 8/3 Fine Grained Sand, well sorted, minor caliche	10'-12'	0.3				Surface
5		SS	SANDSTONE: Hard cemented tan brown SS. Fn. to med. gr., well sorted.	20'-22'	0.4				
	• • • • • •	SW	SW: Tan Fine grained sand, well sorted, 7.5YR 8/2	30'-32'	0.6			==	Bentonite
		SS	SANDSTONE: Hard Sandstone Layer				==		
5 -		sw	SW: Tan brown, 7.5 YR 6/3, medium to fine grained, well sorted, sugar	40'-42'	0.6				
		នឃ	sand. No Odor or staining. Capillary Fringe 60'-62' BGS.Measured Water at 60.67' from TOC	50'-52'	1.0.				
5		SV	00.87 110111100	60'-62'	2.0				8 /16 Sand 78.72' - 53.0'
5		sv		50 -62	2.0				Screen 0.02 Slot 76.72'-56
0				70'-72'	N/A				2' foot. Sump @ 76.72'-78.72
9		SW		80'-82'	2.0				T.D. 78.72', drilled to 83'

PO Box 2304 Roswell, NM 88202-2304

mbenviro@dfn.com , 105) 622-2012 Fax (505) 625-0538

FIELD BOREHOLE LOG

BOREHOLE NO.: DBS-4 TOTAL DEPTH: 80.15'

PROJECT INFORMATION	DRILLING INFORM	A

THE RESERVE TO SHARE THE PARTY OF THE PARTY	The same of the sa	NAME AND ADDRESS OF TAXABLE PARTY.		THE RESERVE OF THE PARTY OF THE	THE RESERVE THE PARTY OF THE PA			
	PROJECT	TINFOR	MATION			DRILLIN	IG INFORMAT	NOI
ROJE	CT:	ESC	8.0118.01.00004	DRII	LING C	O.:	Peterson	Drilling Co.
SITELO	DCATION:	Lea	Co., NM	DRII	LER:		Charles 3	Johnson
B NO).:	Salty	Dog	RIG	TYPE:		Ingersoll	-Rand TH-60
LOGGE	D BY:	CM	Barnhill, PG	MET	HOD O	F DRILL	JNG: Air Rotai	гу б 1/4"
ROJE	CT MANAGE	R: Mil	ce McVey, PG	SAM	IPLING I	METHO	DS: Split Spo	on
DATES	DRILLED:	03/2	5/09	HAM	IMER W	T./DRC	P N/A	
PTES	: Split Spoor	n Pushed	by TH-60 Drilling Rig.				uring drilling n completed well	Page 1 of 1
P EPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Rec. / feet.	PPM TPH	BORING COMPLETION	WELL DESCRIPTION

	GM: Brown Silt, 7.5YR 4/4,Sand,Caliche mixture. Hard Caprock	0'-2'	0.6		Cement Bentonite 52 - 5' BG
sw	SW: Tan 5 YR 8/3 Fine Grained Sand, well sorted, minor caliche	10'-12'	N/A	111	Surface
នន	SANDSTONE: Hard cemented tan brown SS. Fn.to med.gr.,well sorted. 5YR 8/4	20'-22'	N/A		
 SS		30'-32'	N/A		Bentonite
sv	SW: Tan brown, 7.5 YR 6/3, to 8/2 medium to fine grained, well sorted, sugar sand. No Odor or staining.	40'-42'	0.6		
sw	Capillary Fringe 60'-62' BGS.Measured Water at 66.27' from TOC	50'-52'	1.0.	1 3 3 1 1 1	
SW		60'-62'	1.0		8 /16 Sand 80.15' - 52. Screen 0.02
SW					Slot 76'-56'
SW		70'-72' 80'-82'	2.0		2' foot. Sur @ 78'-80' T.D. 80.15', drilled to 8

PO Box 2304 Roswell, NM 88202-2304

mbenviro@dfn.com

FIELD BOREHOLE LOG

BOREHOLE NO.: DBS-6 TOTAL DEPTH: 78.701

505) 6	622-2012 Fa	x (505)	<u>625-0538</u>					
	PROJEC	TINFOR	ROTAM			DRILLIN	NG INFORMA	ATION
ROJE	ECT:	ESC	08.0118.01.00004	DRII	LING C	0.:	Peterso	on Drilling Co.
SITE LO	OCATION:	Lea	a Co., NM	DRII	LER:		Charles	Johnson
DB NO	D.:	Salt	y Dog	RIG	TYPE:		Ingerso	oll-Rand TH-60
OGGE	ED BY:	$\mathbb{C}\mathbb{N}$	I Barnhill, PG	MET	HOD C	F DRILL	_ING: Air Rot	тагу б 1/4 ^{**}
ROJE	CT MANAGE	R: Mil	ke McVey, PG	SAM	IPLING	METHO	DS: Split Sp	oon
ATES	DRILLED:	03/2	26/09	HAM	IMER V	/T./DRC	P N/A	
OTES	Split Spoo	n Pushed	by TH-60 Drilling Rig.				during drilling n completed wel	Page 1 of 1
EPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Rec. / feet.	PPM TPH	BORING COMPLETION	WELL DESCRIPTION
_						1		
5		GM	GM: Tan White Caliche mixed with brown silt. Caprock material. @ 6' Sand 7.5YR 8/2	0'-2'	0.3			Bentonite 51.9
15-		sw	SW: Tan 7.5 YR 8/2 Fine Grained Sand, well sorted,	10'-12'	0.5		== == == == == == == == == == == == ==	Surface
20-		55 55	SANDSTONE: Hard cemented tan brown SS. Fn. to med. gr., well sorted. 7.5YR 8/2	20'-22'	Grab			
30-		SS		30'-32'	1.0			Pontonito
40 -		sw	SW: Tan brown, 7.5YR 8/4 to 7 YR 5/4, medium to fine grained, well sorted, sugar sand. No Odor or staining.	40'-42'	1.0			
20 -		su	Capillary Fringe 62'-64' BGS.Measured Water at 62.75' from TOC	50'-52'	0.5		60000 00000	
55 -		sv		60'-62'	0.5			8 /16 Sand 78.70' - 51.9' Screen 0.02
55		su			3.3			Slot 76.70'-
70 - 75 -		OTT.		70'-72'	2.0			2' foot. Sump @ 76.7'-78'.7
		នឃ		80'-82'	2.0			T.D. 78.70', drilled to 83'

PO Box 2304 Roswell, NM 88202-2304

mbenviro@dfn.com 505) 622-2012 Fax (505) 625-0538

FIELD BOREHOLE LOG

BOREHOLE NO.: **DBS-7** TOTAL DEPTH: **77.10'**

	PROJEC	TINFOR	RMATION	1127		DRILLIN	IG INF	ORMAT	ION
ROJE	CT:	ESC	08.0118.01.00004	DRII	LING C	O.:]	Peterson	Drilling Co.
ITE LO	CATION:	Lea	a Co., NM	DRII	LER:			Charles J	Johnson
рв ис).:	Salt	y Dog	RIG	TYPE:]	Ingersoll	-Rand TH-60
OGGE	D BY:	CI_{M}	I Barnhill, PG	MET	HOD O	F DRILL	.ING: 2	Air Rotai	у б 1/4"
ROJE	CT MANAGE	R: Mil	ke McVey, PG	SAM	IPLING I	METHO	DS: f	Split Spoo	on
ATES	DRILLED:	03/2	26/09	HAM	MER V	/T/DRO	P 1	N/A	
OTES:	Split Spoo	n Pushed	by TH-60 Drilling Rig.			ter level di ter level in	_		Page 1 of 1
EPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Rec. / feet.	PPM TPH		RING PLETION	WELL DESCRIPTION
					1				
5 -		GM	GM: Brown Silt, 5YR 5/6, Sand,Calichemixture.Hard	0'-2'	0.3				Cement
3			Caprock						Bentonite 52.0
.0-			SW: Tan 5 YR 8/3 Fine	10'-12'	0.5				Surface
.5 -		SW	Grained Sand, well sorted, minor caliche				==		
:0-				20'-22'	1.0				
15-							==		
30-									
3		SS	SANDSTONE: Hard	30'-32'	Grab			==	Bentonite
5-		CIT	SW: Tan brown, 5YR 6/6 to 7.5 YR 8/3, medium to					==	
:0 =		SW	fine grained, well sorted,	40'-42'	1.0				
.5			sugar sand. No Odor or staining. Capillary Fringe				==		
n d		SU	60'-62' BGS.Measured Water at 61.74' from TOC						
				50'-52'	1.0.		KOGGO	10000	
5-		SW							8 /16 Sand
				60'-62'	2.0				77.10' - 52.0' Screen 0.02
5 -		SW							Slot 75.10'- 55.10'
				70'-72'	2.0	- 3			2' foot. Sump @ 75.10'-77.10'
5 -		SW		80'-82'	2.0				T.D. 77.10',

PO Box 2304 Roswell, NM 88202-2304

mbenviro@dfn.com 505) 622-2012 Fax (505) 625-0538

FIELD BOREHOLE LOG

BOREHOLE NO.: DBS-8 TOTAL DEPTH: 77.20*

4	PROJEC*	TINFOR	MATION			DRILLIN	IG INI	FORMAT	ION
ROJE	CT:	ESC	08.0118.01.00004	DRIL	LING C	O.:		Peterson	Drilling Co.
TE LO	DCATION:	Lea	ı Co., NM	DRIL	LER:			Charles J	Johnson
B NC	D.:	Salt	y Dog	RIG	TYPE:			Ingersoll	-Rand TH-60
OGGE	D BY:	CIV.	I Barnhill, PG	MET	HOD O	F DRILL	JING:	Air Rotar	y 6 1/4"
ROJE	CT MANAGE	R: Mil	ke McVey, PG	SAM	PLING I	METHO	DS:	Split Spoo	on
ATES	DRILLED:	03/2	26/09	HAM	MER W	T/DRO	P	N/A	
OTES	Split Spoo	n Pushed	by TH-60 Drilling Rig.			ter level d ter level ir	=	frilling leted well	Page 1 of 1
PTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Rec. / feet.	PPM TPH		ORING 1PLETION	WELL DESCRIPTION
_			1				Fee		24'F P
5 1		GM	GM: Brown Silt, 5YR 5/3 to 8/2, Sand,Caliche mixture. Hard Caprock	0'-2'	0.3				Cement Bentonite 52.5
		GM		10'-12'	0.5		 	==	- 5' BG Surface
			SANDSTONE: Hard						
5		នន	cemented tan brown SS. Fn.to med. gr., well sorted. 7.5YR 8/2	20'-22'	Grab			==	
		SW	SW: Tan brown, 5YR 6/6		lia -				
5-		su	to 7.5 YR 7/3 - 8/3, medium to fine grained, wellsorted, sugarsand.No	30'-32'	1.0				Bentonite
0 -		ລພ	Odor or staining, Capillary Fringe 60'-62'					==	
=			BGS.Measured Water at 61.20' from TOC	40'-42'	1.0			==	
5-		CII		1					
0 -		SW		50'-52'	2.0				
5-		CII							0 /16 03
E 0		នម							8 /16 Sand 77.20' - 52.5'
				60'-62'	2.0				Screen 0.02 Slot 75.20'-
5-		รพ							55.20'
0 -				70'-72'	2.0				2' foot. Sump @ 75.20'-77.20'
5-1		SW		80'-82'	2.0				T.D. 77.20', drilled to 83'

PO Box 2304 Roswell, NM 88202-2304

mbenviro@dfn.com

FIELD BOREHOLE LOG

T.D. 70.85', drilled to 83'

BOREHOLE NO.: DBS-9 TOTAL DEPTH: 70.85°

505) 6	22-2012 Fa	x (505)	625-053 <u>8</u>						
1	PROJEC	TINFOR	MATION			DRILLIN	IG INFORMAT	TION	
ROJE	CT:	ESC	08.0118.01.00004	DRII	LING C	O.:	Peterson	n Drilling Co.	
ITE LO	DCATION:	Lea	Co., NM	DRII	LER:		Charles	les Johnson	
рв ис).:	Salt	y Dog	RIG	TYPE:		Ingersol	l-Rand TH-60	
OGGE	D BY:	CM	I Barnhill, PG	MET	HOD O	ry 6 1/4"			
ROJE	CT MANAGE	R: Mil	ce McVey, PG	SAM	IPLING I	on			
DATES	DRILLED:	03/3	30/09	HAM	IMER V	/T./DRC	P N/A		
PTES	: Split Spoor	n Pushed	by TH-60 Drilling Rig.				luring drilling n completed well	Page 1 of 1	
EPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Rec. / feet.	PPM TPH	BORING COMPLETION	WELL DESCRIPTION	
5.5		SM	SM: Gray Black - Brown Silty Sand, clay , silt	0'-2'	0.3			Cement	
15		SW SS	SW: Tan brown,7.5YR 6/4 medium to fine grained, wellsorted, sugarsand. No Odor or staining. SANDSTONE: Hard	10'-12'	0.5			Bentonite 42.5 - 5' BG Surface	
5		sw	SW: Tan brown,10YR8/3, medium to fine grained, wellsorted,sugarsand.No Odor or staining. @52' BGS softer diflling.	20'-22'	0.5				
5-1		sw	Capillary fringe @ 50' BGS? @ 53' BGS saturated to total drillled depth of 83'	30'-32'	1.0			Bentonite	
5-		33	SANDSTONE: Hard	40'-42'	1.0				
55		sw sw	SW. Tan brown, 7.5YR 6/4 medium to fine grained, well sorted, sugarsand. No Odor or staining. Water at 53.93' from TOC	50'-52'	2.0			8 /16 Sand 70.85'-42.5'	
65 -		sw		60'-62'	1.0			Screen 0.02 Slot 68'-48'	
				70'-72'	2.0			2' foot. Sump @ 68'-70'	

80'-82' 2.0

PO Box 2304 Roswell, NM 88202-2304

:mbenviro@dfn.com 505) 622-2012 Fax (505) 625-0538

FIELD BOREHOLE LOG

BOREHOLE NO .: NW-1

TOTAL DEPTH: 74.95',121.31',171.45'

000) 6	22-2012 Fa	X (303)	6Z3-0338						
	PROJEC	TINFOR	RMATION] [DRILLIN	IG INF	FORMAT	ON
ROJE	CT:	ESC	08.0118.01.00004	DRII	LING C	:O.:		Peterson	Drilling Co.
SITE LO	DCATION:	Lea	a Co., NM	DRII	LER:			Charles J	ohnson
DB NO).:	Sali	y Dog	RIG	TYPE:			Ingersoll-	Rand TH-60
LOGGE	ED BY:	CIV	I Barnhill, PG	MET	HOD O	F DRILL	JNG:	Air Rotar	y 6 1/4"
ROJE	CT MANAGE		ke McVey, PG	SAM	PLING I	METHO	DS:	Split Spoo	on
	DRILLED:		31/09	HAM	MER W	/T./DRC		N/A	
OTES			S (S) (S) (S) (S) (S) (S) (S) (S) (S) (S			ter level d	urina d	rilling	
PAILS	Split Spoo			ter level ir	-	_	Page 1 of 1		
EPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Rec. / feet.	PPM TPH		ORING PLETION	WELL DESCRIPTION
5 -10 15 20 -30 3 5 40 40 40 40 40 40 40 40 40 40 40 40 40		SW SS SW SW SW SW SW SW	GM: Brown Silt, 5YR 5/3 to 8/2, Sand, Caliche mixture. SW: Tan brown, 5YR 6/6 to 7.5 YR 7/3 - 8/3, SANDSTONE: Hard cemented tan brown SS. Fn. to med. gr., well sorted. SW: Tan brown, 5YR 6/6-7/4 to 7.5 YR 7/3 - 8/3, medium to fine grained, well sorted, sugarsand. No Odor or staining. Capillary Fringe 60'-62' BGS.Measured Water at 62.35' from TOC NW-1 Shallow; 62.25' NW-1 Middle; 62.04' NW-1 Deep. Three Nested wells placed in one large 9" inch Soil boring. All wells are cased to surface, but separated and isolated by different bentonite seals, 8/16 sand filter packs, and 20 foot screened intervals at different depths. Soil Boring was split spoon sampled from ground surface at 10 foot intervals to 60'-62' BGS. After 60', all sample descriptions were from cuttings from mud rotary drilling.	0'-2' 10'-12' 20'-22' 30'-32' 40'-42' 50'-52' 60'-62'	N/A 1.0 1.0 Grab 1.0 2.0				NW-1 Shallow: DTW = 62.35' TOC, T.D. = 74.95' Cement: 0'-5' Bentonite Seal 5'-50', 8/16 Sand Pack: 50'-74.95' 0.020 Slot Screen: 52.95'- 72.95' Sump and Screen Cap: 72.95'-74.95' NW-1 Middle DTW = 62.25' TOC T.D. = 121.31' Bentonite Seal: 80'-95' 8/16 Sand pack 95' - 121.31' 0.020 Slot Screen: 99.31' - 119.31' Sump and Screen Cap 119.31' Sump and Screen Cap 119.31' Sump and Screen: 99.31' - 121.31' NW-1 Deep DTW = 62.04' TOC T.D. = 171.45' Bentonite Seal: 122' - 145' 8/16 Sand pack 145' - 171.45' 0.020 Slot
-165 70 75 -180		Red Bed /	CL: Red Bed formation: Maroon siltstone /						Screen: 149.45' - 169.45' Sump and Screen

PO Box 2304 Roswell, NM 88202-2304

SC

CL

CL

CL: Red Bed formation: @

150' BGS Maroon siltstone

/ mudstone 2.5 YR 3/2

150

155 -160

165

1.70

FIELD BOREHOLE LOG

BOREHOLE NO.: NW-2

3.87

Bentonite Seal:

8/16 Sand pack

125' - 148.87'

Screen: 126.87'

Sump and Screen

115' - 125'

0.020 Slot

- 146.87

:mbenviro@dfn. 505) 622-2012 Fs		625-0538		T	OTAL D	DEPTH: 75.	35',115.72',14
PROJEC					DRILLIN	NG INFORMAT	TION
ROJECT:	ESC	08.0118.01.00004	DRIL	LING C	00.:	Peterson	Drilling Co.
SITE LOCATION:	Lea	Co., NM	DRIL	LER:	Johnson		
DB NO.:	Salt	y Dog	RIG	TYPE:		Ingersol	l-Rand TH-60
LOGGED BY:	CIV	I Barnhill, PG	MET	HOD C	F DRILL	JNG: Air Rota	ry б 1/4''
ROJECT MANAGE	R: Mil	ke McVey, PG	SAM	PLING	METHO	DS: Split Spo	on
DATES DRILLED:	04/0	01/09	HAM	MER V	/T./DRC	P N/A	
OTES: Split Spoo	n Pushed	by TH-60 Drilling Rig.				during drilling n completed well	Page 1 of 1
EPTH SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMP. #	Rec. / feet.	PPM TPH	BORING COMPLETION	WELL DESCRIPTION
5 10 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	SW SW SW SW SC	GM: Brown Silt, 5YR 5/3 to 8/2, Sand, Caliche mixture. SW: Tan brown, 5YR 6/6 to 7.5 YR 7/3 - 8/3, SANDSTONE: Hard cemented tan brown SS. SW: Tan brown, 5YR 6/6-7/4 to 7.5 YR 7/3 - 8/3, medium to fine grained, well sorted, sugarsand. No Odor or staining. Capillary Fringe 60'-62' BGS.Measured Water at 63.08' from TOC NW-2 Shallow; 63.27' NW-2 Middle; 66.41' NW-2 Deep. Three Nested wells placed in one large 9" inch Soil boring. All wells are cased to surface, but separated and isolated by different bentonite seals, 8/16 sand filter packs, and 20 foot screened intervals at different depths. Soil SC: @ 115' BGS Clayey Sand, fine grained sand / clay mixture 2.5 YR 5/8	0'-2' 10'-12' 20'-22' 30'-32' 40'-42' 50'-52'	0.3 1.0 Grab 0.5 1.0 2.0			NW-2 Shallow: DTW = 63.08' TOC, T.D. = 75.35' Cement: 0'-5' Bentonite Seal 5'-50', 8/16 Sand Pack: 50'-75.35' 0.020 Slot Screen: 53.35'- 73.35' Sump and Screen Cap: 73.35'-75.35' NM-2 Middle DTW = 63.27' TOC T.D. = 115.72' Bentonite Seal: 80'-90' 8/16 Sand pack 90' - 115.72' 0.020 Slot Screen: 93.72' - 113.72' Sump and Screen Cap 113.72' Sump and Screen Cap 113.72' Sump and Screen Cap 113.72' - 115.72' NM-2 Deep DTW = 66.41' TOC T.D. = 148.87'

Appendix B
Laboratory Reports

Soil



COVER LETTER

Friday, April 17, 2009

Mike McVey

Daniel B. Stephens & Assoc. 6020 Academy NE Suite 100

Albuquerque, NM 87109

TEL: (505) 822-9400 FAX (505) 822-8877

RE: Salty Dog

Dear Mike McVey:

Order No.: 0903463

Hall Environmental Analysis Laboratory, Inc. received 67 sample(s) on 3/30/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

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

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Date: 17-Apr-09

CLIENT: Project:	Daniel B. Stephens & Salty Dog	Assoc.			I	ab Order	9903463
Lab ID:	0903463-01			C			9 8:45:00 AM
Client Sample ID	: DBS-1 10'-12'				Matrix	: SOIL	
Analyses	<u>.</u>	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	3600	15		mg/Kg	50	Analyst: RAGS 4/13/2009 7:09:37 PM
Lab ID:	0903463-02		· · · · · · · · · · · · · · · · · · ·	C	Collection Date	: 3/25/200	9 9:00:00 AM
Client Sample ID	: DBS-1 20'-22'				Matrix	: SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	240	3.0		mg/Kg	10	Analyst: RAGS 4/13/2009 7:27:02 PM
Lab ID: Client Sample ID:	0903463-03 : DBS-1 30'-32'			C		: 3/25/200 : SOIL	9 9:15:00 AM
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300 Chloride	D.O: ANIONS	1400	6.0		mg/Kg	20	Analyst: RAGS 4/13/2009 7:44:27 PM
Lab ID:	0903463-04	' ' ' '		C	ollection Date	: 3/25/200	9 9:50:00 AM
Client Sample ID:	DBS-1 50'-52'				Matrix	: SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	380	3.0	ı	mg/Kg	10	Analyst: RAGS 4/13/2009 8:01:52 PM
Lab ID:	0903463-05			C	ollection Date	: 3/25/200	9 10:10:00 AM
Client Sample ID:	DBS-1 60'-62'				Matrix	: SOIL	
Analyses		Result	PQL	Qual 1	Units	DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	160	3.0	r	mg/Kg	10	Analyst: RAGS 4/13/2009 8:19:16 PM
Lab ID:	0903463-06		·	Co	ollection Date	: 3/25/200	9 10:30:00 AM
Client Sample ID:	DBS-1 70'-72'				Matrix	SOIL	
Analyses		Result	PQL	Qual (Units	DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	230	3.0	n	ng/Kg	10	Analyst: RAGS 4/13/2009 8:36:41 PM
Qualifiers: *	Value exceeds Maximum Co	ontaminant Level		В	Analyte detecte	ed in the associ	ciated Method Blank

E Estimated value

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 12

Date: 17-Apr-09

CLIENT: Project:	Daniel B. Stephens & Salty Dog	Assoc.			Lat	Order	: 0903463
Lab ID:	0903463-07		· · · · · · · · · · · · · · · · · · ·	Collectio	n Date:	3/25/20	09 12:05:00 PM
Client Sample ID	: DBS-1 80'-82'				Matrix:	SOIL	
Analyses		Result	PQL	Qual Units		DF	Date Analyzed
EPA METHOD 30 Chloride	0.0: ANIONS	18	0.30	mg/Kg		1	Analyst: RAGS 4/13/2009 10:03:42 PM
Lab ID:	0903463-08		<u> </u>	Collection	n Date:	3/24/20	09 4:05:00 PM
Client Sample ID	: DBS-2 0'-2'			ľ	Matrix:	SOIL	
Analyses		Result	PQL	Qual Units		DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	2000	6.0	mg/Kg		20	Analyst: RAGS 4/13/2009 10:21:07 PM
Lab ID:	0903463-09			Collection	n Date:	3/24/20	09 4:15:00 PM
Client Sample ID:	: DBS-2 10'-12'			ľ	Matrix:	SOIL	
Analyses		Result	PQL	Qual Units		DF	Date Analyzed
EPA METHOD 300 Chloride).0: ANIONS	940	3.0	mg/Kg		10	Analyst: RAGS 4/13/2009 10:38:32 PM
Lab ID:	0903463-10			Collection	n Date: 3	3/24/20	09 4:25:00 PM
Client Sample ID:	DBS-2 20'-22'			N	Matrix: S	SOIL	
Analyses		Result	PQL	Qual Units		DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	39	0.30	mg/Kg		1	Analyst: RAGS 4/13/2009 10:55:56 PM
Lab ID:	0903463-11					•	09 4:45:00 PM
Client Sample ID:	DBS-2 40'-42'				Aatrix: S	SOIL	
Analyses		Result	PQL	Qual Units		DF 	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	42	0.30	mg/Kg		1	Analyst: RAGS 4/13/2009 11:13:21 PM
Lab ID:	0903463-12			Collection	Date: 3	/24/200	99 5:10:00 PM
Client Sample ID:	DBS-2 50'-52'			M	Iatrix: S	OIL	
Analyses	•	Result	PQL	Qual Units		DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	10	0.30	mg/Kg		1	Analyst: RAGS 4/13/2009 11:30:45 PM

- Е Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 17-Apr-09

	Daniel B. Stephens & Salty Dog	& Assoc.			La	ab Order	: 0903463
Lab ID: Client Sample ID:	0903463-13 DBS-2 60'-62'			!	Collection Date: Matrix:		09 5:20:00 PM
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	7.9	0.30		mg/Kg	1	Analyst: RAGS 4/13/2009 11:48:10 PM
Lab ID:	0903463-14				Collection Date:	3/24/200	09 5:45:00 PM
Client Sample ID:	DBS-2 70'-72'				Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	7.7	3.0		mg/Kg	10	Analyst: RAGS 4/10/2009 2:56:20 AM
Lab ID: Client Sample ID:	0903463-15 DBS-2 80'-82'			7	Collection Date: Matrix:		09 6:10:00 PM
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	5.8	3.0		mg/Kg	10	Analyst: RAGS 4/10/2009 3:13:45 AM
Lab ID:	0903463-16			(Collection Date:	3/24/200	09 12:45:00 PM
Client Sample ID:	DBS-3 0'-2'				Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0	D: ANIONS	170	3.0		mg/Kg	10	Analyst: RAGS 4/10/2009 3:31:10 AM
Lab ID: Client Sample ID:	0903463-17 DBS-3 10'-12'				Collection Date: Matrix:		9 1:00:00 PM
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0 Chloride	: ANIONS	58	3.0		mg/Kg	10	Analyst: RAGS 4/10/2009 3:48:34 AM
Lab ID:	0903463-18	-			Collection Date:	3/24/200	9 1:10:00 PM
Client Sample ID:	DBS-3 20'-22'				Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0 Chloride	: ANIONS	41	3.0		mg/Kg	10	Analyst: RAGS 4/10/2009 4:05:59 AM
-	alue exceeds Maximum (Contaminant Level			Analyte detected		ciated Method Blank

- Estimated value
- Analyte detected below quantitation limits J
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

TT 11 17 '	4 1 A 1 .	Y 1 / Y	
Hall Environmen	itai Anaivsis	s Laboratory, II	nc.

Date: 17-Apr-09

CLIENT: Project:	Daniel B. Stephens & Salty Dog	Assoc.			Lab Orde	er: 0903463
Lab ID: Client Sample ID	0903463-19 : DBS-3 30'-32'				ite: 3/24/2	009 1:25:00 PM
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300 Chloride	D.O: ANIONS	44	0.30	mg/Kg	1	Analyst: RAGS 4/10/2009 4:23:24 AM
Lab ID:	0903463-20			Collection Da	ite: 3/24/20	009 1:45:00 PM
Client Sample ID:	: DBS-3 40'-42'			Matr	ix: SOIL	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	35	0.30	mg/Kg	1	Analyst: RAGS 4/14/2009 10:26:44 AM
Lab ID: Client Sample ID:	0903463-21 DBS-3 50'-52'				ite: 3/24/20	009 2:00:00 PM
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	3.4	0.30	mg/Kg	1	Analyst: RAGS 4/14/2009 11:18:58 AM
Lab ID:	0903463-22			Collection Da	te: 3/24/20	009 2:15:00 PM
Client Sample ID:	DBS-3 60'-62'			Matr	ix: SOIL	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	8.5	0.30	mg/Kg	1	Analyst: RAGS 4/14/2009 11:36:23 AM
Lab ID:	0903463-23			Collection Da	te: 3/24/20	009 3:00:00 PM
Client Sample ID:	DBS-3 80'-82'			Matr	ix: SOIL	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	6.6	0.30	mg/Kg	1	Analyst: RAGS 4/14/2009 11:53:47 AM
Lab ID:	0903463-24			Collection Date	te: 3/25/20	009 1:45:00 PM
Client Sample ID:	DBS-4 0'-2'			Matri	ix: SOIL	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	18	0.30	mg/Kg	1	Analyst: RAGS 4/14/2009 1:03:25 PM
•	Value exceeds Maximum C	ontaminant Level				sociated Method Blank ion or analysis exceeded

ND Not Detected at the Reporting Limit Spike recovery outside accepted recovery limits

Analyte detected below quantitation limits

J

MCL Maximum Contaminant Level

RL Reporting Limit

Page 4 of 12

Date: 17-Apr-09

	Daniel B. Stephens & alty Dog	Assoc.				La	b Order	: 0903463
Lab ID:	0903463-25				Collect			09 1:50:00 PM
Client Sample ID:	DBS-4 10'-12'					Matrix:		
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	54	0.30		mg/Kg		1	Analyst: RAGS 4/14/2009 1:20:49 PM
Lab ID:	0903463-26			,	Collect	ion Date:	3/25/200	09 2:00:00 PM
Client Sample ID:	DBS-4 20'-22'					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300. Chloride	D: ANIONS	39	0.30		mg/Kg		1	Analyst: RAGS 4/14/2009 1:38:14 PM
Lab ID:	0903463-27				Collect	on Date:	3/25/200	09 2:10:00 PM
Client Sample ID:	DBS-4 30'-32'					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300.0 Chloride	: ANIONS	19	0.30		mg/Kg		1	Analyst: RAGS 4/14/2009 1:55:38 PM
Lab ID:	0903463-28				Collecti	on Date:	3/25/200	09 2:20:00 PM
Client Sample ID:	DBS-4 40'-42'					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300.0 Chloride	: ANIONS	55	0.30		mg/Kg		1	Analyst: RAGS 4/14/2009 2:13:03 PM
Lab ID:	0903463-29				Collecti	on Date:	3/25/200	9 2:40:00 PM
Client Sample ID:	DBS-4 50'-52'					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300.0 Chloride	: ANIONS	75	0.30		mg/Kg		1	Analyst: RAGS 4/14/2009 2:30:27 PM
Lab ID:	0903463-30				Collecti	on Date:	3/25/200	9 3:00:00 PM
Client Sample ID:	DBS-4 60'-62'					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300.0 Chloride	: ANIONS	44	0.30		mg/Kg		1	Analyst: RAGS 4/14/2009 2:47:52 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 5 of 12

Date: 17-Apr-09

CLIENT: Project:	Daniel B. Stephens & Salty Dog	Assoc.		I	ab Orde	r: 0903463
Lab ID: Client Sample ID	0903463-31 DBS-4 70'-72'			Collection Date Matrix	: 3/25/20 : SOIL	009 3:20:00 PM
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 30 Chloride	0.0: ANIONS	9.7	0.30	mg/Kg	1	Analyst: RAGS 4/14/2009 3:05:16 PM
Lab ID:	0903463-32		·····	Collection Date	: 3/25/20	009 3:55:00 PM
Client Sample ID	: DBS-4 80'-82'			Matrix	: SOIL	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 30 Chloride	0.0: ANIONS	6.9	0.30	mg/Kg	1	Analyst: RAGS 4/14/2009 3:22:41 PM
Lab ID:	0903463-33			Collection Date	: 3/23/20	009 3:40:00 PM
Client Sample ID	: DBS-5 0'-2'			Matrix	: SOIL	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	19	0.30	mg/Kg	1	Analyst: RAGS 4/14/2009 4:32:19 PM
Lab ID:	0903463-34			Collection Date	: 3/23/20	009 4:00:00 PM
Client Sample ID	: DBS-5 10'-12'			Matrix	: SOIL	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300 Chloride	D.O: ANIONS	25	0.30	mg/Kg	1	Analyst: RAGS 4/14/2009 4:49:44 PM
Lab ID:	0903463-35	<u> </u>	"	Collection Date	3/23/20	009 4:20:00 PM
Client Sample ID:	DBS-5 20'-22'			Matrix	: SOIL	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	17	0.30	mg/Kg	1	Analyst: RAGS 4/14/2009 5:07:09 PM
Lab ID:	0903463-36			Collection Date:	3/23/20	09 5:20:00 PM
Client Sample ID:	DBS-5 40'-42'			Matrix	SOIL	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	8.5	0.30	mg/Kg	1	Analyst: RAGS 4/14/2009 5:24:34 PM
-	Value exceeds Maximum C Estimated value					ociated Method Blank ion or analysis exceeded

6

ND Not Detected at the Reporting Limit

Analyte detected below quantitation limits

Spike recovery outside accepted recovery limits

MCL Maximum Contaminant Level

RL Reporting Limit

Hall Environmental	Analysis	Laboratory	. Inc.
--------------------	----------	------------	--------

Date: 17-Apr-09

CLIENT: Project:	Daniel B. Stephens & Salty Dog	z Assoc.			La	ıb Orde	er: 0903463
Lab ID: Client Sample ID	0903463-37 : DBS-5 50'-52'			Collect	tion Date: Matrix:		2009 7:50:00 AM
Analyses		Result	PQL	Qual Units		DF	Date Analyzed
EPA METHOD 306 Chloride	0.0: ANIONS	3.1	0.30	mg/Kg		1	Analyst: RAGS 4/14/2009 5:41:58 PM
Lab ID:	0903463-38	<u> </u>		Collect	ion Date:	3/24/2	009 8:10:00 AM
Client Sample ID	: DBS-5 60'-62'				Matrix:	SOIL	
Analyses		Result	PQL	Qual Units		DF	Date Analyzed
EPA METHOD 300 Chloride	D.O: ANIONS	18	0.30	mg/Kg		1	Analyst: RAGS 4/14/2009 5:59:23 PM
Lab ID: Client Sample ID:	0903463-39 : DBS-5 70'-72'			Collect	ion Date: Matrix:		009 8:45:00 AM
Analyses		Result	PQL	Qual Units	•	DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	12	0.30	mg/Kg		1	- Analyst: RAGS 4/14/2009 6:51:36 PM
Lab ID: Client Sample ID:	0903463-40 DBS-5 80'-82'			Collect	ion Date: Matrix:		009 9:20:00 AM
Analyses		Result	PQL	Qual Units		DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	7.5	1.5	mg/Kg		5	Analyst: TAF 4/11/2009 5:04:35 PM
Lab ID:	0903463-41			Collect	ion Date:	3/26/2	009 8:20:00 AM
Client Sample ID:	DBS-6 0'-2'				Matrix:	SOIL	
Analyses		Result	PQL	Qual Units		DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	4.7	1.5	mg/Kg		5	Analyst: TAF 4/11/2009 6:14:13 PM
Lab ID: Client Sample ID:	0903463-42 DBS-6 10'-12'			Collecti	on Date: Matrix:		009 8:35:00 AM
Analyses	220 0 10 12	Result	PQL	Qual Units		DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	6.5	1.5	mg/Kg		5	Analyst: TAF 4/12/2009 2:21:39 AM
E I	Value exceeds Maximum C Estimated value Analyte detected below qua	ntitation limits	•	Н Ною		г ргерага	sociated Method Blank tion or analysis exceeded evel

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

RL Reporting Limit

Page 7 of 12

Date: 17-Apr-09

CLIENT: Project:	Daniel B. Stephens & Salty Dog	Assoc.				La	ıb Order	: 0903463
Lab ID: Client Sample ID	0903463-43 : DBS-6 20'-22'			-	Collect	ion Date: Matrix:		09 8:45:00 AM
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	D.O: ANIONS	6.3	1.5		mg/Kg		5	Analyst: TAF 4/12/2009 2:56:27 AM
Lab ID:	0903463-44				Collect	ion Date:	3/26/200	09 9:00:00 AM
Client Sample ID:	: DBS-6 30'-32'					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	31	1.5		mg/Kg		5	Analyst: TAF 4/12/2009 3:31:16 AM
Lab ID:	0903463-45			,	Collecti			99 9:15:00 AM
Client Sample ID:	DBS-6 40'-42'		•			Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	4.4	1.5		mg/Kg		5	Analyst: TAF 4/12/2009 4:06:04 AM
Lab ID:	0903463-46				Collecti	on Date:	3/26/200	9 9:40:00 AM
Client Sample ID:	DBS-6 50'-52'					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	3.8	1.5		mg/Kg		5	Analyst: TAF 4/12/2009 4:40:53 AM
Lab ID:	0903463-47				Collecti	on Date:	3/26/200	9 10:00:00 AM
Client Sample ID:	DBS-6 60'-62'					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	0: ANIONS	30	1.5		mg/Kg		5	Analyst: TAF 4/12/2009 5:50:31 AM
ab ID:	0903463-48				Collection	on Date:	3/26/200	9 10:15:00 AM
Client Sample ID:	DBS-6 70'-72'					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	63	1.5		mg/Kg		5	Analyst: TAF 4/12/2009 6:25:20 AM

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Date: 17-Apr-09

	Daniel B. Stephens & Salty Dog	č Assoc.				La	ıb Orde	er: 0903463
Lab ID: Client Sample ID:	0903463-49 DBS-6 80'-82'			1	Collect	ion Date: Matrix:		009 10:45:00 AM
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	17	1.5		mg/Kg		5	Analyst: TAF 4/12/2009 7:34:57 AM
Lab ID:	0903463-50	· · · · · · · · · · · · · · · · · · ·			Collect	on Date:	3/26/20	009 1:00:00 PM
Client Sample ID:	DBS-7 0'-2'					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	16	1.5		mg/Kg		5	Analyst: RAGS 4/14/2009 8:36:03 PM
Lab ID: Client Sample ID:	0903463-51 DBS-7 10'-12'				Collect	ion Date: Matrix:		009 1:10:00 PM
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	9.6	0.30		mg/Kg		1	Analyst: RAGS 4/14/2009 8:53:28 PM
Lab ID: Client Sample ID:	0903463-52 DBS-7 20'-22'			(Collecti	on Date: Matrix:		009 1:20:00 PM
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	9.8	0.30		mg/Kg		1	Analyst: RAGS 4/14/2009 9:45:42 PM
Lab ID: Client Sample ID:	0903463-53 DBS-7 30'-32'			(Collecti	on Date: Matrix:		009 1:30:00 PM
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300.	0: ANIONS	13	0.30		mg/Kg		1	Analyst: RAGS 4/14/2009 10:03:07 PM
Lab ID: Client Sample ID:	0903463-54 DBS-7 40'-42'			(on Date: Matrix:		009 1:45:00 PM
Analyses	•	Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300.0 Chloride	D: ANIONS	16	1.5		mg/Kg		5	Analyst: RAGS 4/14/2009 10:20:32 PM
E E	alue exceeds Maximum (stimated value nalyte detected below qua			E H Me	-l Hold		r preparat	sociated Method Blank ion or analysis exceeded evel

RL Reporting Limit

Page 9 of 12

Date: 17-Apr-09

CLIENT: Project:	Daniel B. Stephens & Salty Dog	ż Assoc.				La	b Orde	er: 0903463
Lab ID: Client Sample ID	0903463-55 : DBS-7 50'-52'						3/26/20 SOIL	009 2:00:00 PM
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 30 Chloride	0.0: ANIONS	7.9	1.5		mg/Kg		5	Analyst: RAGS 4/14/2009 11:30:09 PM
Lab ID:	0903463-56				Collection l	Date:	3/26/20	009 2:15:00 PM
Client Sample ID	: DBS-7 60'-62'				Ma	ıtrix:	SOIL	,
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	D.O: ANIONS	33	1.5		mg/Kg		5	Analyst: RAGS 4/14/2009 11:47:35 PM
Lab ID: Client Sample ID:	0903463-57 : DBS-7 70'-72'						3/26/20 SOIL	009 2:30:00 PM
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	83	0.30		mg/Kg		1	Analyst: RAGS 4/15/2009 12:04:59 AM
Lab ID:	0903463-58				Collection I	Date:	3/26/20	009 3:00:00 PM
Client Sample ID:	DBS-7 80'-82'				Ma	trix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	130	1.5		mg/Kg		5	Analyst: RAGS 4/16/2009 1:02:12 AM
Lab ID:	0903463-59	· · ·			Collection I	ate:	3/26/20	009 4:40:00 PM
Client Sample ID:	DBS-8 0'2'				Ma	trix:	SOIL	•
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	9.5	1.5		mg/Kg		5	Analyst: RAGS 4/15/2009 12:39:49 AM
Lab ID:	0903463-60		·		Collection D	ate:	3/26/20	09 4:55:00 PM
Client Sample ID:	DBS-8 10'-12'				Mat	trix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	8.8	0.30		mg/Kg		1	Analyst: RAGS 4/15/2009 12:57:13 AM
Qualifiers: * '	Value exceeds Maximum C	Contaminant Level]	B Analyte de	etected	in the ass	ociated Method Blank

Quamiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 10 of 12

Date: 17-Apr-09

CLIENT: Project:	Daniel B. Stephens & Salty Dog	Assoc.				La	ıb Ordei	r: 0903463
Lab ID: Client Sample ID	0903463-61 : DBS-8 20'-22'			. 0	Collect	ion Date: Matrix:		09 5:13:00 PM
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	7.3	0.30		mg/Kg		1	Analyst: RAG 4/15/2009 1:14:37 AM
Lab ID:	0903463-62			C	Collecti	ion Date:	3/26/20	09 5:25:00 PM
Client Sample ID	: DBS-8 30'-32'					Matrix:	SOIL	
Analyses	· _	Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	D.O: ANIONS	47	0.30		mg/Kg		1	Analyst: RAG: 4/15/2009 2:59:05 AM
Lab ID: Client Sample ID:	0903463-63 : DBS-8 40'-42'			C	ollecti	ion Date: Matrix:		09 5:40:00 PM
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	D.O: ANIONS	20	1.5		mg/Kg		5	Analyst: RAG 4/15/2009 3:16:30 AM
Lab ID:	0903463-64		. · · · · · · · · · · · · · · · · · · ·	C	ollecti	on Date:	3/26/20	09 5:55:00 PM
Client Sample ID:	DBS-8 50'-52'					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	13	1.5	1	mg/Kg		5	Analyst: RAG 4/15/2009 3:33:54 AM
Lab ID: Client Sample ID:	0903463-65 DBS-8 60'-62'			C	ollecti	on Date: Matrix:		09 8:30:00 AM
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	9.3	0.30	ſ	ng/Kg		1	Analyst: RAG \$4/15/2009 3:51:18 AM
Lab ID:	0903463-66			C	ollecti			09 8:45:00 AM
Client Sample ID:	DBS-8 70'-72'					Matrix:	SOIL	
Analyses		Result	PQL	Qual U	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	8.7	1.5	г	ng/Kg		5	Analyst: RAGS 4/15/2009 4:08:43 AM

- Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 11 of 12

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Project:

Salty Dog

Lab Order:

0903463

Lab ID:

0903463-67

Collection Date: 3/27/2009 9:25:00 AM

Client Sample ID: DBS-8 80'-82'

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	11	1.5	mg/Kg	5	4/15/2009 4:26:08 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

Ε Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 12 of 12

Date: 17-Apr-09

QA/QC SUMMARY REPORT

ent:

Daniel B. Stephens & Assoc.

Project:

Salty Dog

Work Order:

0903463

alyte		Result	Units	PQL	%Rec	LowLimit HighLimit	%RPD RPDLimit Qual
Method:	EPA Method 300.0: A	nions					
Spiple ID	: 0903463-19AMSD		MSD			Batch ID: 18770	Analysis Date: 4/10/2009 5:15:36 AM
Chloride		60.43	mg/Kg	0.30	112	75 125	2.13 20
	: 0903463-38AMSD		MSD			Batch ID: 18798	Analysis Date: 4/11/2009 4:28:19 AM
Combride	. 0002402 4044400	31.40	mg/Kg	0.30	94.2	75 125	2.17 20
•	: 0903463-40AMSD	22.22	MSD	4.5	00.0	Batch ID: 18807	Analysis Date: 4/11/2009 5:39:23 PM
Chipride Sannie ID:	: 0903463-48AMSD	22.33	mg/Kg <i>MSD</i>	1.5	99.2	75 125 Batch ID: 18807	0.411 20 Analysis Date: 4/12/2009 7:17:33 AN
Chloride	, occordo rozanos	82.67	mg/Kg	1.5	128	75 125	9.33 20 S
	: 0903463-20AMSD	02.07	MSD	1.5	120	Batch ID: 18798	Analysis Date: 4/14/2009 11:01:34 AN
: Dride		50.63	mg/Kg	0.30	103	75 125	3.79 20
1	: 0903463-51AMSD	• • • • • • • • • • • • • • • • • • • •	MSD	5.55		Batch ID: 18810	Analysis Date: 4/14/2009 9:28:17 PM
<u>Chl</u> oride		25.35	mg/Kg	0.30	105	75 125	1.57 20
ple ID:	: 0903463-61AMSD		MSD			Batch ID: 18810	Analysis Date: 4/15/2009 1:49:27 AN
Chloride		22.21	mg/Kg	0.30	99.4	75 125	0.417 20
Sample ID:	MB-18770		MBLK			Batch ID: 18770	Analysis Date: 4/9/2009 8:33:21 PM
pride		ND	mg/Kg	0.30			
Sample ID:	MB-18798		MBLK			Batch ID: 18798	Analysis Date: 4/10/2009 7:46:02 PM
bloride		ND	mg/Kg	0.30			
nple ID:	MB-18807		MBLK			Batch ID: 18807	Analysis Date: 4/11/2009 4:29:46 PM
Chloride		ND	mg/Kg	0.30		D / / /D / / / / / / / / / / / / / / /	
	MB-18810		MBLK			Batch ID: 18810	Analysis Date: 4/14/2009 8:01:14 PM
pride	1.00 40770	ND	mg/Kg	0.30		Detab ID: 49770	Apply 5 - A/0/2000 9:50:46 DN
-	LCS-18770	42.07	LCS	0.20	00.5	Batch ID: 18770	Analysis Date: 4/9/2009 8:50:46 PM
bloride anle ID:	LCS-18770	13.87	mg/Kg <i>LCS</i>	0.30	92.5	90 110 Batch ID: 18770	Analysis Date: 4/10/2009 2:50:06 PM
hloride	200 10710	14.13	mg/Kg	0.30	94.2	90 110	7 (laysis Bate. 4/10/2005 2:00:00 1 N
	LCS-18798	14.10	LCS	0.50	94.2	Batch ID: 18798	Analysis Date: 4/10/2009 8:03:27 PM
oride		15.05	mg/Kg	0.30	100	90 110	•
	LCS-18807		LCS	0.50		Batch ID: 18807	Analysis Date: 4/11/2009 4:47:10 PM
'Moride		15.49	mg/Kg	0.30	103	90 110	
nple ID:	LCS-18798		LCS			Batch ID: 18798	Analysis Date: 4/14/2009 10:09:19 AM
hloride		15.30	mg/Kg	0.30	102	90 110	
ample ID:	LCS-18810		LCS			Batch ID: 18810	Analysis Date: 4/14/2009 8:18:39 PM
oride		15.75	mg/Kg	0.30	105	90 110	
	0903463-19AMS		MS			Batch ID: 18770	Analysis Date: 4/10/2009 4:58:12 AM
bloride	0000100 0	61.73	mg/Kg	0.30	121	75 125	
	0903463-38AMS		MS			Batch ID: 18798	Analysis Date: 4/11/2009 4:10:54 AM
hloride	0002462 404550	30.73	mg/Kg	0.30	89.7	75 125	Ah-i- D-1 4/44/2022 5.24.52
1	0903463-40AMS	00.01	MS			Batch ID: 18807	Analysis Date: 4/11/2009 5:21:59 PM
oride		22.24	mg/Kg	1.5	98.6	75 125	

Qualifiers:

Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

Date: 17-Apr-09

QA/QC SUMMARY REPORT

Daniel B. Stephens & Assoc.

Project:

Salty Dog

Work Order:

0903463

alyte	Result	Units	PQL	%Rec	LowLimit HighLimit	%RPD RP	DLimit Qual
Mathod: EPA Method 300.0: An	ions						
S ple ID: 0903463-48AMS		MS			Batch ID: 18807	Analysis Date:	4/12/2009 7:00:09 AM
Chloride	75.30	mg/Kg	1.5	79.2	75 125		
Sample ID: 0903463-20AMS		MS		•	Batch ID: 18798	Analysis Date:	4/14/2009 10:44:09 AM
C pride	48.74	mg/Kg	0.30	90.8	75 125		
Sample ID: 0903463-51AMS		MS			Batch ID: 18810	Analysis Date:	4/14/2009 9:10:53 PM
Chipride	24.95	mg/Kg	0.30	102	75 125		
Sanple ID: 0903463-61AMS		MS			Batch ID: 18810	Analysis Date:	4/15/2009 1:32:02 AM
Chloride	22.30	mg/Kg	0.30	100	75 125		

Estimated value Analyte detected below quantitation limits RPD outside accepted recovery limits

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

S Spike recovery outside accepted recovery limits Page 2

Sample Receipt Checklist

Client Name DBS		Date Received		3/30/2009	
Vork Order Number 0903463	}	Received by:	ARS		
Checklist completed by: Signature	3 30 Date	Sample ID lat	oels checked by:	Initials	
Matrix: Carrier name	e: <u>Greyhound</u>				
Shipping container/cooler in good condition?	Yes 🗹	No 🗌	Not Present		
ustody seals intact on shipping container/cooler?	Yes 🗹	No 🗌	Not Present	Not Shipped	
ustody seals intact on sample bottles?	Yes 🗹	No 🗌	N/A		
Chain of custody present?	Yes 🗹	No 🗀			
hain of custody signed when relinquished and received?	Yes 🗹	No 🗌			
Chain of custody agrees with sample labels?	Yes 🗹	No 🗌			
amples in proper container/bottle?	Yes 🗹	No 🗌			
Sample containers intact?	Yes 🗹	No 🗀			
ufficient sample volume for indicated test?	Yes 🗹	No 🗀			
All samples received within holding time?	Yes 🗹	No 🗀			
Nater - VOA vials have zero headspace? No VOA vials sul	bmitted 🗹	Yes 🗌	No 🗌		
Vater - Preservation labels on bottle and cap match?	Yes 🗌	No 🗆	N/A 🗹		
Water - pH acceptable upon receipt?	Yes	No 🗌	N/A 🗹		
ontainer/Temp Blank temperature?	3°	<6° C Acceptable	•	•	
COMMENTS:	•	If given sufficient	time to cool.		
 				=====	===
<u>.</u>					
lient contacted Date contacted:		Perso	n contacted		
Contacted by: Regarding:					
omments:					
					
Corrective Action					
	· · · · · · · · · · · · · · · · · · ·				

	HALL ENVIRONMENTAL		4901 Hawkins NE - Albuquerque, NM 87109	10	. Analysis	(†() () ()	o ssD esiQ\se	3085 40 ⁵ 't 1) 1) bH (es	T + 131(181 1,e(1,e(BE 480 A 4 BE 1900 A 4 BE 1900 A 4 BE 1900 A 4 BE 1900 A 1	BTEX + MTI BTEX + MTI TPH Method TPH (Method TPH (Method B310 (PNA 6 RCRA 8 Me	\(\times\)								N		Remarks: Any Questons Mars	Call mile movey	C 505-822-9400	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.
-Arother Time	IX-Standard □ Rush	Project Name:	521ty DOL	Project #:	45080.10,8110.802	Project Manager:	Mile Meloy, DE	Sampler: CM Bornbill, Pt	On Ice: Z Yes 🗆 No	Sample Temperature: 7	Container Preservative HEAL No. Type and # Type (19034H.3)	They Mine		2	3	A A	3/30 8 4	6.2	9 K	T 8 1 1		Received by: Q:45 3,20,09	Received by: Date Time		itracted to other accredited laboratories. This serves as notice of
Chain-ch-Custedy Necord	Clienti DBS & A	Ke Muvey	Mailing Addrass: Rosa NE	STE. 100, #1 by Quen Que, NM 87/09	Phone #: 505- 622-9400	- 8877	QA/QC Package: [X_Standard		□ Other	□ EDD (Type)	Date Time Matrix Sample Request ID	NO Sample SOIL DBS-10:3-NOSmal	03/15/4 0845 Saic DBS-1 10-131	03/25/19 0900 Soil DBS-1 20'-32'	13/25/04 UMIS SOIL DBS-1 30'-32'	NO Sample DBS-1 40'-421	93/25/09 0950 Soil DBS-1 50-521	10-10 1-8 Dic DBS-1 60'-62'	03/25/0/30 Soil DBS-1 70-721	03/25/69/12:05 501c DBS-1 80'-82		13/24/04 1200 (Selfraysheggov.	Daté: / Time: Relinquished by:		If necessary, samples submitted to Hall Environmental may be subcor

	ANAL ENVIKONMENTAL	allenvironme	Hawkins NE - Albuqu	Hel. 303-343-3973 Fax 303-349-410/	(†() () ()	, (8021 s (8021) sas/Dies	1) 1) 1) 1) 1) 1) 1)	T + 1310 1310 1310 1310 1310 1310 1310 13	BE 1800 A 4 A 4 A 5 A 5 A 5 A 5 A 5 A 5 A 5 A 5	BTEX + MTI BTEX + MTI TPH Method TPH (Method TPH (Meth	>					12	13	h(^ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			Remarks: Any Question's Place Cell	Mille Muley @	505-822-9400	ice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Charn-61-Custody Record	E A Btandard □ Rush	i	Project #:	100	822 -8677 Project Manager:	□ Level 4 (Full Validation)		□ Other □ On Ice: ☑ Yes □ No	Sample Temperature: 3	Matrix Sample Request ID Container Preservative HEAL No. Type and # Type (3903463	Soil DBS-2 0-2 1 336 Nones	- X	Soic DBS-2 20-32	le 085-2 30-321 18 12	5012 DB5-2 40-42'	ı	Soic DAS-2 60-621	5011 DBS-2 70-72	5010 085-2-80-821 V V (7		A but	Merceived by: G. U.S. 2.20	ate		If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this constitutive Any sub-contracted data will be clearly notated on the analytical report.
Chan	Client: 0856	Majling Address:	StE 100, 14	hone	email or Fax#:565	QA/QC Package: ☐∕Standard	Accreditation	□ NELAP	□ EDD (Type)	Date Time	23/24/09 160	2/9/60	#3/24/29 1625	110 Samp	24/20 164C	03/24/09 1710	03/24/09 1720	23/1/09 1745	18/0		Date: Time:	1300 pt			If necessary, sa

	HALL ENVIRONMENTAL	٠	www.nallenvironmental.com 4901 Hawkins NF - Albiniarana NM 87400		003-343-3973 Fax 303-343-4107	(†	\$,80c	(H, (1, 4, 1)) (H, (1	V 40 1 1 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	TPH Method TPH (Method EDB (Method 8310 (PNA or RCRA 8 Meta Anions (F,Cl,l 8081 Pesticid 8081 Pesticid 8081 Pesticid 8250 (Semi-V									> >			ANY QUESTIONS Please Call	Mike McVey @	505-822-9400
Tun-Around Time	A Standard		30th De	Figure 4:	7000 10.8110.8	Jer:	6 McVay (PE (8021)	S'BMT	Temperature: 7 H H	HEAL No. BTEX + MTB	1403/6 None 18 16	1 19 19 1	18 20 18	5% 2/ 19	, 20 20	25 21	24. 22	5%	V V 26 23		<u> </u>	Control of the Start of the Sta	Received by: Date Time	f necessary samples submitted to Hall Environmental man to a second seco
Chain-Granstody Record	Client: DBS¢ A	ATIN: MIKE HE VEW	" Rd. NA	or Ove. Nm	5-822-9400		14 (Full Validation)		□ EDD (Type)	Date Time Matrix Sample Request ID	03/24/pg 1245 5012 DBS-3 6/201	03/24/04/300 SOIC DBS-3 10-121	03/24/09 1310 Soil DBS-3 20-23	-SOU DBS-	13/24/09/345 SOIL DBS-3 40-42	Soil DBS-3	Soll	NO Sample - DDS-3 701-721	03/24/09 1500 5011 DBS-3 80'-82		Date: Time: Rejinquisheduóv:	09 120 (Mill	Time: Reflinquished by:	If necessary samples enhanted to Hall Environmental may be subsequent

	Rush	1.00	WWW.Hallellial.colli 205 + April Hawkins NF - Albumerane NM 87109	10	· Ol. Oooo 4 Analysis	2 ^{(†})	no ss£) Hc((\$\frac{1}{2}\)	18.1 + TI + T	(NC) (NC) (NC) (NC) (NC) (NC) (NC) (NC)	Preservative Type Type Type Type Type Type Type Typ	88 3 3 4 8 8 8 8 8 8 8	28 25					3% %		1.		Time Remarks: Any Questions Aleac Con	15 Stol Og Time Milke Milley a	7.000
<u>'</u>	Standard □	.	Sarty	Project #:	£508,0118	Project Manager:	Mike	Sampler: ()	On Ice: A Yes	Sample Temperature:	Container Preser	To Variate Non								→		Received by:	Received by:	
Chain-Gracustody Necord	Client: DBS & A	Mills Muley	Mailing Address?	STE 100 Alby Queal - NIM	8112	email or Fax#: 515 - 522 - 8877 F	QA/QC Package:		□ Other	□ EDD (Type)	Date Time Matrix Sample Request ID	03/2/09 1345 501- DOS-4 0-21	03/25/09 1350 Soil DBS-4 10-131	156-10 4-201 DBS-4 20'-231	13/25/pg 1410 5016 DAS-4 30:321	03/25/09/420 Soil DBS-4 40'-42	03/25/06/440 501L DBS-4 50'-521	03/15/04 1500 Soil 085-4 60'-621	03/25/04 1520 Soic DBS-4 70-721	02/2/pg 1555 Spic DBS-4 801-821		Rejnquished by:	Time: Relinquished by:	<i>></i>

	· -	AIAFI SES LABORAL CENT	4901 Hawkins NE - Albumerane NM 87109		Analysis:) ⁴)	oss on as on a contract of a contract on a contract on a contract on a contract on as on a contract on a	7PH (65.1) (10) (10) (11) (10) (11) (10) (11) (10) (11) (10) (11) (10) (11) (10) (11) (10) (10	+ = + = + = + = + = + = + = + = + = + =	8 b bc bc ro ro A,!:	TM + X= TM + X= orli=M + orli=M) + orli=M) & orli=M) & ANG) 0 ANG) 0 EM 8 AF ED, FI OV) 80 COV) 80 COV) 80 COV) 80	BTE 1917 1917 1917 1918 1918 1918 1918 1918								>			Remarks: ANY QUISTIONS?	Please Cull Milke Mevey	0 205-823-9400
-Ard Time	A-Standard □ Rush		E Salty Dob]	ES08.6118.01.00004	Project Manager:	MIKE MUVEY, PE.	CM Ban		Sample l'emperature:	Container Preservative HEAL No.		[34 34		JS 26	1 18 37	y 38	26 Pt	V V V			Received by Date Time	Received by:	
Summedy 年度 co年	Client: DBS & A	Ke McVey	Mailing Address: (0020 ACS demy RONK	X	Phone #: 565- 822 -9400 87109	email or Fax#: 50 5 872 - 8877 P	QA/QC Package: '\$\inf{\mathbb{Z}}\text{Standard} \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqq	Accreditation S			Date Time Matrix Sample Request ID		03/23/49 15:40 Soll DBS-5-01-21	13/23/0 16:01 501C DBS-5-10-121	03/23/00 16:10 Soil DBS-5-20-221	03/23/09 17:20 SOIL DBS-5-40-421	03/24/09 0750 SOIL DBS-5-56-521	03/24/09 0810 SOIL DBS-5-60'-62'	03/24/09 0845 Soil DBS-5-70'-72"	03/24/090920 SOIL DBS-5-80'-82"		T	Date: I'me: Kelinquespery; R. 1700 (MML)	Time: Relinquisked by:	

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.

Air Bubbles (Y or N)

	_ }	þa ul				A Part of the Part		((N 1	10 Y) sə	ldduS	J ijĄ	34	<u></u>						>			-	1			
	L ENVIRONMENTA	WANTED TO LANGE OF A CONTRACT	// 109 // 87109	4107		100 Company	0	100 103				18/9 9S) 0	178	×							>				Persa Co.		OF THE	the analytical report.
	NVIRO	WALL SIN LAD	Albuqueraye, NM 87109	Fax 505-345-4107	100		o [¢] 'SC			səp	oioite		808												avestims ,	or o	822- 9	clearly notated on
	HALL E		5 '		¹ na			(lp(08 t	o Al	÷M) 8 14) 0 8 A۶	831 EDE												INY Que	He Me Vey	505-	ntracted data will be
			4901 Hawkins NE	Tel. 505-3		(Vlr	rsos) o sse o Spid/s	D) Hc sD) 8	11 -	-08 + ∃8	Pod NTB	I + X	3T8 49T												Remarks:	M		ssibility. Any sub-co
i-Arden Tim	Schandard 🗆 Rush	 	52174 JOS	roject #:	ESOB. 0118. 01. 0000 4	Project Manager:	Mixe McVay, DE.	Benhill, DE	X-Yes DNO	Temperature: 3		Container Preservative HEAL No.	6913463	3 / The None. 44 41	45 42	5 X 5	2	Sh sh cs	-	5 8 >	•	V 52 49			Received by: Date Time R	Received by:		acted to other accredited laboratories. This serves as notice of this po
Communication of the Communica	Client: DBS d A	Mixe MeVey	Mailing Address deiny RD, N.E.	STE 100 Hlbuguer Que. NM 81109 Project #.	05-822-9400	545 - 822 -8877	QA/QC Package: \[\text{TarStandard} \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqq		□ NELAP □ Other □	□ EDD (Type)		Date Time Matrix Sample Request ID		03/24/04 0820 Soil DBS-6 6-3'	13/24/09 0835 SOLL DBS-6 10-131	03/21/09/845 5016 DBS-6 20:32'	03/21/0 0900 Soil DBS-6 30'-32'	13/20/09 0915 SOIL DBS-6 40'-42'	13/24/04 0940/5016 DBS-6 50'-52	03/24/00 1000 5014 DB5-6, 60-62	03/24/015 Soil DBS-10 70-72	03/2/pg 1045 501 DB5-6 80-821	7		1 me: Reinquished by:	Date: / Time: Refinguished by:		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

allen - A	Tel. 505-345-3975 Tel. 505-345-3975 Analysis R S/Diesel) S/Diesel)	(ΔΟV-ime	######################################	1		28 88	\$ 25 m	e Time, Remarks: Ann On And Only	3 36 09 mish molly a string of the 100 of th	Inecessary samples submitted to Hall Environmental may be enhanted to other according 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
6 A MINE MUVEY SSHOWNY RD, NIE	o Fig. 505 - 822 - 9400 Or Fax#: 505 - 822 - 5677 C Package:	On Ice:	Type (501C DBS-730'-32 K	12/00/400 SOIL PBS-7 50'-52'	73/24/19 1500 5016 DBS- 1 80'-82' V V	Time: Relinquished.by:	03/19/04 (1.20) WMM G.45 Date Time: Refinquished by: Date Date	if nancerary committee or the without to Itali Environmental

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request	BTEX + MTBE + TMB's (8021) BTEX + MTBE + TPH (Gas only) TPH (Method 8015B (Gas/Diesel) TPH (Method 504.1) EDB (Method 504.1) Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 8081 Pesticides / 8082 PCB's 8081 Pesticides / 8082 PCB's 8250 (Semi-VOA) 600 (VOA) 8260 (VOA) 8260 (VOA) 8260 (VOA)			Remarks: HNY Quest Tons Remarks: HNY Quest Tons Mette Civil mike Mey 2505-872-9400 is possibility. Any sub-contracted data will be clearly notated on the analytical report.
3 4 8 2 2 8		0374/04/0 5016 2085-8 6-31 1947 None. 67 59 03/24/04 113 5016 2085-8 10-121 6 60 60 60 60 60 60 60 60 60 60 60 60 6	5016 OBS-8 40-421 675 SOIC OBS-8 50' 52 675 SOIC OBS-8 70'-73 69 SOIC OBS-8 80-62 1	Date: Time: Refindulshedby: Time: Refindulshedby: Any Questrons Pate Time Remarks: Hay Questrons Pate Time Received by: Date Time Remarks: Hay Questrons Pate Time Received by: Date Time



COVER LETTER

Friday, April 17, 2009

Mike McVey Daniel B. Stephens & Assoc. 6020 Academy NE Suite 100 Albuquerque, NM 87109

TEL: (505) 822-9400 FAX (505) 822-8877

RE: Salty Dog

Dear Mike McVey:

Order No.: 0904064

Hall Environmental Analysis Laboratory, Inc. received 22 sample(s) on 4/3/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

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

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-01

Client Sample ID: DBS NW-1 10'-12'

Collection Date: 3/31/2009 10:20:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	1300	6.0	mg/Kg	20	4/16/2009 1:19:37 AM

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-02

Client Sample ID: DBS NW-1 20'-22'

Collection Date: 3/31/2009 10:30:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	3600	15	mg/Kg	50	4/16/2009 1:37:02 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 2 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-03

Client Sample ID: DBS NW-1 30'-32'

Collection Date: 3/31/2009 10:45:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Q	ial Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	800	6.0	mg/Kg	20	4/16/2009 1:54:27 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- B ' Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 3 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-04

Client Sample ID: DBS NW-1 40'-42'

Collection Date: 3/31/2009 11:00:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS		··· · · · · · · · · · · · · · · · · ·			Analyst: RAGS
Chloride	2500	15	mg/Kg	50	4/16/2009 2:11:51 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 4 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-05

Client Sample ID: DBS NW-1 50'-52'

Collection Date: 3/31/2009 11:15:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Qu	ıal Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	2400	15	mg/Kg	50	4/16/2009 3:21:29 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

Project:

Lab ID:

0904064

Salty Dog

0904064-06

Client Sample ID: DBS NW-1 60'-62'

Collection Date: 3/31/2009 11:30:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	1800	6.0	mg/Kg	20	4/16/2009 3:38:53 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits J
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 6 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-07

Client Sample ID: DBS NW-2 0'-2'

Collection Date: 4/1/2009 10:10:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	12	0.30	mg/Kg	1	4/15/2009 11:52:35 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- J Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 7 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-08

Client Sample ID: DBS NW-2 10'-12'

Collection Date: 4/1/2009 10:25:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS	0.0	0.20			Analyst: RAGS
Chloride	6.2	0.30	mg/Kg	1	4/16/2009 12:10:00 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 8 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-09

Client Sample ID: DBS NW-2 20'-22'

Collection Date: 4/1/2009 10:30:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	12	0.30	mg/Kg	1	4/16/2009 12:27:24 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 9 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-10

Client Sample ID: DBS NW-2 30'-32'

Collection Date: 4/1/2009 10:45:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	16	0.30	mg/Kg	1	4/16/2009 12:44:48 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 10 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-11

Client Sample ID: DBS NW-2 40'-42'

Collection Date: 4/1/2009 11:00:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	1.8	0.30	mg/Kg	1	4/16/2009 6:32:58 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 11 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-12

Client Sample ID: DBS NW-2 50'-52'

Collection Date: 4/1/2009 11:15:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS		····			Analyst: RAGS
Chloride	240	6.0	mg/Kg	20	4/15/2009 3:10:18 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- J Analyte detected below quantitation limits
- NDNot Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits S
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 12 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-13

Client Sample ID: DBS NW-2 60'-62'

Collection Date: 4/1/2009 11:30:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Qu	ial Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	47	6.0	mg/Kg	20	4/15/2009 8:58:28 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 13 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-14

Client Sample ID: SB-1/DBS-9 0'-2'

Collection Date: 3/30/2009 10:50:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	99	6.0	mg/Kg	20	4/15/2009 9:15:53 PM
EPA METHOD 418.1: TPH					Analyst: LRW
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	4/8/2009

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 14 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-15

Client Sample ID: SB-1/DBS-9 10'-12'

Collection Date: 3/30/2009 11:05:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: TAF
Chloride	4100	15	mg/Kg	50	4/16/2009 6:24:02 PM
EPA METHOD 418.1: TPH				•	Analyst: LRW
Petroleum Hydrocarbons, TR	36	20	mg/Kg	1	4/8/2009

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

Page 15 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-16

Client Sample ID: SB-1/DBS-9 20'-22'

Collection Date: 3/30/2009 11:15:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS Chloride	560	6.0	mg/Kg	20	Analyst: RAGS 4/15/2009 9:50:42 PM
EPA METHOD 418.1: TPH Petroleum Hydrocarbons, TR	220	. 20	mg/Kg	1	Analyst: LRW 4/8/2009

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 16 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-17

Client Sample ID: SB-1/DBS-9 30'-32'

Collection Date: 3/30/2009 11:30:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Qu	al Units	DF.	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	480	6.0	mg/Kg	20	4/15/2009 10:08:07 PM
EPA METHOD 418.1: TPH					Analyst: LRW
Petroleum Hydrocarbons, TR	64	20	mg/Kg	1	4/8/2009

_			
Ona	lifī	ers:	

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 17 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-18

Client Sample ID: SB-1/DBS-9 40'-42'

Collection Date: 3/30/2009 11:45:00 AM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	550	6.0	mg/Kg	20	4/15/2009 10:25:31 PM
EPA METHOD 418.1: TPH					Analyst: ĹŔW
Petroleum Hydrocarbons, TR	40	20	mg/Kg	,1	4/8/2009

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 18 of 22

Date: 17-Apr-09

CLIENT: Lab Order:

Daniel B. Stephens & Assoc.

0904064

Project:

Salty Dog

Lab ID:

0904064-19

Client Sample ID: SB-1/DBS-9 50'-52'

Collection Date: 3/30/2009 1:00:00 PM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	160	6.0	mg/Kg	20	4/15/2009 10:42:56 PM
EPA METHOD 418.1: TPH					Analyst: LRW
Petroleum Hydrocarbons, TR	82	20	mg/Kg	1	4/8/2009

Value exceeds Maximum Contaminant Level

Ε Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-20

Client Sample ID: SB-1/DBS-9 60'-62'

Collection Date: 3/30/2009 1:20:00 PM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS		·			Analyst: RAGS
Chloride	93	0.30	mg/Kg	1	4/16/2009 4:13:42 AM
EPA METHOD 418.1: TPH					Analyst: LRW
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	4/8/2009

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- . MCL Maximum Contaminant Level
 - RL Reporting Limit

Page 20 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-21

Client Sample ID: SB-1/DBS-9 70'-72'

Collection Date: 3/30/2009 1:40:00 PM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: RAGS
Chloride	65	3.0	mg/Kg	10	4/16/2009 5:05:55 AM
EPA METHOD 418.1: TPH					Analyst: LRW
Petroleum Hydrocarbons, TR	ND	. 20	mg/Kg	1	4/8/2009

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 21 of 22

Date: 17-Apr-09

CLIENT:

Daniel B. Stephens & Assoc.

Lab Order:

0904064

Project:

Salty Dog

Lab ID:

0904064-22

Client Sample ID: SB-1/DBS-9 80'-82'

Collection Date: 3/30/2009 2:00:00 PM

Date Received: 4/3/2009

Matrix: SOIL

Analyses	Result	PQL Qı	ıal Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS Chloride	9.7	3.0	mg/Kg	10	Analyst: RAGS 4/16/2009 5:23:19 AM
EPA METHOD 418.1: TPH Petroleum Hydrocarbons, TR	ND	20	mg/Kg	. 1	Analyst: LRW 4/8/2009 .

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 22 of 22

Date: 17-Apr-09

QA/QC SUMMARY REPORT

Client:

Daniel B. Stephens & Assoc.

Project:

Salty Dog

Work Order:

0904064

Analyte	Result Units PQL %Rec LowLimit HighLimit						%RPD RPDLimit Qual					
ethod: EPA Method 300.0: A	Anions											
ample ID: MB-18826		MBLK			Batch I	D: 18826	Analysis Date:	4/15/2009 5:53:11 AM				
Chloride	ND	mg/Kg	0.30									
ample ID: MB-18837		MBLK			Batch II	D: 18837	Analysis Date:	4/15/2009 8:23:40 PM				
hloride	ND	mg/Kg	0.30									
Sample ID: LCS-18826		LCS			Batch II	D: 18826	Analysis Date:	4/15/2009 6:10:36 AM				
hloride	15.39	mg/Kg	0.30	103	90	110						
ample ID: LCS-18837		LCS			Batch II	D: 18837	Analysis Date:	4/15/2009 8:41:04 PM				
Chloride	15.66	mg/Kg	0.30	104	90	110						
ethod: EPA Method 418.1: T	Р Н											
Sample ID: MB-18766		MBLK			Batch II	D: 18766	Analysis Date:	4/8/2009				
Eetroleum Hydrocarbons, TR	ND	mg/Kg	20									
ample ID: LCS-18766		LCS			Batch II	D: 18766	Analysis Date:	4/8/2009				
Petroleum Hydrocarbons, TR	103.7	mg/Kg	20	104	82	114						
Sample ID: LCSD-18766		LCȘD			Batch II	D: 18766	Analysis Date:	4/8/2009				
atroleum Hydrocarbons, TR	105.1	mg/Kg	20	105	82	114	1.32	20				

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

Sample Receipt Checklist

Client Name DBS				Date Receive	d:		4/3/2009	
Work Order Number 0904064				Received by	: AT		AX	
Checklist completed by: Signature			430°	Sample ID la	bels checked	by:	Initials	
Matrix:	Carrier name:	Clie	nt drop-off	:				
Shipping container/cooler in good conditi	on?	Yes	. ✓	No 🗌	Not Present			
Custody seals intact on shipping contained	er/cooler?	Yes		No 🗌	Not Present		Not Shipped	\checkmark
Custody seals intact on sample bottles?		Yes		No 🗆	N/A	V		
Chain of custody present?		Yes		No 🗌				
Chain of custody signed when relinquish	ed and received?	Yes	✓	No 🗌				
Chain of custody agrees with sample lab	els?	Yes	✓	No 🗌				
Samples in proper container/bottle?		Yes	V	No 🗌				
Sample containers intact?		Yes	✓	No 🗌				·
Sufficient sample volume for indicated te	st?	Yes	\checkmark	No 🗌				
All samples received within holding time?	•	Yes	✓	No 🗌				
Water - VOA vials have zero headspace?	No VOA vials subn	nitted	\checkmark	Yes 🗌	No 🗌			
Water - Preservation labels on bottle and	cap match?	Yes		No 🗌	N/A 🗹			
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A 🗹			
Container/Temp Blank temperature?			-	<6° C Acceptab				
COMMENTS:				If given sufficient	t time to cool.			
·								
	Data contrated:							
Client contacted	Date contacted:			Pers	on contacted	-		
Contacted by:	Regarding:							
Comments:								
i								
Corrective Action								
		-		 				
							·	

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107	STEX + MTBE + TPH (Gas only) FPH Method 8015B (Gas/Diesel) FDB (Method 504.1) S310 (PNA or PAH)	Date Time Remarks: Hay West Fars Messes Date Time Sos Sos Sar Agron Sos Sar Agron Sos Sar Agron Sos Sar Agron Accedited laboratories. This serves as notice of this possibility. Any sub-contracted data will be cleanly notated on the analytical report.
Coccinication of Rush Project Name: Lute Salty Doc One Lum Spraject #: Sylve Coll 8, 01/8, 01,000 K	JW Bamh, JW Bamh, JKYes □ No Deresture: 6 Type Type	Date: Time: Relinguished by: Received by: Received by: Received by: Date Time Relatinguished by: Date Time Inecessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this poss

B	Ŀ	*			15.00			(N	א סו	() səjc	ir Bubl	1														
	<u>ק</u> בי	Ž			7. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.			~			· <u>-</u> -									_	_	_		6		
		5			***							<u> </u>										_		is	í	
	之 [川 5	5	တ္		*	_	NIS	00		11.711	1111		<u> </u>							_				Office	0	13
i i	20	Ľ	, 8710	107	****	_		08.			S) 017		-					->	_			-			1	8
				5-41	st						9097					_			}	+				SH	8	ι,
10	VIRONMEN C. LABODAL	Z leta	Jue.	505-345-4107	Request	_	LCB,2	 7808				<u> </u>	<u> </u>							\dashv				1/2	4	7
	HALL ENVIRONMENTAL Analysts Labodatody	MAKE 1313 LAD.	Albuqueraue, NM 87109	× 50	100		DS' [†] Od																_	2,	1	72
		יי אַנער אָנייַ	Albuc	Fax	alys						3 AADS									+	_			6	10	
	- ()		<u>.</u>		Am			(H.			٦) ٥١٤:	<u> </u>							\dashv	+				7	J.	N_i
			4901 Hawkins NE	505-345-3975				(1.4	² 09	егроч	M) BD						_							Ý	,	2
1	T «	ζ -	, awkir	5-34				(1.8	117	etpoq	M) Hd.	L								7				The	10	``
	ПГ	ě	ĭ ĭ	I. 50	19	(ləs	səiQ\zs	9) BS	108	poqi	∍M Hd.	L												12	V	
			490	Tel		(Λ)ι	Gas on) НЧТ	+ 3	8TM	+ X∃T8	3												Remarks		}
						(1208) s	YMB'	Ε+	8TM	+ X∃T8	3												Кеп		
					K		**1										7	cO						\$		
					0000		di	9	ŀ		HEAL NO.	3 7	100	2	2			4307	ļ					Time /	Time /	
			1		à		,	0			HEAL NO.	×	10	2	ź	2	2	芝	.					3/69		
		(9		Ó		Il Ves	13	2		Ξ Ġ	7		3			.		}					Date	Date	
	ᄕ	\	S)		w,		1/2	arnhi		اد		1.	&:	755					_	_	_		7	A.	1	
-	□ Rush		1,		8/10		11	W.			reservative Type	1					,		l						\bigvee	1
			F				1/9	2	pratiira		eserva Type	lowe						>						3	1	
Hi	.	ا <u>ن</u> و /) a	'	00	nager	11					1/2								\dashv		-(1. 0		
	ndar	Nan	ן ני	#	0	Mar	11.	<u> ;; </u>	- L		and #	2					/	\rightarrow						l by:	1 is a second	
T-Ar	[⊒-Standard	Project Name:		Project #:	125	Project Manag		Sampler:	Sample Temperature		Container Type and #	1400											,	Received by:	Received by:	
4		P.	T	Pr		P		[%]	5 0	31	→ ————	7	,	Š	3	3	DBS NW 2 50-57	7	}	+				Re	Re	
\ - 4			۱, ۱				□ Level 4 (Full Validation)				<u>τ</u>	DBSNW-20-2	51-01 E-MN 5810	DBS NW-2 20-32	DBS NW-2 30-3	D135 NW-2 4042	50%	JBS NW-2 60-62				- {				}
	;	le	10	Sugue Que Du 87	0	8877	alida				Sample Request ID	17	7 10	20	4	4	8	7						1		
2		1	1	3	9400		> E				Req	3	10	16	3	É	1	3	}-			j		Ì		
4	,	M	20	200	0	1	д Э				ple	2	Ala	¥	7	7	8	150	į		ļ			. \ \		Ì
ğ		79	8030	7		822	eve				sam	B	8	B	00	Ž,	8	0					ŀ			
	4	2		00	82.2	00						1	0			7	7					\Box			og pa	}
្ន	Ç	1	77	10	B	11					Matrix	216	5016	17	5016	7	SNIC	2011						Relipquish	Relinquisted by:	
4	DBS	4770	9:	1		13					Ξ	50		10:30 SOIL	13	1.00 SOM	1 1			_				Religi	Xelija Tij	
L	0	1	dress	2	5	#X	kage: d	(AUA)	2		Time	1.1	10:25	8:0	10:45	10.	37:7	130						ime:	 	
Chain of Curio dynamica	1	#	9 Ad	1	#:	or F ₂	Pac Indar	Other (Type)		<u> </u>		210:10 5010			7	~	18	100	_	_	\dashv	-		Time:	Time:	
_	Client:		Mailing Address:	14	Phone #:	email or Fax#:505	QA/QC Package:			}	Date	10	100	169	1/69	9	10	0110				}	}	Date: 10 /04	Date:	}
	lα 1		M	N.	ഥ	Φ	OAT		İ	I		10//20	10/20	10/140	10/4	370	11/20	17.0		İ	l	1	l	`` <i>\\</i>	ļο	1
													_	1	-`		-							-		

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.

	•				- () o			(1	or 1	Y)	səlqqn	a ₁iA	Z							/	>					
	HALL ENVIRONMENTAL Analysis Labodatody	2			10 to 10 to								<u> </u>											/		
	L ENVIRONMENT	-			42.4								,				 							1 2	6)	Social Internations This was the control of the con
	֓֞֟֓֓֟֟֓֓֟֟֓֓֓֓֓֓֓֓֓֟֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֟֓֓֓֓֓	2	7109	7(e	1002		7/	A1 / (OK) 1	90	X								>				Les	7
	Z	֓֞֞֜֜֞֜֜֞֜֜֜֜֜֜֜֜֓֓֓֓֓֜֜֜֜֜֜֓֓֓֓֓֓֓֓֓֓	1 8 M	5-416		475			(AC		<u> </u>													- , ,	100	7
	Z :		ue, P	505-345-4107			0.00				B (VO)												_	1	1/2	0 3
	שַ		uerg	50,		(7)					D,7) en oite99								_				-	- 12	19	60
	Z)	Albuquerque, NM 87109	Fax -	alysi	((JS 100	- ON			M 8 A		-										+	Q Ves	1/2	
		MANAW hallenvironmental com			An	_		(F			ANG) (1,7	\	R
	HAL		4901 Hawkins NE	-345-3975			<u>.</u>	(r.	₽ 09	g pc	(Metho	EDB											-	1/4	64	$ \mathcal{U} $
,	⊥ <	ξ -	awki	5-34				(I)	811	_z pc	(Metho	Hd]	X							`	>			\	U	
			01 H	al. 505-		1					Metho] .;		
	- - -	我	49	Tel	10年						TM + X													Remarks		190
		_ 				(1208)	s'aM7	_ + :	BE	TM + X	BTE.											_	Rer		
							,	1					ナ	$\overline{2}$	0	7	18	2	20	2	25					1
			1		į		da	13		ı	s S	0904064	, ~							\	\mathcal{Z}			Time	Time	
			100		50000		1/1				HEAL NO.	PO1	T	75	Z	<u>%</u>	12	K	13	Z	C			W. ite	fe l	
	į		-19		,		1c lleg, 1	dunhi	8 [-	00			2-	413		>	į				1	1 Satt	Date	
	hsh		192		Ó		20	3/1	-	1													-	-	N	000
	□ Rush		7)	Ćη		' '	10	SS	ē.	Preservative	. ype	Nonc	_									,	4		C4
ime			\mathcal{N}		0%	Jer:	1/0	1	Yes	eratu	Prese	_	1												1	Gibo
	lard	Project Name:	* 1		Ġ,	Project Manag	M	M		Sample Temperature:	# #	# 7	77	_							>>					100
-Ard	Standard	ect N		Project #:	5508	ect M	/	Sampler:	.ej	ple 1	Container		200			7				77				Received by	Received-by	4
-Ard	K.	Proje		Proje	M	Proje		Sam	On Ice	Sam	ပို့	, J	800		1	085-956-32	is	3	62	70-72	80-82			Recei	Recei	ntracto
•			NE	50			on)						. 1	77	15-68-5810	350	10%	30	60-	- 1	50%					- Corporation
CO				11M 87109		1	, □ Level 4 (Full Validation)				Sample Request ID	İ	10-2	C/2/1 6-580	10	37	DBS-540-	1085-950	6	2-580	- 1				-	- Xe
ဝဘုန		10	Rodd	111	9400	88	II Val				nbə		2	2-3	35	0	as.	185	6-580	13	085-9					t to a r
		Me	7	7		1	4 (Fu	-			ē R		1085-9	0	2		1/1	1	1	1	1			1.1		inorizon
dy		1	A	6	(822	evel				amp		11-99		7-	2	1	2	3-1	2	1	`			\setminus	Hall
	#	19	2	Du Quar Que,	872	.	<u>-</u>				S		0	S	58-	8	80	518-	518-	56.	58		8	EN IN	ğ by:	itted to
	100	11/1	17	20	B	505					Matrix		Soll	4	\ I	1	Solici	Soll	4	6.	1		1	Relinquished by	Refinduished by	s subm
4	7056 A	1	30	H	2	10					Ma	\	N	50 il 580/	SOM	5111		18	S	8	5016			Relind		sample
n-u	Q	TU:	Mailing Address: dcmy +	00	505	要	kage:	 E		/pe)	Time		1050	1105	57,	130	277	1300	1320 SOL	1345 5011	1400			<i>B</i>	iii	If necessary, samples submitted to Hall Environmental may be subcontracted to other acco
		17	g Adc	1	أينا	email or Fax#:	QA/QC Package:	Accreditation	. E	LEUD (1ype)		_			1	V	7	7		٠, ۲	10		_	Time:	Time:	If neces
	Client:	P	Bailin	STR	Phone #:	mail	M/QC	Accreditati	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓		Date		03/30/09	23/30/09	130/05	120/28	30/05	39/04	30/06	30/05	(1)			Date:	Date:	
· ·	o l	1	<i>≥\</i> 4	M	م-۱	υļ	a A	7< □	, 	-		₹,	03/	25	150	13/	13	120	33	13	40	{	ł		ΙÖ	{

Groundwater



COVER LETTER

Wednesday, April 22, 2009

Mike McVey Daniel B. Stephens & Assoc. 6020 Academy NE Suite 100 Albuquerque, NM 87109

TEL: (505) 822-9400 FAX (505) 822-8877

RE: Salty Dog Brine Station

Dear Mike McVey:

Order No.: 0904165

Hall Environmental Analysis Laboratory, Inc. received 21 sample(s) on 4/10/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

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

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Date: 22-Apr-09

	Daniel B. Stephens Salty Dog Brine St					Lab Order	: 0904165
Lab ID: Client Sample ID:	0904165-01 PMW-1			(Collection Da Matr	te: 4/8/2009 ix: AQUEC	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	11000	50		mg/L	500	Analyst: TAF 4/21/2009 1:27:50 PM
Lab ID:	0904165-02			(Collection Da	te: 4/7/2009	9 1:18:00 PM
Client Sample ID:	MW-2				Matr	ix: AQUEC	ous
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	1200	5.0		mg/L .	50	Analyst: TAF 4/22/2009 2:31:16 AM
Lab ID:	0904165-03			(Collection Da	te: 4/7/2009	9 2:13:00 PM
Client Sample ID:	- MW-3			~	Matr	ix: AQUEC	ous .
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300. Chloride	.0: ANIONS	17000	-50		mg/L	500	Analyst: TAF 4/21/2009 2:02:39 PM
Lab ID:	0904165-04			. (Collection Dat	te: 4/7/2009	9 3:00:00 PM
Client Sample ID:	MW-4				Matri	ix: AQUEO	US
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300. Chłoride	0: ANIONS	6600	50		mg/L	500	Analyst: TAF 4/22/2009 2:13:52 AM
Lab ID:	0904165-05		····	C	Collection Dat	te: 4/7/2009	3:45:00 PM
Client Sample ID:	MW-5				Matri	x: AQUEO	US
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.	0: ANIONS	1300	5.0		mg/L	50	Analyst: TAF 4/22/2009 3:23:30 AM
Lab ID:	0904165-06			C	ollection Dat	e: 4/7/2009	4:23:00 PM
Client Sample ID:	MW-6					x: AQUEO	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0 Chloride	D: ANIONS	25	0.10	!	mg/L	1	Analyst: TAF 4/21/2009 2:54:52 PM

ND Not Detected at the Reporting Limit RL Reporting Limit

S Spike recovery outside accepted recovery limits

Analyte detected below quantitation limits

Estimated value

J

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Date: 22-Apr-09

CLIENT: Project:	Daniel B. Stephens Salty Dog Brine Sta				L	ab Order	r: 0904165
Lab ID: Client Sample ID	0904165-07 : DBS-1			Col	lection Date: Matrix:		09 10:55:00 AM OUS
Analyses		Result	PQL	Qual U	nits	DF	Date Analyzed
EPA METHOD 300 Chloride	D.0: ANIONS	320	1.0	mg	ŋ/L	10	Analyst: TAF 4/21/2009 3:12:17 PM
Lab ID:	0904165-08		· · · · · · · · · · · · · · · · · · ·	Col	lection Date:	4/8/200	9 10:13:00 AM
Client Sample ID	: DBS-2				Matrix:	AQUE	SUC
Analyses		Result	PQL	Qual Ur	nits	DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	14	0.10	mg	ı/L	1	Analyst: TAF 4/21/2009 3:29:41 PM
Lab ID:	0904165-09	* . * **** <u>**</u> *		Coll	ection Date:	4/8/200	9 8:44:00 AM
Client Sample ID:	DBS-3				Matrix:	AQUE	OUS
Analyses		Result	PQL	Qual Ur	iits	DF	Date Analyzed
EPA METHOD 300 Chloride	0.0: ANIONS	36	0.10	mg	/L	1	Analyst: TAF 4/21/2009 3:47:05 PM
Lab ID:	0904165-10			Coll	ection Date:	4/8/200	9 9:28:00 AM
Client Sample ID:	DBS-4				Matrix:	AQUE	OUS
Analyses		Result	PQL	Qual Un	aits	DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	38	0.10	mg	/L.	1	Analyst: TAF 4/21/2009 4:04:30 PM
Lab ID:	0904165-11	<u></u>		Coll	ection Date:	4/8/200	9 7:58:00 AM
Client Sample ID:	DBS-5				Matrix:	AQUEO	DUS
Analyses		Result	PQL	Qual Un	its	DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	65	1.0	mg/	ĽL	10	Analyst: TAF 4/21/2009 6:06:22 PM
ab ID:	0904165-12		-	Colle	ection Date:	4/7/2009	9 6:32:00 PM
Client Sample ID:	DBS-6				Matrix:		
analyses		Result	PQL	Qual Un	its	DF	Date Analyzed
PA METHOD 300. Chloride	0: ANIONS	380	2.0	mg/	L	20	Analyst: TAF 4/21/2009 6:23:46 PM
-	Value exceeds Maximum						ociated Method Blank on or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Spike recovery outside accepted recovery limits

ND Not Detected at the Reporting Limit

Analyte detected below quantitation limits

J

Page 2 of 4

Date: 22-Apr-09

CLIENT: Project:	Daniel B. Stephens & Salty Dog Brine State					La	ıb Orde	r: 0904165
Lab ID:	0904165-13			·	Collection	Date:	4/7/200	09 5:07:00 PM
Client Sample ID	: DBS-7				M	atrix:	AQUE	OUS
Analyses	•	Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 30	0.0: ANIONS							Analyst: TAF
Chloride		570	5.0		mg/L		50	4/21/2009 6:41:10 PM
Lab ID:	0904165-14				Collection	Date:	4/7/200	09 5:52:00 PM
Client Sample ID	: DBS-8	•			M	atrix:	AQUE	OUS
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 30 Chloride	0.0: ANIONS	58	1.0		mg/L	, <u>,</u> ,	10	Analyst: TAF 4/21/2009 6:58:34 PM
Lab ID:	0904165-15		•		Collection	Date:	4/8/200	9 6:01:00 PM
Client Sample ID	: DBS-9				M	atrix:	AQUE	OUS
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA MÉTHOD 80°	15B: DIESEL RANGE							Analyst: SCC
Diesel Range Orga	· ·	ND	1.0		mg/L		1	4/13/2009
Motor Oil Range O	rganics (MRO)	ND	5.0		mg/L		1	4/13/2009
Surr: DNOP		115	58-140		%REC		1	4/13/2009
EPA METHOD 801	I5B: GASOLINE RAN	GE						Analyst: DAM
Gasoline Range Or	ganics (GRO)	ND	0.050		mg/L		1	4/15/2009 2:17:54 AM
Surr: BFB		89.1	59.9-122		%REC	•	1	4/15/2009 2:17:54 AM
EPA METHOD 300	0.0: ANIONS							Analyst: TAF
Chloride	-	210	. 10		mg/L		100	4/21/2009 7:15:59 PM
Lab ID:	0904165-16	 			Collection :	Date:	4/8/200	9 12:56:00 PM
Client Sample ID:	NW-1 Shallow				Ma	atrix:	AQUE	OUS
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 300 Chloride	.0: ANIONS	630	5.0		mg/L		50	Analyst: TAF 4/21/2009 7:33:24 PM

Quali	fiers:
-------	--------

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 22-Apr-09

	Daniel B. Stephens & Salty Dog Brine Stat				Lab Order:	0904165
Lab ID:	0904165-17			Collection	on Date: 4/8/2009	12:31:00 PM
Client Sample ID:	NW-1 Middle				Matrix: AQUEOU	JS
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	57	1.0	mg/L	10	Analyst: TAF 4/21/2009 8:25:37 PM
Lab ID:	0904165-18			Collection	on Date: 4/8/2009	12:00:00 PM
Client Sample ID:	NW-1 Deep				Matrix: AQUEOU	JS
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	38	0.10	mg/L	1	Analyst: TAF 4/21/2009 8:43:02 PM
Lab ID:	0904165-19	 		Collection	on Date: 4/8/2009	5:07:00 PM
Client Sample ID:	NW-2 Shallow				Matrix: AQUEOU	JS
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300. Chloride	0: ANIONS	410	5.0	mg/L	50	Analyst: TAF 4/21/2009 9:00:26 PM
Lab ID:	0904165-20			Collection	n Date: 4/8/2009	4:51:00 PM
Client Sample ID:	NW-2 Middle				Matrix: AQUEOU	JS
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300.0	D: ANIONS	570	2.0	mg/L	20	Analyst: TAF 4/22/2009 11:06:09 AM
Lab ID:	0904165-21	***		Collectio	n Date: 4/8/2009	4:19:00 PM
Client Sample ID:	NW-2 Deep]	Matrix: AQUEOU	JS
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 300.0 Chloride): ANIONS	4700	20	mg/L	200	Analyst: TAF 4/21/2009 9:35:16 PM

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 22-Apr-09

QA/QC SUMMARY REPORT

ient:

Daniel B. Stephens & Assoc.

Project:

Salty Dog Brine Station

Work Order:

0904165

nalyte	Result	Units	PQL	%Rec	LowLimit Hig	hLimit	%RPD RF	DLimit Qual
Method: EPA Method 300.0: Ar	nions							
mple ID: 0904165-08AMSD		MSD			Batch ID:	R33344	Analysis Date:	4/21/2009 5:14:09 PM
loride	18.72	mg/L	0.10	87.9		25		20
ample ID: MB		MBLK			Batch ID:	R33344	Analysis Date:	4/21/2009 12:53:01 PM
loride	ND	mg/L	0.10				,	
emple ID: MB		MBLK			Batch ID:	R33358	Analysis Date:	4/22/2009 10:31:19 AM
hloride	ND	mg/L	0.10					
mple ID: LCS		LCS			Batch ID:	R33344	Analysis Date:	4/21/2009 1:10:25 PM
Moride	5.075	mg/L	0.10	101		10		
ample ID: LCS		LCS			Batch ID:	R33358	Analysis Date:	4/22/2009 10:48:44 AM
loride	4.969	mg/L	0.10	99.4		10		4/0.4/0.000 4 50 44 DM
ample ID: 0904165-08AMS		MS			Batch ID:	R33344	Analysis Date:	4/21/2009 4:56:44 PM
hloride	18.92	mg/L	0.10	92.0	75 12	25		
ethod: EPA Method 8015B: D	iesel Range							
ample ID: MB-18809		MBLK			Batch ID:	18809	Analysis Date:	4/13/2009
esel Range Organics (DRO)	ND	mg/L	1.0					
tor Oil Range Organics (MRO)	ND	mg/L	5.0					
ample ID: LCS-18809		LCS			Batch ID:	18809	Analysis Date:	4/13/2009
iesel Range Organics (DRO)	5.228	mg/L	1.0	105	74 15	57		
mple ID: LCSD-18809		LCSD			Batch ID:	18809	Analysis Date:	4/13/2009
iesel Range Organics (DRO)	5.455	mg/L	1.0	109	74 15	57	4.25	23
thod: EPA Method 8015B; Ga	asoline Ran	ge						
mple ID: 5ML RB		MBLK			Batch ID:	R33239	Analysis Date:	4/14/2009 9:30:26 AM
asoline Range Organics (GRO)	ND	mg/L	0.050				•	
mple ID: 2.5UG GRO LCS		LCS			Batch ID:	R33239	Analysis Date:	4/14/2009 6:38:55 PM

Qualifiers:

Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

Sample Receipt Checklist

Client Name DBS		Date Receive	d:	4/10/2009	
Work Order Number 0904165		Received by	: TLS		
Checklist completed by: Signature	4 Date	09	abels checked by.	Initials	
Matrix: Ca	rrier name: <u>UPS</u>				
Shipping container/cooler in good condition?	Yes 🔽	No 🗌	Not Present		
custody seals intact on shipping container/cooler?	Yes 🗸	No 🗌	Not Present	Not Shipped	
sustody seals intact on sample bottles?	Yes	No 🗌	N/A ✓		
Chain of custody present?	Yes 🗹	No 🗌			
hain of custody signed when relinquished and received?	Yes 🗸	No 🗌			
Chain of custody agrees with sample labels?	Yes 🗹	No 🗌			
amples in proper container/bottle?	Yes 🗸	No 🗌			
Sample containers intact?	Yes 🗸	No 🗌			
ufficient sample volume for indicated test?	Yes 🗹	No 🗌			
All samples received within holding time?	Yes 🗹	No 🗀			٠
Vater - VOA vials have zero headspace? No VOA	A vials submitted	Yes 🗹	No 🗆		
later - Preservation labels on bottle and cap match?	Yes	No 🗆	N/A 🗹		
Vater - pH acceptable upon receipt?	Yes	No 🗌	N/A 🗹		
ontainer/Temp Blank temperature?	2°	<6° C Acceptab	le		
COMMENTS:		If given sufficient	t time to cool.		
·					
					===
	•				
ient contacted Date conta	acted:	Pers	on contacted		
Contacted by: Regarding	i:				
omments:					
1					
Corrective Action					
· ·					-
Agricultural designation of the second secon					

	HALL ENVIRONMENTAL	ANALI SIS LABORALORI	4901 Hawkins NE - Albuquerane NM 87109	LC	Analysis) [†])	no ssĐ eəi①\ss OS,₄Od	5B (G (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	+ MTB + Method - Method - Method - Method - Method - Method - Meta - Method - Meta -	BTP1 1977 1977 1978 1978 1978 1978 1978 197													Remarks: Any Questions Merce Call	With Melley a	505-822-9400	
wn-Aroma Time.	Standard □ Rush		Sotty Los Our Status	Project #:	ESOB. 0118. 01. 0000 4	Project Manager:	Mixe Melly PE.	Sampler: 11 Parnhill Per	Temperature 7.	er Preservative Type		1875mic None	2	a		\(\script{\sinte\sint{\sinte\sint{\sinte\sint\sint\sinti	9	ct	8	5	0)		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Date	Received by:		
Chan-Grady Kecord	Client: DBS & A	ATTN: Mike Meley,	NE	UM RT		8877	QA/QC Package: XStandard □ Level 4 (Full Validation)	Accreditation	□ EDD (Type)	Matrix Sample Request ID		04/08/04 1457 H20 PMW-1	04/01/04 1318 H20 MW-2	04/01/09 1413 H20 MW-3	10/10/	04/07/05/15 150 MW-5	04/07/04/1623 Has MW-6	04/08/14 1055 H20 DBS-1	04/0/1013 H20 DBS-2	04/08/00 0844 HO DBS-3	4/08/01918 Has DBS-4	10	32. Hyd DBS-6	Time: Relinguished by:	Date: Relinguished by:		If an included and included the second of th

(N or N)

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.

	}	Jean			3.00 m			(N 1	0 人)	Air Bubbles (12/	3	24			, All		- Caraca granter			>		,	کی		
	L ENVIRONMENTA!	ADORA I OF	environintentat.com Albuqueraue, NM 87109	505-345-4107	nest	C	108-			AOV) 80628 -im92) 0728 8140 A		\times	\times		,	X		age of the second			>		the metery	20 To D150	An aluyors	10 DBS-9
	HALL ENVIRONMENTAL	MAMAN Pollonvironmontal com	wwwa.ieithiioiliiteii 1901 Hawkins NE - Albuquerau	10	Analysis	(†((†.4((H <i>f</i> (H _{/s} ON, _e	d 50 or P. sls:	EDB (Methors 8310 (PNA d RCRA 8 Methors (F,Cl Anions (F,Cl													lease Quil Mi	17-822-940	1 T	ed on Jamp
				Tel. 505		(V)r	Gas or) H9T - 9) 831	· 80 3E +	BTEX + MTE BTEX + MTE			×										Remarks: ${\cal H}$	65,	y y y	Weca
	İ		Sine Station		Se000 10		Vey, PE.	mailly Re-		HEAL NO.	13	ī	51	5	Şì	91		1.8	19	70	<i>C</i> ¹		/ Date Time	0/02 1000	/ Date Time	
rArd Time	Z Standard □ Rush	ne:	Salty Dock		£508.0118.	Project Manager:	mike me	oler: MM Sound	Tempera	Container Preservative Type and # Type	Jahre None	11 11 11 11 11 11	Jeor Hone How	415 kg 5,861	1 252 X	plage None					A		ed by:	1 / 4/	(ed.by.)	=
			K	WM 82 Project #:	9400 (E.	8877 Project	Validation)	Sampler: On Ice:	Samp		7 18/2	00	9	22	/x/	hallow 12	"iddle"	Deg	Shallow	Middle	Deco N		Received by		Received by:	
Cann-atto	4	mike meder	1	ROUCE QUE	22-	-822-6	☐ Level 4 (Full Validation)	er		Sample Request ID	-58C (DB5-	DBS-4			NW-15		1-14/4	NW-2	NW-21	NW-2 4	7	hed by:		r ed by:	11000
In-Office	D856	4772: M	Mailing Address Assemy	100 A164	# 5005-	r Fax#: 505	QA/QC Package: Z Standard	itation AP 🗆 Other	EDD (Type)	Time Matrix	1707 1/20	1752 420	1801 120			1256 Hrs	1231 Has	1200 1/20	1707 Aso	07H 1591	1619 1420		Time: Relinduish	R	Time: 'Relinquished by:	In II and to a feeting of the property of the
	Client:	*	Mailing	576	Phone #:	email or Fax#:	QA/QC Packa Z Standard	Accreditation □ NELAP		Date	60/60/40	04/01/08	50/50/10	1 /		04/08/05	50/50/h 0	04/08/0	04/08/00	04/08/09	50/80/20		Date	1	Date: /	

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.

Appendix C
Well Data Forms

Type Well	Type of Data ☐ Development ☐ Sampling ☐ Pump Test		Well She of	
	□ Other		_	
1. Project DBSi, A Salty Dob Brine Station	2. Project Location 52/14 Dof 1	Brine Pour	Area 3.D	04/08/09
4. Technician Barnhill, Pb	Len Co.			
7. Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designati	-		cation of Well (Site, Description)
	<u> </u>	Levels		
Initial	Final	(Final + 24 Hoyrs
Date: 10:30	Date: / Date: Time	11.00	Date	
10. Total Depth of Well (from TOC) 78.50	15. Total Depth of Well (20.	Total Depth of Well (from TOC)
11. Water Level (from TOC) 62, 38	78, 2 16. Water Level (from TO	oc),631	21.	Water Level (from TOC)
12. Water Column Height Nom Dia		17. 3 Well Volum		22. Size and Type of Pump or Bailer
13. Well Diameter	0.16 0.1534 0.65 0.5972 1.47 1.3540	18. 5 Well Volum	es Gallons.	Bed, floz, 1.8" Submersible
14. Well Volume (gal) 2, 5763/ 8"	2.61 2.3720	19. Purge Yolume	02//045	Sete T.D.
		d Analysis	00 14/ 4/ 0	No.
23. Total Amount of Water Removed Pumped Dry Yes N	<u>√</u> ? 4 Yes	ed to well?	If yes, what wa Sampling Perso	roundwater Sampled (Yes) No s the sample number & Date: onnel? DBS-1, 04/08/0/08/0/08/0/08/0/08/0/08/0/08/0/0
27. Final Parameters ms/cs Time Temp C Conductivit 10:34 19.99 1.38	y pH NTU 3 8,35 C/	car 62.63 ,	Removed 1 to 60 /loss	Photo Roll #, Flow Rate Observations 1.06PH Clear
28. Physical Appearance and Remarks	TURBID Init			Sample.
29. Purgewater disposal method:		200ND SU		
	Sampling / Develo			
	pH NTUS	WL V (from TOC) (g 62.38 /n	folume Dis	solved Flow Rate Photo #, xygen (gpm) Observ. (1)
10:48 20,30 1.394 8	3.33 TURBID	$\frac{-}{-}$ $\frac{\partial}{\partial z}$	1.0 2	3/ 1.0 TURBIO
, , ,	8.35 clerk	62.63	1.5 1.0 2.	67 1.0 C/cox
(1) Note volume and physical character of sedim NTU = Nephelometric turbidity units	nents removed.			
WL = Water Level from Top of PVC Casing // Checked By	Manhulle-	-P6		Date 04/08/09

Type Well	Type of Data	Well No. DBS-2
52MW	☐ Development	Sheet i
☐ Production	© Sampling	of Sheets
☐ Other	☐ Pump Test ☐ Other	,
	- Other	
1. Project DBS CA	2. Project Location	3. Date
Salty Det Brine Station	Solty Dob Brine Poro Ar	ce 04/08/09
4. Technician	Jally Dut Dincome ou	EE 01/0-10/
CM Barnhill, PG	1 / 1 2	
CM garnhill, 86	Lea Co, N.M.	
7. Method	8.Manufacturer's Designation of Rig	9. Location of Well (Site, Description)
Pumping Surging Air Lift Bailing Other	DSR-2001	DBS-2
	·	DD3 - 2
	Water Levels	
Initial	Final	Final + 24 Hours
Date: 04/08/09 Time: 0950	Date: 04/08/09 Time: 10:15	Date: Time:
10. Total Depth of Well (from TOC)	15. Total Depth of Well (from TOC)	20. Total Depth of Well (from TOC)
79.80		
<u> </u>	79.60	<u> </u>
11. Water Level (from TOC)	16. Water Level (from TOC)	21. Water Level (from TOC)
65.45	64.33	
12. Water Column Height Nom	$\frac{x}{y} = gal/ft$ 17.3 Well Volumes	22. Size and Type of
14.35' Dia	Sch 40 Sch 80 6.88 6a11	
13. Well Diameter 2" SCH 40 PVC MW 6"	0.15 0.1534 18.5 Well Volumes 0.65 0.5972 11.40 2	, Rediffo 2, 18"
2" SCH 40 PVL MW 6"	147 13540 77 70 087	lons Sul mentile
14. Well Volume (gal) 2 294 / 8"	2.61 2.3720 19. Purge Volume	JOBINGS 10/E
(s) w.e. height)	2.61 2.3720 19. Purge Volume	ous setetio.
·	Final Field Analysis	
23. Total Amount of Water 24. Was We		as the Groundwater Sampled (Yes No
Removed Pumped Dry		, what was the sample number & Date:
10 Gallons Yes C	If yes, source: Sample	ing Personnel? DB5-2, 04/08/09
·	CA	noonshille-10:13
27. Final Parameters Time Temp C Conductivit	,	mBomh: 11c-10:13 Photo Roll #,
	ry pH NTUs WL Remove	ed Flow Rate Observations
10:12 20.08 0.451	8,24 Almust 64.33 106all	ons 1.06PM Almost
	S IN THE WELL, DO NOT TAKE PH AND CONDUCTI	
28. Physical Appearance and Remarks		· · · · · · · · · · · · · · · · · · ·
	TUXBID Initially - almost	Clas a Sangle.
29. Purgewater disposal method:		
29. Purgewater disposal method.	ON GROUND Surta	ce
	Sampling / Development Parameters	
M5/Can	WL Volume	Dissolved Flow Rate Photo #,
Time Temp C Conductivity	pH NTUs (from TOC) (gallons)	
10.00 21.34 0.699 8	124 TUKBIO 65.45 101/10	5.87 1.0 TULBID
10'03 20.79 0 494 8	128 TUKBIO - 2.5	4.98 1,0 TOESI
	5.24 TULBIB - 5.0	3.89 1,0 TURBE
10:09 20.12 0.452 8	3,24 TUKBID - 7,5	3.36 1.0 TOKBIB
10:12 20,08 D.451 8	3,23 Almost 66.33' 10.0	3.6/ 1.0 Alyist
1 2000 0000	CIEIL VIII 1010	2.VI Clerk
		
(1) Note volume and physical character of sedir	nents removed.	
NTU = Nephelometric turbidity units	\checkmark)	
WL = Water Level from Top of PVC Casing Checked By		Date
Officered by	Maralle -PG	Date 04/08/09
L	VIOLUTION V	-1100101

Type Well MW ☐ Production ☐ Other	Type of Data ☐ Development ☑ Sampling ☐ Pump Test ☐ Other	Well No. DBS-3 Sheet 1 of Sheets	
1. Project DBS&A Salty Dof Brine Station	2. Project Location Salty Dof Brine Poup Area	3. Date 04/08/09	
4. Technician CM Barnh. 11, Ph	Lea Co; N.M.		
7 Methed Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designation of Rig DSR - 200/	9. Location of Well (Site, Description) DBS-3	
	Water Levels		
Initial	Final	Final + 24 Hours	
Date: 08/09 Time: 0820	Date: Time: 0948 15. Total Depth of Well (from TOC)	Date: Time:	
10. Total Depth of Well (from TOC) 78.72	15. Total Depth of Well (from TOC) 78.60	20. Total Depth of Well (from TOC)	
11. Water Level (from TOC)	16. Water Level (from TOC)	21 Water Level (from TOC)	
12. Water Column Height Nom Dia	x = gal/ft 17.3 Well Volumes 8.46 Ga/1	22. Size and Type of Pump of Bailer	
13. Well Diameter	0.18 0.1534 18.5 Well Volumes 0.65 0.5972 /// /// C	Rediffez, 1.811	
THE TOP IC MIN I SHI	1.47 1.3540 17.77 03/		
14. Well Volume (gal) 8" (s) w.e. height) 2. 88 6a/.	10 601/04	s Sete T.O.	
23. Total Amount of Water 24. Was We	Final Field Analysis II 25 Was water added to well? 26. W	/as the Groundwater Sampled (Yes.) No	
Removed Pumped Dry Yes No	? Yes If yes	, what was the sample number & Date: ling Personnel? DBS-3, 04/04/09	
10 Gallons.		MBarnhilla 0844	
27. Final Parameters y m5/c, Time Temp C Conductivity			
0843 19.53 0.552 7.44 clean bl.44 1062/1001 1,06PM Clean			
IF PETROLEUM IS IN THE WELL, DO NOT TAKE PH AND CONDUCTIVITY PARAMETERS 28. Physical Appearance and Remarks			
7.	vabio Intelly - Clear	Sample	
29. Purgewater disposal method:	ON GROUND SURFA	Œ.	
	Sampling / Development Parameters		
Time Temp C. Conductivity	WL Volume pH NTUs (from TOC) (gallons	Dissolved Flow Rate Photo #, Oxygen (gpm) Observ. (1)	
0831 18.06 0.735 7	1.89 TURBID 60.67 15itio	6.44 1.0 Turais	
0834 1885 0,620 7	7.68 TURBIO - 2.5	4.56 1.0 TUNDE	
0837 19.34 0.583 7	1.52 TURBIO - 5.0	2.66 1.0 TURNE	
0840 19.58 0,558 7	1.48 TURAJO - 7.5	2.55 1.0 TURBIO	
0843 19.53 0.552 7	1.44 CKEN 61.44' 10.0	2,93 1,0 C/ear	
(1) Note volume and physical character of sediments removed.			
NTU = Nephelometric turbidity units			
WL ≈ Water Level from Top of PVC Casing // Checked By	1500	Date	
L. My	In Mosau PG	04/08/09	

Type Well MW □ Production □ Other	Type of Data ☐ Development Sampling ☐ Pump Test ☐ Other	Well No. DBS-44 Sheet 1 of / Sheets
1. Project DBS & A Salty Dob Brine Station	2. Project Location 50174 Dof Brine Por	3. Date 04/08/09
4. Technician CMBarnhill, Pt	Lea lo, NM	
7. Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designation of Rig DSR -2001	9. Location of Well (Site, Description) $DBS-4$
	Water Levels	
Initial	Final	Final + 24 Hours
Date: 0905	Date: 04/08/09 Time: 0935	Date: Time:
10. Total Depth of Well (from TOC) 80,151	15. Total Depth of Well (from TQC) - 80, 10	20. Total Depth of Well (from TOC)
11. Water Level (from TOC)	16. Water Level (from TOC)	21. Water Level (from TOC)
12. Water Column Height Nom Dia	x = gal/ft 17. 3 Well Volume	es 22. Size and Type of Pump or Bailer
13. Well Diameter 2" 3" 4" 6" 14. Well Volume (gal) 2 22 44. 8"	0.15 0.1534 18.5 Well Volume 0.65 0.5972 1.47 1.3540 // / / / / / / / / 2.61 2.3720 19. Purge Volume	Sulmarille
(s) w.e. height)	Final Field Analysis	20/10/19
23. Total Amount of Water Removed 24. Was We Pumped Dn Yes 27. Final Parameters	ell 25. Was water added to well? y? He Yes of If yes, source:	26. Was the Groundwater Sampled Yes No If yes, what was the sample number & Date: Sampling Personnel? OHDSING: 1 C 928 Photo Roll #,
Time Temp C Conductivity pH NTUS WL Removed Flow Rate Observations 1997 20.38 0.520 7.59 Cheek 66.38 1062/1045 1.06PM Clean		emoved Flow Rate Observations Observations 10 ballons 100 ban Clean
IF PETROLEUM I 28. Physical Appearance and Remarks	IS IN THE WELL, DO NOT TAKE PH AND CONE TURBID In, filly -	Class & Sample
29. Purgewater disposal method:		
	ON GROVNO S	
Time Temp C Conductivity Oa 15 19.01 0.819 -		olume Dissolved Flow Rate Photo #, allons) Oxygen (gpm) Observ. (1)
0918 20.38 0.595	8.08 Tunio - 2	25 6.45 110 TURBIE
	8.05 TUKBIO 5	1.0 5.42 110 TURBIO
0924 20.31 0.523 7	1.59 Clean 66.38' 10	0.0 4.92 1.0 Clear
(1) Note volume and physical character of sedir	nepts removed.	
WL = Water Level from Top of PVC Casing		
Checked By	Molon Man P6	Date 04/08/09

Type Well	Type of Data	Well No. DBS-5
	☐ Development	Sheet 1 0000
☐ Other	12 Sampling ☐ Pump Test	oi / Sheets
	Other	
1. Project DBS& A	2. Project Location Brine Pono Arm	3. Date
Solty DI+ Brine Station	Solty Dob Plaga Lake	
4 Tooksioian	Shed & Brine Well 1	
CM Bornhill, Pb	Lea County, NM.	
7 Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designation of Rig	9. Location of Well (Site, Description)
Pumping Surging All Lift Balling Other	DSA-2011	DBS-5
	Water Levels	
Initial	Final	Final + 24 Hours
Date: 04/08/09 Time: 0730	Date: 0800	Date: Time:
10. Total Depth of Well (from TOC)	15. Total Depth of Well (from TOC)	20. Total Depth of Well (from TOC)
78-90'	78.90	2 2 2 2
11. Water Level (from TOC)	16. Water Level (from TOC)	21. Water Level (from TOC)
12. Water Column Height Nom	x = gal/ft 17. 3 Well Volumes	22. Size and Type of
15,91 Dia	Sch 40 Sch 80 7.63 Gallo	Pump op Bailer
13. Well Diameter 2" 4"	0.1534 18. 5 Well Volumes	Rediffiz 1.8"
	0.65 0.5972 1.47 1.3540 12.72 Gal	lons. Submerille
14. Well Volume (gal) 2.54 6a/. 8"	2.61 2.3720 19. Purge Volume	Seto T.D.
(s) w.e. height) 0.57 63/	Final Field Analysis	3676 775
23. Total Amount of Water 24. Was We		s the Groundwater Sampled (Yes) No
Removed Pumped Dry	? No Yes If yes, v	what was the sample number & Date:
1062/10ms Yes NO	If yes, source: Samplin	g Personnel? DBS-5. 04/08/09
07.5:1.0	C.	MBarnh://e 0758 Photo Roll #
27. Final Parameters M5/III Time Temp C Conductivity	pH NTUs _WL Removed	Flow Rate Observations
1757 19.60 0.777	pH NTUS WL Removed 7,15 Shost 13,55106016	ins lillem Almist clear
IF PETROL FUM IS	S IN THE WELL, DO NOT TAKE PH AND CONDUCTIVI	TY PARAMETERS
28. Physical Appearance and Remarks		
	10x610 -hills - Bine	t cleu e Sample
29. Purgewater disposal method:	ON GROUND Surface	
	Sampling / Development Parameters	
Time Temp C Conductivity	WL Volume	Dissolved Flow Rate Photo #,
1 , , , , , , , , , , , , , , , , , , ,	pH NTUs (from TOC) (gallons).	Oxygen (gpm) Observ. (1)
	16 TURED - 2.5	4.07 1.0 Tungo
1.77		4,18 1.0 TURBIO
075/ 19.09 0.758 7	7.19 TURBID 5.0	
0/2/ 17:5/ 0./10	7.16 TURBID - 7.5	4.51 1.0 10x010
0757 19.00 0.717	1.13 Clerk 63.55 10.0	4.96 1.0 Clan
(1) Note volume and physical character of sedim	ents removed.	
NTU = Nephelometric turbidity units / WL = Water Level from Top of PVC casing /		
Checked By	mil. Di	Date
1 Williams	TO.	04/08/09

Type Well MW □ Production □ Other	Type of Data ☐ Development Sampling ☐ Pump Test ☐ Other_	Well No. DB5-6 Sheet 1 of , Sheets
1. Project DBS&A Salty Dob Brine Stattob 4. Technician	2. Project Location Salty Dob Playa L Shed & Brine well A	3. Date
4. Technician Om Bamhill, Pt	Lea Co, NIM.	7762
7. Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designation of Rig $DSR - 200/$	9. Location of Well (Site, Description) DBS-6
	Water Levels	020 €
Initial	Final	Final + 24 Hours
Date: / 1/09 Time: 18:15	Date: 04/07/09 Time: 18:34	Date: Time:
10. Total Depth of Well (from TOC)	15. Total Depth of Well (from TOC)	20. Total Depth of Well (from TOC)
78.70 11. Water Level (from TOC) 62.75	78, 40 16. Water Level (from TOC)	21. Water Level (from TOC)
12. Water Column Height Nom Dia		nes 22. Size and Type of Fump of Bailer
13. Well Diameter 2"514 40 PVC MW 14. Well Volume (gal) 2.5561. (s) w.e. height)	0.16 0.1534 18. 5 Well Volun	nes 76 601/045 Rediffez, 1.8"
·	Final Field Analysis	
23. Total Amount of Water Removed / D Go / low 5 24. Was We Pumped Dn Yes	Yes If yes, source:	26. Was the Groundwater Sampled Aes No If yes, what was the sample number & Date: Sampling Personnel? DB5-6, 64/07/06 Om Barnhillo 1833
00 0	6,95 dom. 63.70 SIN THE WELL, DO NOT TAKE PH AND CON	
7	VKBio Initially - 4	Ilmost cleure Sample
29. Purgewater disposal method:	ON GROUNZ	Surface
	Sampling / Development Parame	eters
1832 20:16 1.545 (1832 20:12 1:566 (1) Note volume and physical character of sedin NTU = Nephelometric turbidity units	7.94 TUKBID (from TOC) (1.94 TUKBID (D.2.75) 1.7.37 TUKBID — 2.7.06 TUKBID — 2.99 TUKBID — 2.95 Almost (3.70)	Volume Dissolved Flow Rate Photo #, observ. (1) 1.10 Tokes 6 1.0 Tokes 6 1.0 Tokes 6 1.0 Tokes 6 1.0 Tokes 6 1.0 Tokes 6 1.0 Tokes 6 1.0 Tokes 6 1.0 Tokes 6 1.0 Tokes 6 1.0 Tokes 6 1.0 Tokes 6 1.0 Tokes 6
WL = Water Level from Top of PVC Casing // Checked By	Tenpo Bu - P6	Date 04/07/09

Type Well	Type of Data ☐ Development	Well No. DB5-7
☐ Production☐ Other	Sampling □ Pump Test	of /Sheets
- Other	Other	/
1 ,	2. Project Location	3. Date
Salty Dob Bring Station	Solty Dot Plays Lake shed & Brine Well Area	04/07/09
4. Technician Cm Barnhill, PG		
	Lea Co, N-M-	S. Location of Well (Site, Description)
7 Method Pumping Surging Air Lift Bailing Other	DSR-201	DBS-7
	Water Levels	102-7
Initial	Final	Final + 24 Hours
Date: 04/07/09 Time: 16:45	Date: 17:10 04/04/09 Time: 17:10 15. Total Depth of Well (from TOC)	Date: Time:
10. Total Depth of Well (from TOC)		20. Total Depth of Well (from TOC)
77.10	76.20'	101 What 700
11. Water Level (from TOC) (61.74	16. Water Level (from TOC)	21. Water Level (from TOC)
12. Water Column Height Nom	x = gal/ft 17. 3 Well Volumes 7.27 (2.11)	22. Size and Type of Pump or Bailer
/5, 56	/,27 08/10	773
01/50/11/2 01/11/1 4"	0.65 0.5972 12.28 63/	lons Rediffra, 1.8" Submersible
14. Well Volume (gal) 2. 45 6 / 8"	1.47 1.3540 2.61 2.3720 19. Purge Volume	JUDINEYSI BIC
(s) w.e. height)	Final Field Analysis	043 Se. & 1.D.
23. Total Amount of Water 24. Was Well Removed Pumped Dry2	25. Was water added to well? 26. W	Vas the Groundwater Sampled Ves No , what was the sample number & Date:
Removed Pumped Dry? Yes No	If yes, source: Samp	ling Personnel? DBS-7, 04/67/09
	(mBornhille 1767
27. Final Parameters M5/Cm Time Temp C Conductivity		Phóto Roll#,
1706 20,5/ 1,999	7,03 Chen 61.89 108	ed Flow Rate Observations Officers 1.16pm Almost Check on
IF PETROLEUM IS IN THE WELL, DO NOT TAKE pH AND CONDUCTIVITY PARAMETERS 59 mp/c 28. Physical Appearance and Remarks		
Ze. Thysical Appositions and Termanis	VKBID Intially - 91.	most cleare Sample.
29. Purgewater disposal method:	ON GROUND Surface	
	Sampling / Development Parameters	
Time Temp C Conductivity	WL Volume pH NTUs (from TOC) (gallons	•
16:54- 21:79 3.051 7.	' '	
16.57 21.16 1.776 7.	36 TUXBID 2.5	4.35 1025 TURBE
1.700 20.83 1.869 7.	25 TUKBIO 5.0	5.23 1.025 TURBIO
1703 2069 1.959 7.	15 TUKBIO - 7.5 -7 Almost / 169 10	4.65 1.025 TURBIN
1706 20,51 1,999 7,	03 Otean 61.89 10.	0 4.30 10 2.5 C/Ein.
(1) Note volume and physical character of sedimen	nts removed.	
NTU = Nephelometric turbidity units /		·
WL = Water Level from Top of PVC Casing Checked By	and -11	Date
(X My in	MIN TO	04/07/09

Type Well	Type of Data	Well No. DBS-8	
<u></u> ∑ MW	☐ Development	Sheet 1	
☐ Production	Ø Sampling □ Duma Toot	of Sheets	
☐ Other	☐ Pump Test ☐ Other		
7000			
1. Project DBS&A	2. Project Location	3. Date	
Salty Dot Bring State	Salty Dob Playa Lake Shed & Brine Well Ar	04/07/09	
4 Technician	Shell Brien Will D.		
an Brak'il De	Shear Drine Well AT	ea	
4. Technician CM Barnhill, PG	Lea G, NM		
7. Method	8.Manufacturer's Designation of Rig	9. Location of Well (Site, Description)	
Pumping Surging Air Lift Bailing Other	DSR-2001	DBS-8	
	Water Levels		
Initial	Final	Final + 24 Hours	
ПППа	Filial	Final + 24 Hours	
Date: 04/01/69 Time: 17:30	Date: 17:56	Date: Time:	
	Date: 17:56	00 Table 11 (111 11 11 11 11 11 11 11 11 11 11 1	
10. Total Depth of Well (from TOC)	15. Total Depth of Well (from TOC)	20. Total Depth of Well (from TOC)	
77.20'	77.05		
11. Water Level (from TOC)	16. Water Level (from TOC)	21. Water Level (from TOC)	
61.20'	61.57		
12. Water Column Height Nom	x = gal/ft 17. 3 Well Volumes	22. Size and Type of	
16.0 Dia	Sch 40 Sch 80 7.68 6	1	
		777	
13. Well Diameter 2" 5CH 40 PVC MW 6"	0.16 0.1534 18.5 Well Volumes 0.5972	Belitlez ,1.811	
2"5CH40 PVC MW 6"	0.65 0.5972 1.47 1.3540 12.862	Ellons Submersible	
14. Well Volume (gal) 2 8"	2.61 2.3720 19. Purge Volume		
14. Well Volume (gal) 2. 56 6/lons 8"	2.61 2.3720 19. Purge Volume	10AS 30101.D.	
	Final Field Analysis		
23. Total Amount of Water 24. Was We		S. Was the Groundwater Sampled Ves No	
Removed Pumped Dry	? Yes If	yes, what was the sample number & Date:	
106allons Yes	If yes, source:	impling Personnel? DBS-8 04/07/09	
•	_ •	Cm Barnhille 17:52	
27. Final Parameters m.5/Ln Time Temp C Conductivity		Photo Roll #,	
Time Temp C Conductivity	pH NTUs WL Rem	noved Flow Rate Observations	
17:51 20.32 0.884	1.37 14x810 61.39 10	Gallons 1.06PM TUKBID	
IF PETROLEUM IS IN THE WELL, DO NOT TAKE pH AND CONDUCTIVITY PARAMETERS			
28. Physical Appearance and Remarks Turbib Had			
	INKBID POD		
29. Purgewater disposal method:		£	
- ,	ON GROUND Sur		
	Sampling / Development Paramete		
برم/ویر Time Temp C Conductivity	PH NTUs (from TOC) (gallo		
1	pH NTUs (from TOC) (gallo 1.62 TURBIO 6/.20 1111		
		12/ 3,9/ 1.0 TURBIO	
17:42 20,58 0,974 8	177 TURBIO - 2,5	4.65 10 TURBO	
17:45 20,41 0.924 8	70 TULIDIO - 5.0	0 4.34 1.0 TUXAS	
	7.94 TURBIO - 7.5	4.37 1.0 TULBIÓ	
11:51 00.52 0.884	1.52 TURBID 61.57' 10.	0 4.88 110 TURBIO	
(1) Note volume and physical character of sedim-			
NTU = Nephelometric turbidity units			
WL = Water Level from Top of PVC Casing	/		
Checked By	Turbol B. D/	Date	
	ore I feel to	04/07/09	

Type Well MW Production Other	Type of Data ☐ Development ☐ Sampling ☐ Pump Test ☐ Other	Well No. DB5-9 Sheet 1 of Sheets
1. Project DBS & A Salty DOG Brine Station	2. Project Location Saity Dob Plana Lake	3. Date 04/08/09
4. Technician CM Parnhill, PG	Shed & Brine Well Are Lea Co. NM	
7. Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designation of Rig DSR-200 /	9. Location of Well (Site, Description) $DBS - 9$
	Water Levels	
Initial	Final	Final + 24 Hours
Date: 4/18/04 Time: 17:35	Date: 04/08/09 Time: 18:01	Date: Time:
10. Total Depth of Well (from TOC)	15. Total Depth of Well (from TOC)	20. Total Depth of Well (from TOC)
11. Water Level (from TOC) 53.93	16. Water Level (from TOC) 54/12	21. Water Level (from TOC)
12. Water Column Height Nom Dia		,
13. Well Diameter 2	0.16 0.1534 18. 5 Well Volumes 0.65 0.5972 1.47 1.3540 2.61 2.3720 19. Purge Volume	Gallons Submersible
(s) w.e. neight)	Final Field Analysis	0/1243
23. Total Amount of Water Removed 24. Was We Pumped Dry Yes No.	ell 25. Was water added to well? Yes If yes, source:	26. Was the Groundwater Sampled Yes No fyes, what was the sample number & Date: sampling Personnel? CM Barnh, II @ [81.0]
27. Final Parameters Time Temp C Conductivity 18.00 18.48 1.17	y pH NTUS WL Re 7.12 TURSIE 54.12/	Photo Roll #, moved Flow Rate Observations OGUI45 1-0 GPM TVRB ID
28. Physical Appearance and Remarks	SIN THE WELL, DO NOT TAKE PHAND CONDI	
29. Purgewater disposal method:	ON GROUND Surfa	ic.
	Sampling / Development Parameter	
		lume Dissolved Flow Rate Photo #, Observ. (1) 7.05 / O TURBIO 1.0 TURBIO TURBIO
16:54 18.35 1.203	7.14 TURBID 5.	0 4.43 1.0 TURBIO
16:57 18.48 1.201 18:00 18.48 1.176	7.13 TURBID - 7. 7.12 TURBIS 54.12 10	5.08 1.0 TURBID 5.59 1.0 TURBID
(1) Note volume and physical character of sedin	nents removed.	
WL = Water Level from Top of PVC Casing Checked By	My Jan Pt	Date 04/08/09

Type Well MW Production Other	Type of Data ☐ Development ☐ Sampling ☐ Pump Test ☐ Other		Well No. NW-/. Sheet 1 of Sheets	Shallow
1. Project DBS & A Salty Dob Brine Station	2. Project Location Solty Dot £	Brine POND Area	3. Date 94 /08/0	09
4. Technician Cm Bamhill, PG	Lea Co			
7. Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designat		9. Location of Well (Site, NW-/ Sha	
	Water	Levels		
Initial	Final		Final + 24 H	ours
Date: 04/18/09 Time: 12:40	Date: /08/09 Time		Date:	Time:
10. Total Depth of Well (from TOC)	15. Total Depth of Well 74.9		20. Total Depth of Well	
11. Water Level (from TOC)	16. Water Level (from To	00) 35	21. Water Level (from T	⁻ OC)
12. Water Column Height Nom Dia	x = gal/ft Sch 40 Sch 80	17.3 Well Volumes 6.048 Ga/	22. Size and T	
13. Well Diameter 2" 4" 4" 6" 14. Well Volume (gal) 2, 0 / 6 3 / 1 (s) w.e. height)	0.16 0.1534 0.65 0.5972 1.47 1.3540 2.61 2.3720	18. 5 Well Volumes 10.08 Ga/, 19. Purge Volume 10 Ga/(0	1045 July 6 mar	
23. Total Amount of Water Removed 24. Was We Pumped Dry Yes No 27. Final Parameters	25. Was water add Yes If yes, source:	If yes, v Samplin	s the Groundwater Samples what was the sample number g Personnel? NW-/ Samples Barnhille	er & Date:
		US WL Removed BO 62.31 10.0 TAKE PH AND CONDUCTIVI	1,0	bservations TUKBIO
28. Physical Appearance and Remarks	TURBINHO	- well No	T Well Dev	cloped
29. Purgewater disposal method:	ON C	SROUND Surt	ice	
41.6	Sampling / Develo	opment Parameters WL Volume	Dissolved Flow Ra	ite Photo #,
Time Temp C Conductivity 12:43 21.29 1.255	pH NTUs 7.48 TURBIO	(from TOC) (gallons).	Oxygen (gpm) 3.69 /10	
12:45 20.92 1.444 -7	7.47 TURBID TORB	<u>- 2.5</u> 5.0	2.08 2.0	_ 10100
12:52 21.0 1.442 7	.40 TURSO	7.5	2.09 1.0	TURBA
<u> 12:55 20,36 1404 7</u>	7.39 TUKBI	62.55 10.0	2.08 1,0	TURYS
(1) Note volume and physical character of sedim NTU = Nephelometric turbidity units WL = Water Level from Top of PVC Casing	ents removed.			
Checked By	Men	PG	Date 04/08	3/09

Type Well	Type of Data ☐ Development ☐ Sampling ☐ Pump Test ☐ Other		Well No. / W-/ Y. Sheet 1 of / Sheets	niddle
1. Project DBS& A Salty Dob Brine Station	2. Project Location So 1th Do 6 £	Brine Pour Area	3. Date 04/08/09	7
4. Technician Barnhill, Pb	,	o., N.M.		
7 Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designation $DSR \cdot 200/$	of Rig	9. Location of Well (Site, De NW-/ M; 4	
	Water L	evels	1	
Initial	Final		Final + 24 Hoyr	's
Date: 12', 10	Date: 04/08/09 Time:	12:35	Date:	Time:
10. Total Depth of Well (from TOC)	15. Total Depth of Well (fro	, '	20. Total Depth of Well (fro	om TOC)
11. Water Level (from TOC) (2.25	16. Water Level (from TOC)) _	21. Water Level (from TOC)
12. Water Column Height Nom Dia	Sch 40) Sch 80	7.3 Well Volumes 28,34 63//	22. Size and Typ Pump of Ba	
13. Well Diameter 2// \$CH 40 PVC MW 6" 14. Well Volume (gal) 9.4461/ (s) w.e. height) 8"	0.65 0.5972 1.47 1.3540	18. 5 Well Volumes 47. 24 G1/1 19. Purge Yolume 30 G2/1045	loss Roberth 2 Subme Scto7	rs, ble
	Final Field			
23. Total Amount of Water Removed Pumped Dry Yes No.	Y? Yes If yes, source:	If yes, w Sampling	the Groundwater Sampled hat was the sample number to personnel? NW-1, MBs rnh://@	& Date: n:d&la , 04/08/ 12:3/
27. Final Parameters Time Temp C Conductivity 12:30 20.00 0.638	y pH NTUs	WL Removed U 6251 3061		Photo Roll #, ervations
IF PETROLEUM IS IN THE WELL, DO NOT TAKE OH AND CONDUCTIVITY PARAMETERS				
28. Physical Appearance and Remarks		Ho		
29. Purgewater disposal method:	ON G	ROUND Surto	c e	
	Sampling / Develop	ment Parameters		
Time Temp C Conductivity 12:18 20:07 0:755 7	• • • • • • • • • • • • • • • • • • • •	WL Volume (gallons) 2.25 /n.10a/	Dissolved Flow Rate Oxygen (gpm) 6:17 3.0	Photo #, Observ. (1) Tukble
12:22 19.90 0.735	7.54 TURBIO		2.89 3.5	TURNI
12:26 20.02 0.665	7.48 TURNIO	20	2.86 2.5	TURBIS
12:30 20.00 0.638	7.47 TURBIO	62.51 30	3,37 2,5	TUKBA
(1) Note volume and physical character of sedim NTU = Nephelometric turbidity units WL = Water Level from Top of PVC Casing	pents removed.			
Checked By	on Man 1	PG	Date 04/08/	109

Type Well MW Production Other	Type of Data Development Sampling Pump Test Other	Well No. Ww-/ Deep Sheet 1 of / Sheets	
1. Project DBSE A Solty Dob Brine Station	2. Project Location Salty Dob Brine Pond 1	3. Date 17ca 04/08/09	
4. Technician Bornhill, PG	Lea Co, N.M.		
7. Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designation of Rig	9. Location of Well (Site, Description) NW-/ Derp	
	Water Levels		
Initial	Final	Final + 24 Hours	
Date: 1/36	Date: 04/48/69 Time: 12:02	Date: Time:	
10. Total Depth of Well (from TOC)	15. Total Depth of Well (from TOC)	20. Total Depth of Well (from TOC)	
11. Water Level (from TOC) 62.04	16. Water Level (from TOC)	21. Water Level (from TOC)	
12. Water Column Height Nom Dia	x = gal/ft 17.3 Well Volumes 49.66	22. Size and Type of Pump or Bailer	
13. Well Diameter 5/1 5/4 40 PVL MW 14. Well Volume (gal) 16, 35340 8"	0.16 0.1534 18. 5 Well Volumes 0.65 0.5972 1.47 1.3540 82.76 2.61 2.3720 19. Purge Volume 50 62/1	6al- Rediffez, 1.8" Submersible 11-4- Sete T.D.	
(s) w.e. height)	Final Field Analysis	7043	
23. Total Amount of Water Removed Pumped Dry Yes Yes	ell 25 Was water added to well? 26 If Yes, source: Sa	6. Was the Groundwater Sampled See No yes, what was the sample number & Date: ampling Personnel? NW-1 Dem, 04/08 Om Born h: 1/0 12:00	
27. Final Parameters Time Temp C Conductivity pH NTUs WL Removed Flow Rate Observations 11:55 19:85 0.497 7.44 C/cuk 62:60 50:60/60 3.5:600 C/cuk			
28. Physical Appearance and Remarks	Initially Transis-cle		
29. Purgewater disposal method:	ON GROUND Surte	ie.	
193/cm	Sampling / Development Paramete WL Volu		
Time Temp C Conductivity 11:40 20.27 0.603 7	pH NTUs (from TOC) (gallo 1.55 Tukbio 62.04 10.11.	ons). Oxygen (gpm) Observ. (1) 13/ 4.92 3.5 Tuess	
11:46 20.04 0.532	7.50 TURBU - 10 7.48 TURBU - 2	0 3.69 3.5 TURBIS 0 3.53 3.5 TURBE	
11:49 19.80 0.505	7.47 cler - 30	0.6	
11:52 19.94 0.497 7	7.44 Clar 62.60 5		
(1) Note volume and physical character of sediments removed. NTU = Nephelometric turbidity units			
WL = Water Level from Top of PVC Casing Checked By	Intermedia Pt.	Date 04/08/p9	

Type Well	Type of Data ☐ Development ☑ Sampling ☐ Pump Test ☐ Other	Well No. Sheet 1 NW - 2 Shallow of Sheets
1. Project DBSCA Salty Dob Brine Station	2. Project Location Salty Dob Playa Lat Shed & Brine Well Are	3. Date 04/08/09
4. Technician CMBarnhill, Pt	Shed & Brine Well Are Lea Go, NM	
7. Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designation of Rig $\mathcal{D} \mathcal{S} \mathcal{L} - \mathcal{Q} \mathcal{O} \mathcal{O} /$	9. Location of Well (Site, Description) NW-2-Shallow
	Water Levels	
Initial	Final	Final + 24 Hours
Date: 4/05/04 Time: 16:45	Date: 04/08/09 Time: 17',15	Date: Time:
10. Total Depth of Well (from TOC) 74, 15	15. Total Depth of Well (from TOC)	20. Total Depth of Well (from TOC)
11. Water Level (from TOC) 63.08	16. Water Level (from TOC) / 63, 68	21. Water Level (from TOC)
12. Water Column Height Nom Dia		
13. Well Diameter 2 11 5 (14 40 PV (14 16 16 16 16 16 16 16 16 16 16 16 16 16	0.16 0.1534 18. 5 Well Volume 0.65 0.5972 8,8,6 1.47 1.3540	alla Submeruble
14. Well Volume (gal) 1.77 8" (s) w.e. height)	2.61 2.3720 19. Purge Volume	Site T.D.
·	Final Field Analysis	
23. Total Amount of Water Removed 24. Was We Pumped Dry Yes No	Y? Yes If yes, source:	26. Was the Groundwater Sampled Ses No If yes, what was the sample number & Date; Sampling Personnel? NW-2 5h2/16W 04/08/09 CMBarnh; //e 17:07
27. Final Parameters MS/CA Time Temp C Conductivity 17.06 19.32 1.88	y ph NTUS WL R 3 7.33 TULBIO 63.68' S IN THE WELL, DO NOT TAKE PH AND CONT	Photo Roll #, Removed Flow Rate Observations 10 63 (1045 110 CPM TURB 10
OO Dhisaigal Assessment and Danselle	TURBID - Poorly Dev	
29. Purgewater disposal method:	ON GROUND SUIT	(a)
·	Sampling / Development Parame	
Time Temp C Conductivity 16:35	pH NTUS (from TOC) (g 7.37 TURBID (3.08 14) 7.42 TURBID — 3 7.40 TURBID — 5 7.35 TURBID — 7	Tolume Dissolved Flow Rate Photo #, allons) Oxygen (gpm) Observ. (1) 11/12/ 5.46 1.0 TURBIO 1.5 4.22 1.0 TURBIO 1.5 4.03 1.0 TURBIO 1.5 4.37 1.0 TURBIO 1.0 T
(1) Note volume and physical character of sedin NTU = Nephelometric turbidity units WL = Water Level from Top of PVC Casing) Checked By	ments removed.	Date 04/03/09.

Type Well	Type of Data ☐ Development ☐ Sampling ☐ Pump Test ☐ Other		Well No. Sheet 1 NW-2 middle of Sheets					
1. Project DBSCA Solty DOG Brine Station 4. Technician	2. Project Location Solty Dob Shock & Bri	Playd Loka	3. Date 04/08/09					
7. Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designation	NM,	9. Location of Well (Site, Description) NW-2 - m, dd/e					
	Water	Levels						
Initial	Final		Final + 24 Hoyrs					
Date: 04/08/09 Time: 16:25 10. Total Depth of Well (from TOC)	Date: / Time / Time / 15. Total Depth of Well (i	16:55	Date: Time: 20. Total Depth of Well (from TOC)					
10. Total Depth of Wen (Holl 100)		5,72	20. Total Depthyor Well (IIoIII 100)					
11. Water Level (from TOC)	16. Water Level (from TC)C) 4,41	21. Water Level (from TOC)					
12. Water Column Height Nom Dia	x=gal/ft 8ch 40 Sch 80	17.3 Well Volumes /9.78 6a/	22. Size and Type of Pump or Bailer					
13. Well Diameter	0.16 0.1534 0.65 0.5972 1.47 1.3540	18. 5 Well Volumes 32.95	ES 120' 1.8" Submersible					
14. Well Volume (gal) 6,5963/1 8"	2.61 2.3720	19. Purge Volume	Soto T.P.					
23. Total Amount of Water 24. Was We		d Analysis	as the Groundwater Sampled Yes No					
Removed Pumped Dr. Yes N.	? (No Yes	If yes, Sampli	what was the sample number & Date: g Personnel? NW-2, m, dele					
27. Final Parameters ms/cm Time Temp C Conductivit 16,50 19.64 2.172	y pH NTU - 7.17 TUK	s WL Removed	Photo Roll #, By Flow Rate Observations Officers 1.06 PM Toughton					
IF PETROLEUM I 28. Physical Appearance and Remarks	SIN THE WELL, DO NOT T	rake ph and conductiv PH20	/ITY PARAMETERS					
29. Purgewater disposal method:	ON		See.					
		ppment Parameters						
16:40 18.91 2.155	pH NTUS 7,37 TVKBIO 7.36 TVKBIO 7,25 TVKBIO	WL Volume (from TOC) (gallons) 63-27 (n.f.)	Dissolved Flow Rate Photo #, Oxygen (gpm) Observ. (1) 5.38 1.0 Tukbib 5.52 1.0 Tokbib					
16:45 18.76 2.153 16:50 19.04 2.172	7.17 TV4B10	64.41 20	6.63 1.0 TURBLE					
(1) Note volume and physical character of sedir	nents removed.							
WL = Water Level from Top of PVC Casing Checked By	Miller	Pb	Date 0 4/08/09					

Type Well MW Production Other	Type of Data □ Development □ Sampling □ Pump Test □ Other		Well No. NW-Z Deep of Sheets									
1. Project DBS & A Solty Dob Brine Station 4 Technician	2. Project Location Setty Dob Shell & Brin	Plays Lake	3. Date 0 4/08/09									
CM Barnhill, Pt	Lea Co,	, NM										
7 Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designat	tion of Rig	9. Location of Well (Site, Description) NW-2 - Deep									
Water Levels												
Initial	Final		Final + 24 Hours									
Date: 04/08/09 Time: 15:30	Date: / Time	e: 16:22	Date: Time:									
10. Total Depth of Well (from TOC)	15. Total Depth of Well	(from TOC)	20. Total Depth of Well (from TOC)									
11. Water Level (from TOC) 66.4/	16. Water Level (from Toler)	OC)	21. Water Level (from TOC)									
12. Water Column Height Nom Dia	x = gal/ft Sch 40 Sch 80	17.3 Well Volumes 31.5765//o	22. Size and Type of Pump or Bailer									
13. Well Diameter 2" SCH YO PVC MW 6" 14. Well Volume (gal) 10-52 Gal 8"	0.1534 0.65 0.5972 1.47 1.3540 2.61 2.3720	18. 5 Well Volumes 52 - 63 G 19. Purge Volume 70 Ga//6	Hous ES 120 Set 1.8 @120' From TOC.									
		ld Analysis										
23. Total Amount of Water Removed Pumped Dn Yes A	23 (4) Yes	if yes, v Samplir	s the Groundwater Sampled (Ses) No what was the sample number & Date: g Personnel? NW-2 Desp (16:1)									
	2 6.81 TUX		Hous 1,06 PM TURBIE									
28. Physical Appearance and Remarks	TUKB	A										
29. Purgewater disposal method:	ON 6R	OUND Surface										
	Sampling / Devel	opment Parameters										
	pH NTUS 7.69 TURND 7.53 TURND	WL Volume (gallons)	Dissolved Flow Rate Photo #, Oxygen (gpm) Observ. (1) 1.21 1.0 Turns b 6.55 1.0 Turns b									
13,70	6.88 TURBIO	$\frac{-}{-}\frac{20}{30}$	7.39 1-0 TUKBIE									
	10.81 TURBO	66,10 40	6.35 1.0 TURBIS									
		:	· · · ·									
(1) Note volume and physical character of sedin NTU = Nephelometric turbidity units	nents removed.											
WL = Water Level from Top of PVC Casing												
Checked By	letruic-	-Pt	Date 04/08/09									

Type Well	Type of Data		Well No. Pmw-/						
☐ MW ☐ Production	☐ Development ☐ Sampling	of	Officer						
Other	☐ Pump Test ☐ Other		(
1. Project DBS & A Salty Dot Brine Station	2. Project Location Salty Dob Brir	ic Pour Area	3. Date 04/08/09						
4. Technician CMB3116:11,PF	/	Lea Co, NM							
7. Wethou	8.Manufacturer's Designation of Rig	9. Lo	9. Location of Well (Site, Description)						
Pumping Surging Air Lift Bailing Other	DSR-200/		PMW-/						
Initial	Water Leve	ls	Final + 24 Høurs						
<u> </u>									
Date: 14'35	Date: / 15/09 Time: / 5								
10. Total Depth of Well (from TOC) 78.87	15. Total Depth of Well (from TO	C) 20.	Total Depth of Well (from TOC)						
11. Water Level (from TOC)	16. Water Level (from TOC)	21.	Water Level (from TOC)						
12. Water Column Height Nom Dia		Well Volumes 6.19 Gallons	22. Size and Type of Pump or Bailer						
13. Well Diameter	0.1534 18.5 0.65 0.5972	Well Volumes	, Rod, floz, 1.8"						
2 11 SCH 40 PVC MW 6" 14. Well Volume (gal) 2-06 Gal 8"	4.47 4.0540	10,326a//ors	lons Submersible						
(s) w.e. height) 2-06 GAL	Final Field Ana	rge Volume	3.01 6 1.0						
23. Total Amount of Water 24. Was We	ell 25. Was water added to we	li? 26. Was the G	roundwater Sampled Yes No						
Removed Pumped Dn Yes N		Sampling Pers	what was the sample number & Date: ng Personnel? PMW-/ 04/20/09						
		CME	Barnh: 110 14:57 Photo Roll #,						
7/ Final Parameters m/s/ Time Temp C Conductivit		WL Removed	Flow Rate Observations						
1466 20,49 25,41	SIN THE WELL, DO NOT TAKE PH								
00 01	TURBID Instally-								
	· · · · · · · · · · · · · · · · · · ·								
29. Purgewater disposal method:		Surface							
ms/cm·	Sampling / Developmen		ssolved Flow Rate Photo #,						
Time Temp C Conductivity	pH NTUS (from T 7.13 TUKBIP 65.		Oxygen (gpm) Observ. (1)						
14:47 21.87 23.02	7.11 TURBIO -	2.5 6	88 1.0 TUKE						
14.50 21.22 24.56	7.05 TUEBIO -	5.0 6	61 1.0 TUKBIE						
1453 20.62 25.25	6.84 TURBIO -	- 7.5 6	42 110 SISA						
1456 20,49 25,41	6.83 C/en 40	25 10.0 6	.32 110 Clear						
(1) Note volume and physical character of sedir NTU = Nephelometric turbidity units	ments removed.								
WL = Water Level from Top of PVC Casing Checked By	hote bul	01	Date						
	MI WILL	# f	04/08/09						

Type Well	Type of Data ☐ Development	·	Well No. Sheet 1 MW-2								
Production	Sampling		of / Sheets								
Other	☐ Pump Test ☐ Other	<u> </u>									
1. Project DB S & A	2. Project Location		3. Date	,/ /							
Solty DOL Brine STITI	, Salty Do	6 , Playa Lake	04	407/09	<i>f</i>						
Salty DOF Brine Stati. 4. Technician CM Barnh: 11, PG	Silea & Brine	6 , Playa Lake aren WM ,									
7. Method	8.Manufacturer's Designatio	on of Rig	9. Location of	Location of Well (Site, Description)							
Pumping Surging Air Lift Bailing Other	DSR-2	00/	MW	MW-2							
Water Levels											
Initial	Final		Fin	Final + 24 Hours							
Date: 12!00 10. Total Depth of Well (from TOC)	Date: Time: 15. Total Depth of Well (fr	13:22	Date:		ne:						
10. Total Depth of Well (from TOC)	15. Total Depth of Well (fr	rom TOC)	20. Total Dep	th of Well (from	TOC)						
11. Water Level (from TOC)	16. Water Level (from TO		21. Water Lev	21. Water Level (from TOC)							
61.65	61.6	/'									
12. Water Column Height Nom	x = gal/ft Sch 40 Sch 80	17. 3 Well Volumes		Size and Type Pump or Baile							
73.7	0.16 0.1534	36 6a//on 18.5 Well Volumes	<i>></i>								
13. Well Diameter (2°) 2" 5CH 40 PVC MW 6"	0.65 0.5972	60.56 Ga	lons Submersible								
14. Well Volume (gal)	1.47 1.3540 2.61 2.3720	19. Purge Volume 40 60									
(s) w.e. height) / \(\alpha \cdot / / 63/' \)	l Final Field		100 NJ								
23. Total Amount of Water 24. Was We Removed Pumped Dry	II 25: Was water adde	d to well? 26. Wa	s the Groundwate what was the sam								
406allons Yes No		Samplin	g Personnel? MW - 2 , 04/07/0								
1		Ch	Banna	1:110	-/3:18						
27. Final Parameters Time Temp C Conductivity		s WL Removed	l Flow Rat	e Observ	vations						
13:17 19.73 4.49.				,,,	clean						
00 8	S IN THE WELL, DO NOT TA										
7	ing in initial	ly - Clead a	Samp	le	:						
29. Purgewater disposal method:	ON GR	OUND Surta	ce '								
	Sampling / Develo		D: 1								
Time Temp C Conductivity		WL Volume (from TOC) (gallons)	Dissolved Oxygen	Flow Rate (gpm)	Photo #, Observ. (1)						
13:02 18:83 2.720		61.65 Initial	4.74	333	TUXBIO						
13:05 19.32 4.204 8	7.47 Clear		4-16	2.5	Clear						
13:13 19.80 4.443	8.68 Ckin		7.04	C/cm-							
13:17 19:73 4:492 8		<u>— 30</u> 61.61' 40	3.80 2.5 cless								
13.17 17.75 4.47.	0,00	<u> </u>			<u> </u>						
			,								
					•						
(1) Note volume and physical character of sedim	ents removed.										
NTU = Nephelometric turbidity units WL = Water Level from Top of PVC Casing				•							
Checked By	M Barles, 1	PL	Date	4/07/0	9						

Type Well	Type of Data ☐ Development ☐ Sampling ☐ Pump Test ☐ Other	Well No. MW-3 Sheet 1 Sheets								
1. Project DBS&A	2. Project Location	3. Date								
Solty Dot Brine Station	Salty Dot, Playa Lake Shel & Brine Well Area	= 04/07/09								
4. Technician CM Barnhill, Pb	Shel & Brine Well Area									
	8.Manufacturer's Designation of Rig	S. Location of Well (Site, Description)								
Pumping Surging Air Lift Bailing Other	DSR · 200/	MONITOR Well 3								
Water Levels										
Initial	Final	Final + 24 Hoursy								
Date: 04/07/04 Time: 13:46	Date: 14:17 15. Total Depth of Well (from TOC)	Date: Time:								
10. Total Depth of Well (from TOC)	15. Total Depth of Well (from TOC)	20. Total Depth of Well (from TOC)								
11. Water Level (from TOC)	16. Water Level (from TOC)	21. Water Level (from TOC)								
12. Water Column Height Nom Dia	x = gal/ft Sch 40 Sch 80 17. 3 Well Volumes $40.80 6a$	22. Size and Type of Pump or Bailer								
13. Well Diameter 2" SCH 40 PVC 6"	0.16 0.1534 18.5 Well Volumes	Red, floz, 1.8"								
2" SCH 40 PVC 6"	147 10540 60 (38//	ons submersible								
14. Well Volume (gal) 13.6 6a//o4s 8"	4/60/	lons. Setat.o.								
23. Total Amount of Water 24. Was Wel	Final Field Analysis 1 25, Was water added to well? 26, \(\)	Was the Groundwater Sampled (Yes) No								
Removed Pumped Dry	? (No.) Yes If ye	what was the sample number & Date: g Personnel? mw-3, 04/67/09								
H/ 62/1045		Barn h: 1/c- 14:13								
27. Final Parameters M5/cm Time Temp C Conductivity		Photo Ball #								
1412 1990 36.61	6.39 Clear 67-68 4/6	red Flow Rate Observations 11043 2,5 6PM Clear Hiz								
IF PETROLEUM IS 28. Physical Appearance and Remarks	Cleve H20									
29. Purgewater disposal method:	ON GROUND Surfac									
10.6/2	Sampling / Development Parameters WL Volume									
Time Temp C Conductivity	pH NTUs (from TOC) (gallons	c) Oxygen (gpm) Observ. (1)								
7 20	.67 Clen 62.02 Initia	1 4.87 2.5 c/cm.								
13:39 20:05 31.40 6	37 Cless - 10	4.35 2.5 Clean								
14:03 20:06 35.92 6	5.37 Clerk — 20	4.16 2.5 Clark								
14:07 19.91 36.48 6	1.37 clear - 30	3.93 2.5 C/em								
14:12 17:90 36.61 6	.39 Clerk 62.68 41	3.18 2.5 C/err								
(1) Note volume and physical character of sedim	ents removed.									
WL = Water Level from Top of PVC Casing Checked By	1-00/11	Date /								
L (Cley o	WINDEN J6	04/07/09								

CMB ENVIRONMENTAL & GEOLOGICAL SERVICES, INC. WELL DATA FORM Type Well Type of Data Well No. MW-4 жĺмW □ Development Sheet 1 Sampling ☐ Production Sheets 1 □ Other Pump Test □ Other 1. Project 1 85¢ A 2. Project Location 04/07/2009 Salty Dob Brine Station alty Dof Playa Loke Shed & Brine Well Arek 4. Technician CM Barnhi Lea Co. NM 8.Manufacturer's Designation of Rig 9. Location of Well (Site, Description) 7. Method Pumping Surging Air Lift Bailing Other MONITON Well#4 DSR-2001 Water Levels Initial Final + 24 Hours Time: 14:35 ime: Date: 04/07/19 Date: 10. Total Depth of Well (from TOC) 15. Total Depth of Well (from TOC) 20. Total Depth of Well (from TOC) 62.5+ 147.3 147.31 11. Water Level (from TOC) 16. Water Level (from TOC) 21. Water Level (from TOC) 6250 12. Water Column Height x=gal/ft 17. 3 Well Volumes Nom 22. Size and Type of Sch 40 Pump or Bailer Dia Sch 80 4069 Gallans 18, 5 Well Volumes 13. Well Diameter CO 162 0.1534 0.65 67.83 Gallons. 0.5972 2" SCH 40 PVL MW 1.47 1.3540 14. Well Volume (gal) 13.56 6 SOF CT.D. 2.61 2.3720 (s) w.e. height) Final Field Analysis 25 Was water added to well? No Yes 23. Total Amount of Water 26. Was the Groundwater Sampled Yes No 24. Was Well Pumped Dry? If yes, what was the sample number & Date: Sampling Personnel? MW - 4,04/07/09 Removed (No) If yes, source: 41601/0015 C'M. Barnhille 15:00 Photo Roll #, 27. Final Parameters m5/Cm Conductivity NTUs Removed Flow Rate Observations - Clear 62:50 416-110HS 2.56Pm 14:59 C/TEL-19,67 IF PETROLEUM IS IN THE WELL, DO NOT TAKE PH AND CONDUCTIVITY PARAMETERS 28. Physical Appearance and Remarks alene 29. Purgewater disposal method: GROUND Surface Sampling / Development Parameters Conductivity Dissolved Flow Rate Photo #. NTUs (gallons) Temp C Oxygen (gpm) Observ. (1) 6.80 initia 12.68 clear 2.56pm Clerk

Sampling / Development Parameters

Time Temp C Conductivity pH NTUs (from TOS), (gallons), Oxygen (gpm) Observ. (1) $14:42 \quad 19.64 \quad 12.68 \quad 6.80 \quad alcent \quad fint \quad fix \quad 10.112 \quad 2.42 \quad 2.5 cpm \quad alcent \quad al$

Checked By

Type Well	Type of Data ☐ Development ☑ Sampling ☐ Pump Test ☐ Other	Well No. MW-5 of Sheets				
1. Project DBS: A Salty Dob Brine Station 4. Technician	2. Project Location Salty Dob Playa Lake Shed & Brine Well Area	3. Date 04/07/09				
CM Barnhill, PG	Lea Co. NM					
7. Method	8.Manufacturer's Designation of Rig	9. Location of Well (Site, Description)				
Pumping Surging Air Lift Bailing Other	DSR-200/	MONITOR Well #5				
	Water Levels					
Initial	Final	Final + 24 Hours				
Date: //07/05 Time: /5:23 10. Yotal Depth of Welt (from TOC)	Date: / 5 / 48 15. Total Depth of Well (from TOC)	Date: Time:				
10. Total Depth of Well (from TOC) (29.78)	15. Fotal Depth of Well (from TOC)	20. Total Depth of Well (from TOC)				
11. Water Level (from TOC) (00, 79	16. Water Level (from TOC)	21. Water Level (from TOC)				
12. Water Column Height Nom Dia	$\begin{array}{c} x = \text{gal/ft} \\ \text{Sch 40} & \text{Sch 80} \end{array}$	22. Size and Type of Pump of Bailer				
13. Well Diameter 2" ScH 40 PVL MW 6"	0.16 0.1534 18.5 Well Volumes 0.65 0.5972 55 12 C	Rodoffoz, 1.8"				
2"SCH 40 PVCMW 6"	1.47 1.3540 35. 77 62					
14. Well Volume (gal) // Gallon 5 - 8" (s) w.e. height)	2.61 2.3720 19. Purge Volume 35 6/1	lons Sete T.O.				
20 Table Annual Water Lot Was West	Final Field Analysis					
23. Total Amount of Water Removed Pumped Dry Yes No.	? Yes If ye 2 Tryes, source: Sam	Was the Groundwater Sampled (Yes) No s, what was the sample number & Date: poling Personnel? MW-5, 04/1/09				
27. Final Parameters		mBarnhille 15:45 Photo Roll #				
27. Final Parameters m3/C, Time Temp C Conductivity 15:43 20:07 3.679	y pH NTUs WL Remov	ved Flow Rate Observations				
	S IN THE WELL, DO NOT TAKE PH AND CONDUCT					
28. Physical Appearance and Remarks	TURBIO Initally - claus	10 0 Samuela				
20 Pursuantar disposal method:		2 C Strappe				
29. Purgewater disposal method:	ON GROUND Suxtace					
	Sampling / Development Parameters WL Volume					
Time Temp C Conductivity	pH NTUs (from TOC) (gallons	s) Oxygen (gpm) Observ. (1)				
13:30 20.27 5.210	7.15 TURBIN 60:79 Initia					
15:34 20.42 4.117	7.10 TURBIO - 10	3.27 2.5 TUERNO SISH				
	7.03 Slight _ 20	3.83 2.5 TURBO				
15:43 20.07 3.679 6	0.97 Clear 60.85' 35	3.95 2.5 Clen				
(1) Note volume and physical character of sedim	nents removed.					
WL = Water Level from Top of PVK Casing	4					
Checked By	the Pb.	Date 04/07/09				

Type Well	Type of Data ☐ Development ☐ Sampling ☐ Pump Test ☐ Other			Well No. MW-b MW-b of / Sheets					
1. Project DBS4 A Salty Dob Brine Station 4. Technician CMBarnhill, P6	2. Project Location Salty Dob Shed & Brid Lea Go,		Ke Frea	3. Date 04/07/09					
7. Method Pumping Surging Air Lift Bailing Other	8.Manufacturer's Designati	on of Rig		9. Location of Well (Site, Description) MONTUR Well # 6					
	Water	Levels							
Initial	Final			Final + 24 Hou	ırş				
Date: 04/07/09 Time: 16:00	Date: 04/07/09 Time	16:30		Date:	Time:				
10. Total Depth of Well (from TOC)	15. Total Depth of Well (from TOC) 1,40		20. Total Depth of Well (fi	rom TOC)				
11. Water Level (from TOC)	16. Water Level (from TC			21. Water Level (from TC	OC)				
12. Water Column Height Nom Dia	x = gal/ft Sch 40 Sch 80	_ ,	162/10	22. Size and Type of gumpor Bailer					
13. Well Diameter 2 " SCH 40 PVC MW 6" 14. Well Volume (gal) 9-07261, 8"	0.1534 0.65 0.5972 1.47 1.3540 2.61 2.3720	18. 5 Well Volur 457 19. Purge Volum	36611	- 1 - 1/10/01/07/07 4 10					
·		d Analysis							
23. Total Amount of Water Removed 24. Was We Pumped Dry Yes	Y? Yes Yes If yes, source:	ed to well?	If yes, who Sampling I	s the Groundwater Sampled (es) No what was the sample number & Date: g Personnel? MW-6, 04/17/0 Barnh: 11c 16:23 Photo Boll #					
27. Final Parameters Time Temp C Conductivit 19.92 0.45		Sio 62.38	3061	Flow Rate Obs	Photo Holl #, servations TUKBIÔ				
28. Physical Appearance and Remarks	TURBIO				·				
29. Purgewater disposal method:		ound Sur	- '						
	Sampling / Develo			Bi El B	DI				
Time Temp C Conductivity 16:10 20:48 1.445 16:14 20:13 0:486	7.73 TURBIO 7.95 TURBIO	100011	Volume (gallons) (b)	Dissolved Flow Rate Oxygen (gpm) 5.94 2.5	Photo #, Observ. (1) Tukk io				
16:18 19:89 0.458	7.77 Sisas		20	5.6/ 2.5	TINAD				
16:22 19.92 0.451	7.65 TURBIO	<u>62.38</u> _	38	<u> </u>	TURBO				
(1) Note volume and physical character of sedin NTU = Nephelometric turbidity units WL = Water Level from Top of PVC Casing	nents removed.								
Checked By	interment	P/_		Date 04/07,	109				

Appendix D
Survey Report

Longitude	-103.370911	-103.370655	-103.37239	-103.370571	-103.372714	-103.372656	-103.372739	-103.373696	-103.373978	-103.3713	-103.374144	-103.373159	-103.372712	-103.372238	-103.371391	-103.371043	-103.371043	-103.371043	-103.37278	-103.37278	-103.37278
Latitude	32.694886	32.69561	32.694786	32.694426	32.696384	32.68803	32.686608	32.686864	32.689339	32.695341	32.688261	32.687516	32.687169	32.686806	32.687104	32.695098	32.695097	32.695098	32.687244	32.687245	32.687244
STICK_UP	-0.269	2.980	2.709	2.933	2.658	2.437	3.000	2.648	2.804	2.521	2.418	2.433	2.682	0.903	1.578	-0.302	-0.276	-0.275	3.341	3.296	3.304
NOTE																SHALLOW	MIDDLE	DEEP	SHALLOW	MIDDLE	DEEP
CONCRETE_ELEV	3817.360	3817.524	3813.953	3817.441	3818.001	3810.213	3807.210	3808.051	3803.460	3818.646	3810.259	3809.616	3808.643	3808.058	3808.590	3817.627	3817.627	3817.627	3809.156	3809.156	3809.156
CASING_ELEV	3817.091	3820.504	3816.662	3820.374	3820.659	3812.650	3810.210	3810.699	3806.264	3821.167	3812.677	3812.049	3811.325	3808.961	3810.168	3817.325	3817.351	3817.352	3812.497	3812.452	3812.460
NORTHING	617873.964	618138.347	617833.410	617707.515	618414.069	615374.784	614857.267	614947.540	615847.216	618038.544	615454.721	615186.298	615061.483	614930.722	615041.326	617950.772	617950.542	617950.848	615088.572	615088.794	615088.531
EASTING	837410.946	837487.158	836956.004	837516.816	836851.361	836896.578	836875.641	836580.482	836485.585	837289.690	836438.049	836743.571	836882.305	837029.110	837288.689	837369.632	837369.657	837369.402	836860.966	836861.043	836861.137
WELL	DBS-1	DBS-2	DBS-3	DBS-4	DBS-5	DBS-6	DBS-7	DBS-8	DBS-9	PMW-1	MW-2	MW-3	MW-4	MW-5	MW-6	NW-1(s)	NW-1(m)	NW-1(d)	NW-2(s)	NW-2(m)	NW-2(d)