BW - 8

ANNUAL REPORT

2021

From:	<u>Ayarbe, John</u>
To:	Chavez, Carl J, EMNRD
Cc:	"Pieter Bergstein (pieter@bergsteinenterprises.com)"; "susan@bergsteinenterprises.com"
Subject:	[EXTERNAL] SUBMITTAL of 2021 Annual Class III Well
Date:	Monday, May 9, 2022 9:22:23 AM
Attachments:	2021 Annual Report Salty Dog 5-09-2022.pdf

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Hi Carl,

Attached is an electronic copy of the 2021 Annual Class III Well Report for the Salty Dog brine station. I'm submitting the report to you on behalf of PAB Services, Inc. The report was prepared in accordance with the requirements of discharge permit BW-8.

Please let me know if you have questions.

Thanks!

John P. Ayarbe Senior Hydrogeologist

Daniel B. Stephens & Associates, Inc.

a Geo-Logic Company 6020 Academy Road NE, Suite 100 Albuquerque, New Mexico 87109 Office: (505) 822-9400 | Direct: (505) 353-9137 Mobile: (505) 280-4339 jayarbe@dbstephens.com or jayarbe@geo-logic.com

www.dbstephens.com | www.geo-logic.com

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May 9, 2022

Mr. Carl Chavez New Mexico Oil Conservation Division Environmental Bureau 1220 South St. Francis Drive Santa Fe, New Mexico 87505-4225

Re: 2021 Annual Class III Well Report Salty Dog Brine Station, Lea County, New Mexico DP-BW-8, API No. 30-025-26307

Dear Mr. Chavez:

On behalf of PAB Services, Inc., Daniel B. Stephens & Associates, Inc. (DBS&A) is submitting the enclosed annual Class III well report for the Salty Dog brine station located in Lea County, New Mexico. The report includes the annual certification by the site operator (Appendix A).

Please call us at (505) 822-9400 if you have any questions or require additional information.

Sincerely,

DANIEL, B. STEPHENS & ASSOCIATES, INC.

John Ayarbe, P.G. Senior Hydrogeologist

JA/rpf Enclosure cc: Pieter Bergstein, PAB Services, Inc.

2021 Annual Class III Well Report Salty Dog Brine Station Lea County, New Mexico DP-BW-8, API No. 30-025-26307

Prepared for New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division

Prepared by



6020 Academy NE, Suite 100 Albuquerque, New Mexico 87109 www.dbstephens.com DB19.1198

May 9, 2022



Table of Contents

1.	Intro	duction	1
2.	Brine	Well Operational Activities	2
	2.1	Fluid Injection and Brine Production	2
	2.2	Injection Pressure	4
	2.3	Chemical and Physical Analyses	4
	2.4	Deviations from Normal Operations	5
		Leaks and Spills	
	2.6	Area of Review	5
	2.7	Mechanical Integrity Test	6
3.	Othe	r Facility Activities	6
4.	Subsi	dence Monitoring and Cavern Characterization	6
5.	Grou	ndwater Conditions	8
Refer	ences		8

List of Figures

- 1 Site Location and Facilities
- 2 Aerial Photograph of Salty Dog Brine Station
- 3 Generalized Brine Well Schematic
- 4 Monitor and Extraction Well Locations
- 5 Land Subsidence Survey Monitoring Point Locations



List of Tables

1	Monthly Water Injection and Brine Production Volumes, 2021	.3
2	Injection Water and Produced Brine Chemical and Physical Characteristics	.4
3	Semiannual Surface Subsidence Monitoring, 2021	.7

List of Appendices

- A Annual Certification
- B 2021 Monthly Fresh Water and Brine Report Forms
- C Brine Well Cavern Characterization
- D Laboratory Analytical Reports
- E Area of Review Evaluation
- F 2021 Survey Data for Land Surface Subsidence Monitoring



1. Introduction

Daniel B. Stephens & Associates, Inc. (DBS&A) has prepared this annual Class III well report for submission to the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (OCD) Environmental Bureau on behalf of PAB Services, Inc. (PAB) for operation of a brine well (Brine Supply Well #1 [API No. 30-025-26307]) at the Salty Dog Brine Station (the site). The site is located in Lea County, New Mexico, approximately 11 miles west of Hobbs, New Mexico along U.S. Highway 62/180 (US 62/180) (Figure 1). This report summarizes operational and monitoring activities conducted at the site in 2021, and was prepared in accordance with the requirements of discharge permit (DP) BW-8, last renewed on May 17, 2019 (NMEMNRD, 2019). Submittal of this report meets Condition 2.J of the permit.

Appendix A provides an annual certification signed by Mr. Pieter Bergstein stating that continued salt solution mining will not cause cavern collapse, surface subsidence, or property damage, and will not otherwise threaten public health and the environment, based on geologic and engineering data.

Salty Dog is a brine water production and loading station, consisting of fresh water supply wells, a brine production well, and a concrete truck loading pad with two brine filling stations. Fresh water is stored in two 1,000-barrel (bbl) aboveground storage tanks (ASTs) near the loading station and a series of ASTs at the brine well. Produced brine is pumped from the brine well to a bermed tank battery consisting of six 750-bbl ASTs, where the brine is stored for sale. The brine well is located approximately 0.5 mile southwest of the brine filling station (Figure 1). Figure 2 provides an aerial photograph of the brine station showing the layout of the current facility infrastructure.

Brine is produced from the in situ extraction of salt at the brine well, a UIC Class III well (Brine Supply Well #1 [API No. 30-025-26307]). The brine well is approximately 3,000 feet deep and has been in operation since the early 1980s. The Salty Dog brine well is configured for reverse circulation brine recovery, where fresh water is circulated down the casing annulus into the Salado Formation—a Permian-age sedimentary rock unit composed of halite (salt) and other evaporative beds. Fresh water dissolves the salt, and the brine is extracted through the center tubing of the well. Figure 3 provides a generalized schematic of the brine well showing its construction, current tubing depth, and the penetrated geologic units.



The physical location of the brine well is 1,980 feet from south line (FSL) and 1,980 feet from east line (FEL) (NW/4 SE/4, Unit Letter J) in Section 5, Township 19 South, Range 36 East, New Mexico Principal Meridian (NMPM). The brine well was installed in June 1979. The original discharge permit for the brine well (GWB-2) appears to have been issued on December 18, 1982 (OCD, 1994). The discharge permit was last renewed on May 17, 2019 (NMEMNRD, 2019).

Injection water used in brine production is obtained from the Ogallala Aquifer by pumping from two fresh water supply wells (FWS-1 and FWS-2) and groundwater remediation well RW-2. Well FWS-1 is the main fresh water supply well. Well FWS-2, located near the brine well, is used as an auxiliary fresh water well during periods of high brine demand. Well RW-2 is used to remove and provide hydraulic containment of chloride-impacted groundwater in the brine well area; groundwater extracted from this well is also used for brine production. Chloride-impacted groundwater in the former brine pond area is contained and removed by pumping from FWS-1. Depth to regional groundwater is approximately 70 feet below ground surface (bgs). Figure 4 shows the well locations.

2. Brine Well Operational Activities

The following subsections report fluid injection/brine production volumes and well maintenance activities.

2.1 Fluid Injection and Brine Production

Except for an approximately 2-year shutdown between 2011 and 2013 and temporary interruptions for routine maintenance and testing (e.g., February 2009 sonar survey [SOCON, 2009]), the brine well has been in continuous operation since 1980, producing an average of approximately 10,500 barrels per month (bbl/mo) of brine between 1980 and 2009. This production rate is based on 1987, 1996–1999, and 2009 brine production and sales records (Salty Dog, 1988, 1999, and Undated).

Both fluid injection and brine production volumes are metered, and daily volumes are recorded on monthly fresh and brine water report forms (Appendix B). Table 1 summarizes monthly injection and production volumes for the reporting period. Injection water for the brine well comes from two fresh water wells (FWS-1 and FWS-2) and a groundwater remediation well (RW-2) (Figure 4). In 2021, average monthly ratios of injected water to produced brine ranged from 0.95 to 1.00.



	Volu	me (bbl)	Ratio
Month	Water Injection	Brine Production	(Injection : Production)
January	7,370	7,370	1.00
February	11,960	11,960	1.00
March	20,635	20,645	1.00
April	—	_	—
Мау	19,680	19,740	1.00
June	23,115	23,115	1.00
July	29,925	31,360	0.95
August	—	_	—
September	43,670	43,710	1.00
October	35,225	35,425	0.99
November	_	_	_
December	27,330	27,330	1.00
Annual total	218,910	220,655	_

Table 1. Monthly Water Injection and Brine Production Volumes, 2021

bbl = Barrels

Based on the data reported in Table 1 and previously reported production records (Salty Dog, 1988, 1999, and Undated; DBS&A, 2014), the estimated cumulative volume of brine production is 7,241,574 bbl.

In 2021, brine production activities at the site dissolved an estimated 31,243 bbl of Salado Formation. This estimate is based on the brine production data reported in Table 1, the average total dissolved solids (TDS) concentrations of the produced brine and injection water reported in Table 2, and an assumed density of the Salado Formation of 2.17 grams per cubic centimeter (g/cm³). Based on the historical and current brine production data, the total estimated size of the brine solution cavern is approximately 1,047,132 bbl, with an estimated cavern floor diameter of 175 feet. The estimation of the cavern floor diameter was calculated using the OCD example salt cavern characterization approach and site data (Appendix C). In 2012, OCD estimated a volume of 1,022,196 bbl for the Salty Dog solution cavern (NMEMNRD, 2012).



Table 2.Injection Water and Produced Brine
Chemical and Physical Characteristics

	Average Concentration (mg/L ^a)			
Constituent	Injection Water	Produced Brine		
pH (s.u.)	7.82	7.17		
Specific gravity (unitless)	1.000	1.200		
Chloride	810	185,000		
Sodium	395	61,000		
TDS	1,750	309,000		

^a Unless otherwise noted

mg/L = Milligram per liter

NM = Not measured

s.u. = Standard units

TDS = Total dissolved solids

2.2 Injection Pressure

Pressure is monitored on the well tubing and on the annulus between the inner tubing and outer casing. These measurements are recorded on the monthly fresh and brine water report forms (Appendix B). In 2021, recorded daily tubing pressure remained steady at 125 pounds per square inch (psi), while annulus pressure was generally 375 psi.

2.3 Chemical and Physical Analyses

Condition 2.A of DP-BW-8 requires semiannual monitoring of the chemical and physical characteristics of the injection water and produced brine, including pH, density, and TDS and chloride concentrations. The permit also requires that the sodium concentration of the produced brine be analyzed.

Table 2 reports average constituent concentrations calculated from the 2021 semiannual monitoring data. Samples of the injection water and produced brine were collected in June and November 2021. Dissolution of the Salado Formation increases the constituent concentrations and specific gravity of the produced brine relative to the injection water. The average TDS concentration and average specific gravity of the injection water are 1,750 milligrams per liter (mg/L) and 1.000, respectively, while the same properties of the produced brine are 309,000 mg/L and 1.200, respectively. Appendix D provides the laboratory analytical reports associated with the semiannual monitoring events.



Historical water quality analyses show TDS concentrations of the fresh water and produced brine to be approximately 600 mg/L and 320,000 to 350,000 mg/L, respectively (Martin, 1982; Unichem, 1987).

2.4 Deviations from Normal Operations

There were no deviations from normal operations in 2021.

2.5 Leaks and Spills

There were no leaks or spills in 2021.

On May 20, 2021, PAB received a letter of violation from OCD for supposed releases of brine in multiple areas at the site. The OCD identified the supposed released during an inspection conducted on May 5, 2021 (OCD, 2021). In response to the letter of violation and in consultation with OCD, PAB collected soil samples from 12 locations around the brine well on July 28, 2021. The soil samples were submitted to Cardinal Laboratories in Hobbs, New Mexico for analysis of several constituents, including benzene, toluene, ethylbenzene, and total xylenes (BTEX), chloride, and gasoline, diesel, and mineral oil range organics. The results of the analysis showed that the constituents of each sample were below applicable criteria specified in Table I of 19.15.29 NMAC. It was therefore deemed that abatement was unnecessary (DBS&A, 2021).

2.6 Area of Review

Condition 3.G of DP BW-8 requires Salty Dog to report within 72 hours the discovery of any new wells, conduits, or other devices that (1) are within a 1-mile radius and (2) may penetrate to the injection zone of the brine well.

The brine station is located on private property in rural southeastern New Mexico, approximately 11 miles west of Hobbs. The majority of the area surrounding the site is undeveloped and owned by the State of New Mexico.

On April 12, 2022, DBS&A conducted an area of review evaluation using the OCD online oil and gas maps application. This application is accessible through the OCD website (http://www.emnrd.state.nm.us/OCD/ocdgis.html). Appendix E provides a map produced from the area of review evaluation. The map shows that there are two previously plugged and abandoned wells (API 30-025-03989 and API 30-025-42773) southwest of the Salty Dog brine



well. However, no new brine wells or other penetrations that may penetrate into the injection zone of the Salty Dog brine well are present within a 1-mile radius of the brine well.

2.7 Mechanical Integrity Test

A mechanical integrity test (MIT) was not conducted on the brine well in 2021. The last MIT was performed in 2018.

In December 2017, the brine well was damaged because anhydrite had collapsed the well tubing. The well was subsequently repaired, and was operational again in February 2018. On February 9, 2018, before placing the well back in operation, PAB conducted an MIT on the well; it passed the test. Gary Robinson of OCD was present during the MIT. A record of the MIT was provided in the 2017 annual Class III well report (DBS&A, 2018a).

Prior to the February 2018 MIT, the last MIT was performed on October 31, 2013, when Salty Dog conducted a Bradenhead test on the brine well. The test showed no problems with the integrity of the well casing. Results of this test were reported to OCD on November 15, 2013.

Pursuant to 20.6.2.5204 New Mexico Administrative Code (NMAC), PAB is required to demonstrate mechanical integrity of the brine well at least once every five years.

3. Other Facility Activities

There were no other facility activities in 2021 outside of normal operations.

4. Subsidence Monitoring and Cavern Characterization

Condition 2.B.1 of DP BW-08 requires Salty Dog to monitor for potential land subsidence in the area of the brine well (OCD, 2019). To meet this condition, PAB contracted Peterson Drilling and Testing, Inc. and DBS&A to install five subsidence survey monitoring points at the site in March 2018 (DBS&A, 2018b). The five subsidence survey monitoring points include three points located approximately 200 feet from the brine well, one point located approximately 60 feet from the brine well, and one point that is a metal tab welded to the brine well casing (Figure 5). Construction and placement of the monitoring points were conducted in accordance with



DBS&A (2014). Basin Surveys of Hobbs, New Mexico surveyed the monitoring points after their installation (Appendix F). The initial survey was conducted on March 23, 2018 using the nearest U.S. Geological Survey (USGS) benchmark referenced to NMSPCE (NAD 83).

In accordance with Condition 2.B.1 of DP-BW-8, Salty Dog has each monitoring point surveyed semiannually to at least the nearest 0.10 foot (OCD, 2019). Atkins Engineering Associates Inc. (Atkins) conducted the 2021 semiannual surveys on June 29 and November 23, 2021. The survey data are reported in Table 3, and show no indication of land subsidence. The semiannually surveyed elevations at SMP-01 through SMP-04 are all within ±0.03 foot of the initial survey. At SMP-05, the 2021 elevations are 1.66 feet lower than the initial elevation; however, there are no indications of subsidence at the brine well, where the SMP-05 metal tab is welded. In 2021, Atkins replaced Basin Surveys and began to conduct subsidence monitoring at the site. The differences between the initial survey and those in 2021 at SMP-05 appear to be due to the change in surveyors. Appendix F provides the survey reports.

	Elevation (feet msl)			
Survey Monitoring Point	Initial 3/23/2018	First Semiannual 6/29/2021	Second Semiannual 11/23/2021	
SMP-01	3,810.11	3,810.10	3,810.10	
SMP-02	3,809.01	3,809.02	3,809.02	
SMP-03	3,808.80	3,808.83	3,808.83	
SMP-04	3,806.32	3,806.33	3,806.33	
SMP-05 (brine well)	3,811.72	3,810.06	3,810.06	

Table 3. Semiannual Surface Subsidence Monitoring, 2021

msl = Above mean sea level

Condition 2.B.2 of DP BW-08 requires solution cavern characterization using geophysical methods to estimate the size and shape of the solution cavern. During a December 9, 2016 phone call between DBS&A (on behalf of PAB) and OCD (Jim Griswold and Carl Chavez), it was agreed that solution cavern characterization using geophysical methods would be conducted only if surface subsidence was detected during semiannual surveying of the monitoring points. Section 2.1 of this report presents an estimated size and diameter for the solution cavern.



5. Groundwater Conditions

Salty Dog is addressing groundwater impacts resulting from releases at the brine well and a former brine pond. A hole in the casing of the brine well at 250 feet bgs was discovered in 1999 (Salty Dog, 1999). The hole released brine, impacting groundwater, and was repaired in August 1999 by installing a casing liner (Salty Dog, 1999). In October 2008, the brine pond was removed and impacted soil was excavated and disposed of (DBS&A, 2008). The area of the former brine pond is shown in Figures 1 and 2.

Two chloride plumes currently exist at the site: one in the area of the brine station (i.e., the former brine pond area) and a second near the brine well. In 2009, PAB initiated groundwater extraction to remove and provide hydraulic containment of brine-impacted groundwater at the brine station and near the brine well (DBS&A, 2009). Groundwater abatement and monitoring activities are being conducted to satisfy an administrative compliance order issued by OCD (ACO 2008-02) and settlement agreement and stipulated revised final order (NM-OCD 2008-2A) between OCD and Mr. Bergstein.

Groundwater monitoring and extraction data are reported and evaluated in reports submitted to OCD (e.g., DBS&A, 2022). The data include water levels and water quality at the site monitor wells. Site monitor wells are shown in Figure 4.

References

- Daniel B. Stephens & Associates, Inc. (DBS&A). 2008. Closure report, brine pond and loading area, 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. December 3, 2008.
- DBS&A. 2009. *Recovery well installation and pump test report, 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. November 20, 2009.
- DBS&A. 2014. Work plan for surface subsidence monitoring and solution cavern characterization, Salty Dog Brine Station. Prepared for the New Mexico Energy, Minerals and Natural



Resources Department Oil Conservation Division, Environmental Bureau, Santa Fe, New Mexico. September 17, 2014.

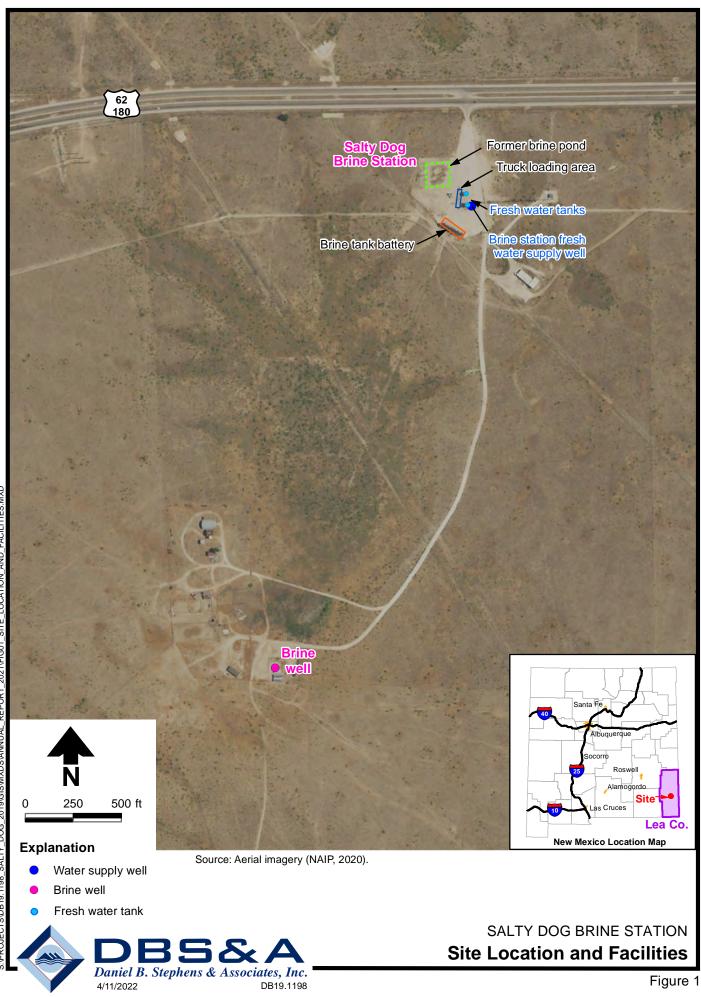
- DBS&A. 2018a. 2017 annual Class III well report, Salty Dog Brine Station, DP BW-8, API No. 30-025-26307, Lea County, New Mexico. Prepared for the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division. May 1, 2018.
- DBS&A. 2018b. Letter report from John Ayarbe and Michael D. McVey to Carl Chavez, Oil Conservation Division, regarding Installation of monitor well and subsidence survey monitoring points, Salty Dog Brine Station (API No. 30-025-26307). June 25, 2018.
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- Martin Water Laboratories, Inc. (Martin). 1982. Result of water analyses for raw water and brine water samples collected November 1, 1982. Prepared for Natural Resources Engineering Inc. November 1, 1982.
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- NMEMNRD. 2019. Letter from Adrienne Sandoval to Pieter Bergstein, PAB Services, Inc., regarding Renewal of discharge permit (BW-8) PAB Services, Inc., UIC Class III Brine Well "Brine Supply Well No.1" (API No. 30-025-26307) UL: J Section 5 Township 19 South, Range 36 East, 1980 FSL, 1980 FEL, Lat. N 32.68847°, Long. W 103.37445°, NMPM, Lea County, New Mexico. May 17, 2019.
- Oil Conservation Division, New Mexico Energy, Minerals and Natural Resources Department (OCD). 1994. Letter from Roger C. Anderson to Larry Squires, Salty Dog, regarding Discharge plan BW-08 renewal, Salty Dog Inc. water station, Lea County, New Mexico. March 4, 1994.

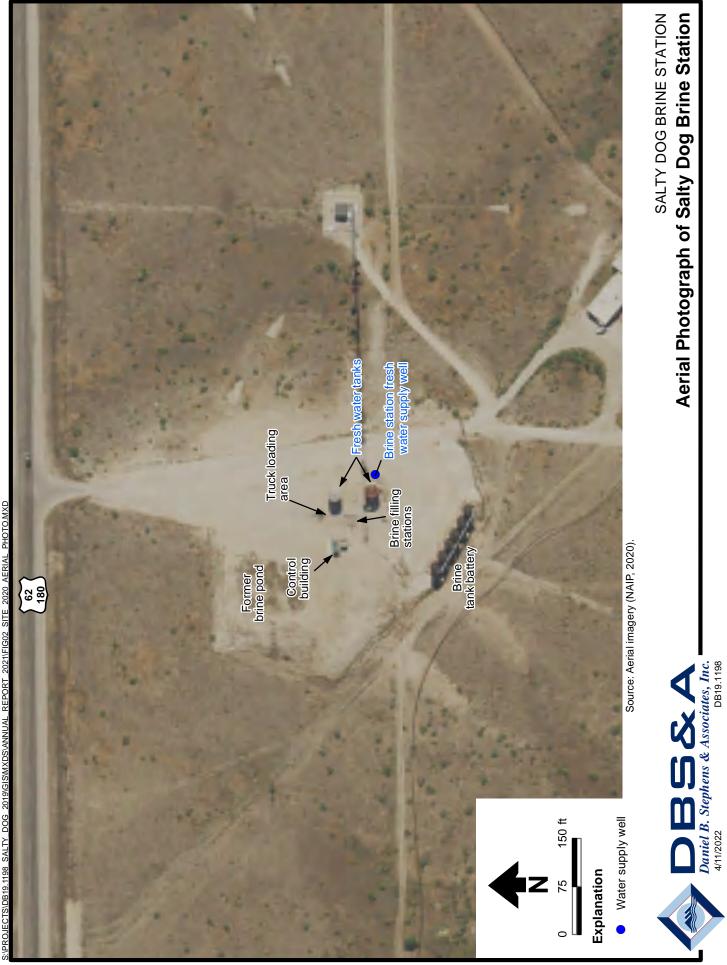


- OCD. 2021. Letter from Eugene Bolton to Salty Dog, Inc. regarding Letter of violation Field inspection. May 20, 2021.
- Salty Dog, Inc. (Salty Dog). 1988. Letter report outlining facility data for quarter ending September 1987. February 25, 1988.
- Salty Dog. 1999. Form C-103 report on Brine supply well #1. Submitted September 8, 1999. Approved by OCD December 1, 1999.
- Salty Dog. Undated. E-mail from James Millett to Jim Griswold, OCD, regarding Salty Dog 2009 sales.
- SOCON Sonar Well Services, Inc. (SOCON). 2009. ECHO-LOG, Salty Dog, Inc. Brine well No: 1, Hobbs, New Mexico: First SOCON Sonar Well Services survey. February 5, 2009.
- Unichem International (Unichem). 1987. Laboratory results for water samples collected on November 25, 1987. Prepared for Larry Squires. December 1, 1987.

Figures

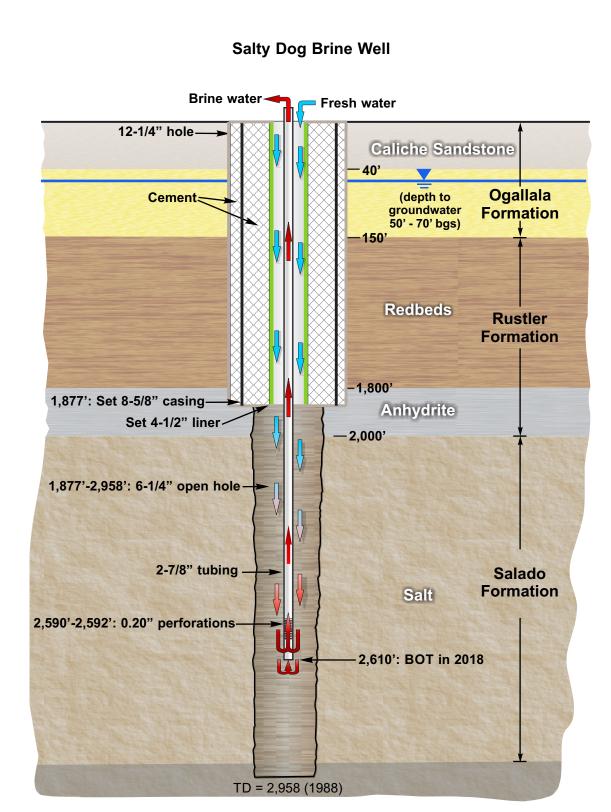






SVPROJECTS/DB19.1198 SALTY DOG 2019/GIS/MXDS/ANNUAL REPORT 2021/FIG02 SITE 2020 AERIAL PHOTO.MXD

Figure 2



Notes:

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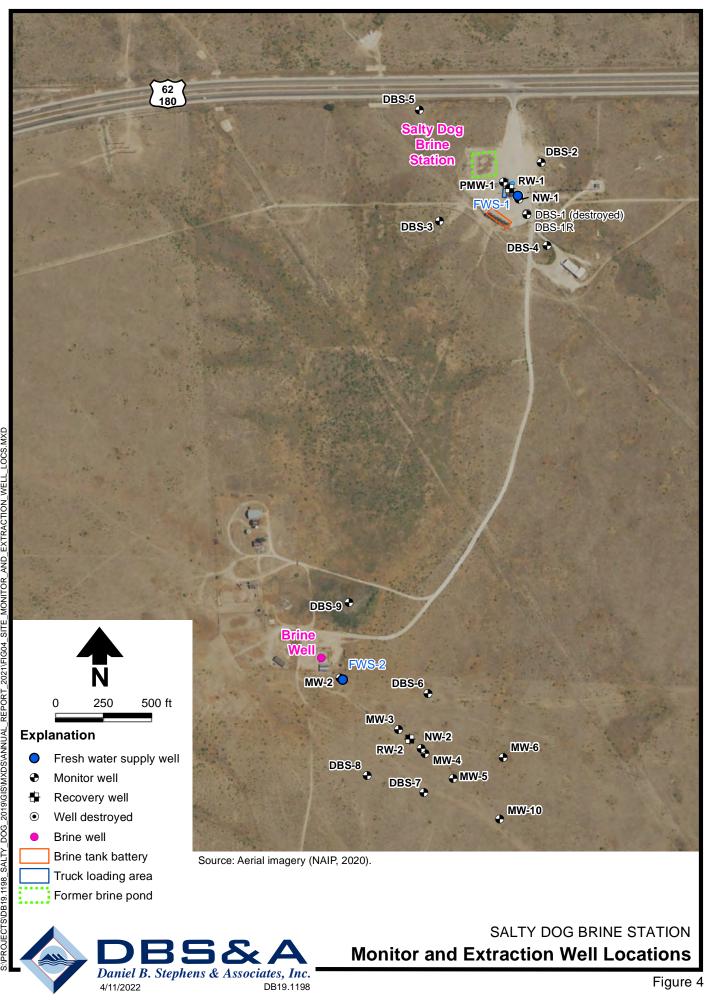
- 1. BOT = Bottom of tubing
- 2. Figure not to scale

Sources:

- 1. Completion data based on OCD well reports
 - 2. Lithology from Salty Dog (1988)



SALTY DOG BRINE STATION Generalized Brine Well Schematic



PROJECTS/DB19.1198_SALTY_DOG_2019/GIS/WXDS/ANNUAL_REPORT_2021/FIG04_SITE_MONITOR_AND_EXTRACTION_WELL_LOCS: MXD



Figure 5

Appendix A

Annual Certification



Annual Certification

PAB Services, Inc. certifies that continued salt solution mining will not cause cavern collapse, surface subsidence, property damage, or otherwise threaten public health and the environment based on geologic and engineering data.

RETITU BEUGITEI,4

Name

Title

5/5/22

CED

Signature

Date

Appendix B

2021 Monthly Fresh Water and Brine Report Forms



		MONTHLY I	FRESH & BR	INE WATER F	REPORT	
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	AMOUNT OF FRESH	AMOUNT OF			
	WATER PUMPED	BRINE WATER	DAILY TURING	DAILY CASING	FRESH
	DOWN HOLE	OUT OF HOLE	PRESSURES	PRESSURES	WATER
Date	BBLS	BBLS SOLD	PSI	PSI	SOLD
1	1100	1100	104	572	
2	1220	1220	100,00	0225	220
3 .	1226-	1.1330	1.25	395	200
4 13		A SOUT	1 12	315	,520
5	265			- 3.1.2	120
6	T-1-12D	1920 -	.25	375	
7	400	1 400 -	103		
8	626	525	125	395	360
9	125	335	125	375	200
10	300	300	125	375	120
11	300	300	124-	3/2<	40
12			125	375	130
13	200	200	125	375	
14	400	400	125	375	
15	1.020	13630	125	125	190
16	, #00	- 800	125	123	100
17	150	1490	12.5	135	70
18 .	050	2.50	128	125	
19	(1) 905	10 905	158	125	
20	1270	1270	105	376	
21				225	
22	Con God	2000 900	135-	245	
23	320	320	10.0	375	70
24	15	15	35	378	
25	290	380	125	3575	60
26				- cere-	
27	200	200	125	375	
28	600	600	125	375	
29	- 410	STORY LIA	124	276 1	NOT ATTA
30	425	4425	1925	325	60
31	1======================================	110,0000	125	975	
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		DALT	1 J X Z Y		
		all JUN			
	AMOUNT OF FRESH	AMOUNT OF			
	WATER PUMPED	BRINE WATER		DAILY CASING	FRESH
	DOWN HOLE	OUT OF HOLE	PRESSURES	PRESSURES	WATER
Date	BBLS	BBLS SOLD	PSI	PSI	SOLD
1	170	170	175	3725	0000
2	2200	23,00	125	Jam	
3	1.50		- 1 - 2	250	
4	11.5		-12-25		
5	1000	600	125	7=13	175
6	125	1635		-224	
7	200	200	125	3200	20
8	Zm	200	175		130
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12	áct)		123	375	130
13	1020			704	
14			125 25-	376	
15	2700		100	2(5	
16	700	<u> </u>	00	-343	
17		XCD	102	30	
18	1 2000 0 100			345	
19				3 12	201
20					301
21	0.00	5100	- 192	3.72	30
22		200	-123		
23	and the second s	:\$g		3.12	
	2.00		125		
24	10	17.0		- 765	
25	200	200	125	3.775	
26		W. From	125	373	1.24
27			125	375	60
28	1	1	125	-375	
29			125	325	
30			1.252	375	
31		<u> </u>	23	372	
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٦.		AMOUNT OF FRESH	AMOUNT OF			
		WATER PUMPED	BRINE WATER	DAILY TUBING	DAILY CASING	FRESH
		DOWN HOLE	OUT OF HOLE	PRESSURES	PRESSURES	WATER
	Date	BBLS	BBLS SOLD	PSI	PSI	SOLD
	1	575 300	570 300	125	375	
	2	760 300	. 760 Soc	@125_	375	
	3	2800	2800	125	370	
	4	800	600		└───	
	5	- 1100	400			
	6	630	630		_/	
	8	+125 1190	600	·		
	9	1100	1/00 1190			150
	10	1260	260		<u> </u>	
	11 1	GAD	900			
	12	1800	1800		/	
	13	1130	1130			120
	14	1290	1290			1250
	15	660	660			00
	16	930	930		1	
	17	1000	1000	/		(A)
	18 .	- 590	- 590 -			to
1	19	1000		/		500
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	22	600	600			
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ł	25					μ
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	FACILITY/LOCATIO	0	Ly Dog		
	MONTH/YEAR	7-21	THEATC	0	
	AMOUNT OF FRESH				EDECH
	WATER PUMPED	BRINE WATER	DAILY TUBING	DAILY CASING	FRESH
	DOWN HOLE	OUT OF HOLE	PRESSURES	PRESSURES	WATER
Date	BBLS	BBLS SOLD	PSI	PSI	SOLD
	570	670 /	- 125	20	<u> </u>
2	380	380	125	325	
3		- 630	125	3.65	
4			125	575	
5	600	600 15/16	125-	362	
6	- 1565	565	1.25	375	<u> </u>
			1125	375	6
8	12:0	1,2:30	125	375	
9		3860	125	375	
10	400 /	HOO	125	375	
11	400	480	125	375	-FFO
12	2030	20.50	125	32<-	25
13	2395	2060	125	375	
14	1590	1590	125	375	
15	1450 .	7450	100 115	276-	160
16	200	300 .	125-105	375- 1	125
17	1.030	L.0.3D	100	224	
18	70 11000	74		275	
19	806	800	. 25	220	
20	410	410	12:0	264	
21	660		TOC-	22	
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24	· / /	4(1)	125	22	
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26		- 1077)	122	23	
27	- 1520	1520	125	3.65	
28	· aun illing		125	375	
29	100	740		375	
		. tou	125-	375	
30	240	735	125	325	
31	-700	900	125	325	
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	MONTH/YEAR	7021	7003	September		
						5
	AMOUNT OF FRESH	AMOUNT OF				
	WATER PUMPED	BRINE WATER	DAILY TUBING	DAILY CASING	FRESH	
	DOWN HOLE	OUT OF HOLE	PRESSURES	PRESSURES	WATER	
Date	BBLS	FPISSOLD	PSI	PSI	SOLD]
1	1100	11001	-			4
2	1140	1140	/I 1			4
3	TOU				120	4
4	1800	1800 -				-
6	-2700		, ,			1460
7	1010	- 2700			155	- 17/4-
8	TIDIA	1000 -			<u> </u>]
9	69.5	695 1			20 70	
10	Fing 10	710 1			·D	4
11	- ILIDO	1950 /			20	4
12	1390	1290 1			20	-
14	. 1020					-
15	CORD - The 164h	1020			2110	-
16	920	920			25	
17	1150	1150 1			-	1
18	960	900 1].
19	1500	1500 1				1
20	404,070	4,070			150	4
21	600 - 900 ·	500 400 V			80	4
22	2.040	- 1460.V	ļ		27.	4
24	1 Heren 1240	L J JOS V	r		54	4
25	820	220				1
26	000					1 ·
27	2.05	-295 V				1
28	SUD	240 V			277 .]
29	1,700	1700 1			125]
30	3,060	13:050 1				-
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Date	Work/Repairs	Work/Repairs	Estimated Cost	Work Author	ized hy	
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MONTHLY FRESH & BRINE WATER REPORT

	FACILITY /LOCATION Salty Dog				
	MONTH/YEAR Oct-21				
	AMOUNT OF FRESH				
	WATER PUMPED	AMOUNT OF BRINE	DAILY TUBING	DAILY CASING	
	DOWN HOLE	WATER OUT OF HOLE	PRESSURES	PRESSURES	FRESH WATER
DATE	BBLS	BBLS SOLD	PSI	PSI	SOLD
1	. 3600	3800			
2	1900	1900			
3	1500	1500			
4	1560	1560			25
5	600	600			115
6	5 1290	1290			100
7	1800	1800			25
8	800	800			220
9	820	820			
10	400	400			
11	. 1050	1050			
12	1610	1610			25
13	625	625			
14	500	500			115
15	600	600			120
16	5 200	200			20
17	400	400			170
18	3 2120	2120			
19	600	600			170
20	1800	1800			
21	. 3350	3350			125
22	1500	1500			
23	1550	1550			180
24	400	400			30
25	400	400			20
26	300	300			220
27	1800	1800			160
28	3 1170	1170			
29	300	300			90
30	380	380			
31	300	300			P
TOTALS	35225	35425	0	0	1930

MONTHLY FRESH & BRINE WATER REPORT

	FACILITY /LOCATIC)N				
	MONTH/YEAR		Salty Dog Nov-21			
	AMOUNT OF FRESH				1	
	WATER PUMPED	AMOUNT OF BRINE	DAILY TUBING	DAILY CASING		
	DOWN HOLE	WATER OUT OF HOLE	PRESSURES	PRESSURES	FRESH WATER	
DATE	BBLS	BBLS SOLD	PSI	PSI	SOLD	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
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22						
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26						
27						
28						
29						
30						
31						
TOTALS	0	0	0	0	0	

MONTHLY FRESH & BRINE WATER REPORT

	FACILITY /LOCATION Salty Dog				
	MONTH/YEAR Dec-21				
	AMOUNT OF FRESH				
	WATER PUMPED	AMOUNT OF BRINE	DAILY TUBING	DAILY CASING	
	DOWN HOLE	WATER OUT OF HOLE	PRESSURES	PRESSURES	FRESH WATER
DATE	BBLS	BBLS SOLD	PSI	PSI	SOLD
1	. 300	300			360
2	430	430			
3	2160	2160			
4	1430	1430			25
5	860	860			
6	i 460	460			
7	180	180			
8	2330	2330			
9	800	800			25
10	400	400			
11	1250	1250			
12	420	420			120
13	1320	1320			
14	1300	1300			100
15					25
16	820	820			240
17	/ 1190	1190			90
18	3 2220	2220			30
19	700	700			90
20	800	800			
21	470	470			
22	1790	1790			180
23	290	290			50
24	1200	1200			
25	400	400			
26	5				
27	220	220			
28	3 400	400			100
29	1400	1400			120
30	1790	1790			
31					
TOTALS	27330	27330	0	0	1555

Appendix C

Brine Well Cavern Characterization



0 9 8 P 9.10 11	0-1-1-0				Calcula	tion Cover	Sheet
4 0 0 0 1 0 1 1 0 V	Daniel B. Steph	nens & Assoc	ciates, Inc	c.			
Project Nar	ne <u>Salty Dog Brine W</u>	ell Cavern Chara	acterization	Project N	umber <u>DB1</u>	9.1198.00	
Calculation	Number <u>1</u>	C	Discipline	Hydrology	No	. of Sheets	2
PROJECT:							
Salty Dog							
SITE:							
Salty Dog E	Brine Station, Lea County	, New Mexico.					
SUBJECT:							
Brine Well	Cavern Characterization						
SOURCES	OF DATA:						
2. Lat	nthly fresh and brine wat poratory analytical reports storical documents and in	s for brine and fr	eshwater sa	mpling			
The above Dog Brine S	data sources are referen	ced and summa	arized in the	main body of the	2021 Annual	Class III Well F	Report, Salty
SOURCES	OF FORMULAE & REFE	ERENCES:					
New Mexic	co Energy, Minerals an	d Natural Res	ources Dep	artment (NMEM	NRD). Undat	ed. Example	Salt Cavern
Charac	terization. Emailed to DB	S&A from NME	NMRD on De	ecember 7, 2018	(Included her	ein).	
	any Calculation					Neulation No.	
	ary Calculation		al Calculatio		upersedes Ca	alculation No.	
Rev. No.	Revision	Calculation By	Date	Checked By	Date	Approved By	Date

	,	,	11 7	



Project No.	DB19.1198.00	Date <u>4/21/2022</u>	
Subject	Brine Well Cavern Characterization	Sheet <u>1</u> of <u>1</u>	
By <u>J. Kess</u>	erChecked By _J. Ayarbe	Calculation No.	1

1. Purpose

Calculate the estimated height and estimated floor diameter of the brine cavern at the Salty Dog Brine Station.

2. Given

1. Volume of the brine cavern at the end of 2021:

Volume = 1,047,132 barrels (bbl)

Value based on historical and present brine production data, as presented in the main body of the 2021 Annual Class III Well Report, Salty Dog Brine Station.

2. Equation for the volume of a cone:

$$Volume = \frac{\pi \times radius^2 \times height}{3}$$

3. Brine well construction (Figure 3):

Casing is set at 1,877 feet below ground surface (feet bgs). Tubing was set at 2,610 feet bgs in 2018, when the brine well was repaired.

3. Method

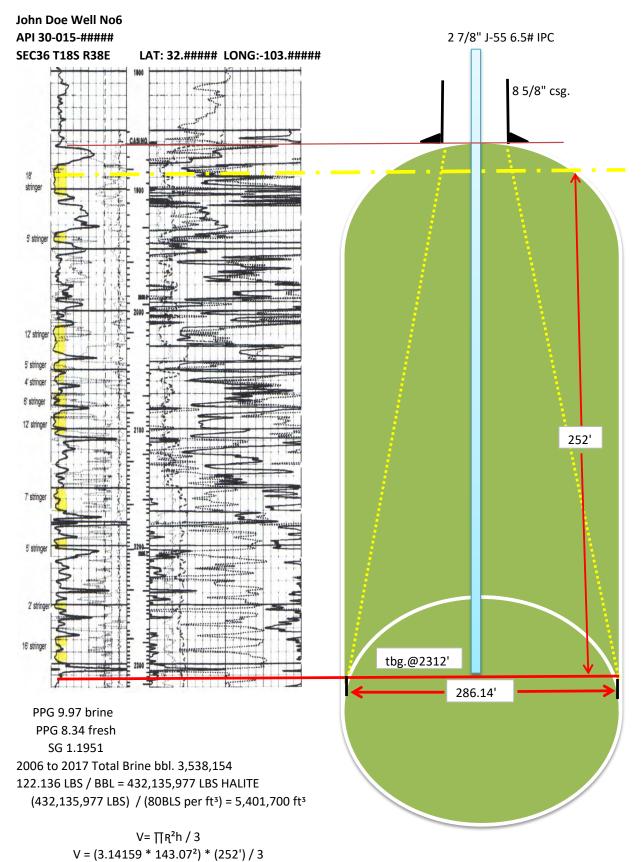
Cavern height calculated as the difference between the bottom of the well casing and the 2018 tubing depth of 2,610 feet bgs.

Floor diameter calculated by solving for radius in the cone-volume equation.

4. Solution

$$\begin{aligned} \text{Cavern Floor Diameter} \\ 1 \ bbl &= 5.614584 \ \text{acre-feet} \\ radius &= \sqrt{\frac{3 \times Volume}{\pi \times height}} = \sqrt{\frac{3 \times 1.047,132 \ bbl}{\pi \times 733 \ feet}} \times \frac{5.614584 \ ft^3}{bbl} = 87.52 \ feet \end{aligned}$$

 $diameter = 2 \times radius = 2 \times 87.52$ feet = 175.0 feet



V = 5,401,648.6 ft.³

Est. hight is 252' Est. cavern floor diameter is 286.14'

Appendix D

Laboratory Analytical Reports





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

June 21, 2021

Mike Zbrozek Daniel B. Stephens & Assoc. 6020 Academy NE Suite 100 Albuquerque, NM 87109 TEL: FAX

OrderNo.: 2106279

RE: Salty Dog

Dear Mike Zbrozek:

Hall Environmental Analysis Laboratory received 14 sample(s) on 6/4/2021 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis	• Date Reported: 6/21/2021					
CLIENT: Daniel B. Stephens & Assoc.		Client Sample	DBS-1R			
Project: Salty Dog	Collection Date: 6/2/2021 4:15:00 PM					
Lab ID: 2106279-001	Matrix: AQUEOUS Received Date: 6/4/2021 11:00:00 AM					
Analyses	Result	RL Qual Units	DF Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS			Analy	st: JMT		
Chloride	2200	100 * mg/L	200 6/11/2021 1:07:14 AM	1 A79019		

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 21

Hall Environmental Analysis	• Date Reported: 6/21/2021					
CLIENT: Daniel B. Stephens & Assoc.		Client Sam	nple ID: D	BS-2		
Project: Salty Dog		Collection	n Date: 6/	/2/2021 4:45:00 PM		
Lab ID: 2106279-002	Matrix: AQUEOUS	Receive	ed Date: 6/	4/2021 11:00:00 AM		
Analyses	Result	RL Qual U	Units DI	F Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS				Analys	st: CAS	
Chloride	85	5.0 n	mg/L 10	0 6/7/2021 12:07:27 PM	R78920	

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

Qualifiers:

* Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits Sample pH Not In Range
- Р RL Reporting Limit

Page 2 of 21

Hall Environmental Analysis	Date Reported: 6/21/2021					
CLIENT: Daniel B. Stephens & Assoc.		Client Sample	ID: PMW-1			
Project: Salty Dog	Collection Date: 6/2/2021 3:50:00 PM					
Lab ID: 2106279-003	Matrix: AQUEOUS	Received Da	ate: 6/4/2021 11:00:00 AM			
Analyses	Result	RL Qual Units	DF Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS			Analy	st: JMT		
Chloride	6800	250 * mg/L	500 6/11/2021 1:19:34 AM	A79019		

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 21

Hall Environmental Analysis	• Date Reported: 6/21/2021					21	
CLIENT: Daniel B. Stephens & Assoc.		Client	Sample I	D: DI	3S-4		
Project:Salty DogCollection Date: 6/3/2021 9:30:00 AM					0 AM		
Lab ID: 2106279-004	Matrix: AQUEOUS	Rec	eived Dat	t e: 6/4	/2021 11:00:	00 AM	
Analyses	Result	RL Qu	al Units	DF	Date Analyz	zed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: CAS
Chloride	39	5.0	mg/L	10	6/7/2021 1:24	4:48 PM	R78920

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 21

Hall Environmental Analysis	• Date Reported: 6/21/2021					
CLIENT: Daniel B. Stephens & Assoc.		Client S	ample I	D: DBS-5		
Project: Salty Dog	Collection Date: 6/3/2021 10:00:00 AM					
Lab ID: 2106279-005	Matrix: AQUEOUS Received Date: 6/4/2021 11:00:00 AM					
Analyses	Result	RL Qua	l Units	DF Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS				Analys	t: CAS	
Chloride	170	50	mg/L	100 6/7/2021 2:03:26 PM	R78920	

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

Qualifiers: *

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- JAnalyte detected below quantitation limitsPSample pH Not In Range
- P Sample pH Not In RL Reporting Limit

Page 5 of 21

Hall Environmental Anal	• Date Reported: 6/21/2021						
CLIENT: Daniel B. Stephens & Ass	ос.	Client	Sample I	D: DE	38-3		
Project: Salty Dog		Colle	ection Dat	t e: 6/3	/2021 10:35:00 AM		
Lab ID: 2106279-006	Matrix: AQUEOUS	Matrix: AQUEOUS Received Date: 6/4/2021 11:00:00 AM					
Analyses	Result	RL Qua	al Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS					Analys	t: CAS	
Chloride	52	5.0	mg/L	10	6/7/2021 2:16:19 PM	R78920	

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

Qualifiers:

* Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix D

- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 6 of 21

Hall Environmental Analysis	• Date Reported: 6/21/2021				
CLIENT: Daniel B. Stephens & Assoc.		Client Sample	D: DBS-9		
Project: Salty Dog Collection Date: 6/3/2021 11:15:00 AM					
Lab ID: 2106279-007	Matrix: AQUEOUS	Received Da	te: 6/4/2021 11:00:00 AM		
Analyses	Result	RL Qual Units	DF Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS			Analys	st: CAS	
Chloride	290	50 * mg/L	100 6/7/2021 2:54:58 PM	R78920	

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 7 of 21

Hall Environmental Analysis	• Date Reported: 6/21/2021)21	
CLIENT: Daniel B. Stephens & Assoc.		Client	t Sample I	D: DE	3S-8		
Project: Salty Dog		Coll	ection Dat	e: 6/3	8/2021 11:35	:00 AM	
Lab ID: 2106279-008	Matrix: AQUEOUS	Re	ceived Dat	:e: 6/4	/2021 11:00	:00 AM	
Analyses	Result	RL Qu	al Units	DF	Date Analy	zed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: CAS
Chloride	35	5.0	mg/L	10	6/7/2021 3:3	3:38 PM	R78920

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 8 of 21

Hall Environmental Analysis	• Date Reported: 6/21/2021				
CLIENT: Daniel B. Stephens & Assoc.		Client Sample I	D: DBS-10		
Project: Salty Dog	ect: Salty Dog Collection Date: 6/3/2021 12:15:00 PM				
Lab ID: 2106279-009	Matrix: AQUEOUS	Received Dat	te: 6/4/2021 11:00:00 AM		
Analyses	Result	RL Qual Units	DF Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS			Analys	st: CAS	
Chloride	560	50 * mg/L	100 6/7/2021 4:12:16 PM	R78920	

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 9 of 21

S % Recovery outside of range due to dilution or matrix

Hall Environmental Analysis	Laboratory, Inc	•		Date Reported: 6/21/20	021
CLIENT: Daniel B. Stephens & Assoc.		Client	t Sample I	D: DBS-6	
Project: Salty Dog		Coll	lection Dat	te: 6/3/2021 3:15:00 PM	
Lab ID: 2106279-010	Matrix: AQUEOUS	Re	ceived Dat	te: 6/4/2021 11:00:00 AM	
Analyses	Result	RL Qu	ial Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analys	st: CAS
Chloride	250	50	mg/L	100 6/7/2021 4:38:01 PM	R78920

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- JAnalyte detected below quantitation limitsPSample pH Not In Range
- RL Reporting Limit

Page 10 of 21

Hall Environmental Analysis	s Laboratory, Inc	•	Date Reported: 6/21/20	021
CLIENT: Daniel B. Stephens & Assoc.		Client Sample I	D: MW-5	
Project: Salty Dog		Collection Da	te: 6/3/2021 1:30:00 PM	
Lab ID: 2106279-011	Matrix: AQUEOUS	Received Da	te: 6/4/2021 11:00:00 AM	
Analyses	Result	RL Qual Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS			Analys	st: CAS
Chloride	640	50 * mg/L	100 6/7/2021 5:03:46 PM	R78920

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 11 of 21

S % Recovery outside of range due to dilution or matrix

Analytical Report

Lab Order 2106279

ed: 6/21/2021 Data Danor

Han Environmental Analysis	Laboratory, Inc	•	Date Reported: 6/21/2
CLIENT: Daniel B. Stephens & Assoc.		Client Sample I	D: MW-3
Project: Salty Dog		Collection Dat	te: 6/3/2021 2:55:00 PM
Lab ID: 2106279-012	Matrix: AQUEOUS	Received Dat	te: 6/4/2021 11:00:00 AM
Analyses	Result	RL Qual Units	DF Date Analyzed
SPECIFIC GRAVITY			Analys
Specific Gravity	0.9991	0	1 6/9/2021 4:37:00 PM

Hall Environmental Analysis Laboratory Inc.

Lab ID: 2106279-01	2	Matrix: AQUEOUS	Received Date: 6/4/2021 11:00:00 AM					
Analyses		Result	RL	Qual	Units	DF	Date Analyzed	Batch
SPECIFIC GRAVITY							Analyst:	CAS
Specific Gravity		0.9991	0			1	6/9/2021 4:37:00 PM	R79010
EPA METHOD 300.0:	ANIONS						Analyst	: JMT
Fluoride		ND	1.0		mg/L	10	6/11/2021 1:44:14 AM	A79019
Chloride		4400	250	*	mg/L	500	6/11/2021 1:31:54 AM	A79019
Bromide		2.0	1.0		mg/L	10	6/7/2021 5:16:40 PM	R78920
Phosphorus, Orthophos	phate (As P)	ND	5.0	Н	mg/L	10	6/11/2021 1:44:14 AM	A79019
Sulfate		290	5.0	*	mg/L	10	6/7/2021 5:16:40 PM	R78920
Nitrate+Nitrite as N		ND	4.0		mg/L	20	6/17/2021 10:34:18 PM	R79167
SM2510B: SPECIFIC	CONDUCTANCE						Analyst	CAS
Conductivity		19000	100		µmhos/c	10	6/15/2021 1:22:09 PM	R79103
SM2320B: ALKALINIT	Υ						Analyst	CAS
Bicarbonate (As CaCO3	3)	226.3	20.00		mg/L Ca	1	6/8/2021 6:18:24 PM	R78958
Carbonate (As CaCO3)		ND	2.000		mg/L Ca	1	6/8/2021 6:18:24 PM	R78958
Total Alkalinity (as CaC	O3)	226.3	20.00		mg/L Ca	1	6/8/2021 6:18:24 PM	R78958
SM2540C MOD: TOTA		S					Analyst	KS
Total Dissolved Solids		9910	200	*D	mg/L	1	6/11/2021 2:15:00 PM	60550
SM4500-H+B / 9040C:	PH						Analyst	CAS
рН		7.53		н	pH units	1	6/8/2021 6:18:24 PM	R78958
EPA 6010B: TOTAL R	ECOVERABLE META	LS					Analyst	ags
Calcium		840	10		mg/L	10	6/11/2021 6:49:30 PM	60475
Magnesium		130	10		mg/L	10	6/11/2021 6:49:30 PM	60475
Potassium		14	10		mg/L	10	6/11/2021 6:49:30 PM	60475
Sodium		2500	50		mg/L	50	6/11/2021 6:52:30 PM	60475

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

D Sample Diluted Due to Matrix Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

Page 12 of 21

Analytical Report

Lab Order 2106279

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/21/2021

CLIENT: Daniel B. Stephens & Assoc.Project: Salty DogLab ID: 2106279-013	Matrix: AQUEOUS		Collect		:6/3	ine 3/2021 3:30:00 PM 4/2021 11:00:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SPECIFIC GRAVITY						Analyst:	CAS
Specific Gravity	1.200	0			1	6/9/2021 4:37:00 PM	R79010
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	170000	10000	*	mg/L	2E-	+ 6/11/2021 2:21:17 AM	A79019
SM2540C MOD: TOTAL DISSOLVED SOL	IDS					Analyst:	KS
Total Dissolved Solids	315000	2000	*D	mg/L	1	6/11/2021 2:15:00 PM	60550
SM4500-H+B / 9040C: PH						Analyst:	CAS
рН	7.21		н	pH units	1	6/8/2021 12:59:09 PM	R78958
EPA 6010B: TOTAL RECOVERABLE MET	ALS					Analyst:	ags
Sodium	71000	2000		mg/L	2E-	+ 6/11/2021 6:55:28 PM	60475

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 13 of 21

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order **2106279** Date Reported: **6/21/2021**

Project:	Daniel B. Stephens & Assoc. Salty Dog			Collect		e: 6/3/	/2021 3:45:00 PM	
Lab ID:	2106279-014	Matrix: AQUEOUS		Receiv	ved Date	e: 6/4/	/2021 11:00:00 AM	
Analyses		Result	RL	Qual	Units	DF	Date Analyzed	Batch
SPECIFIC	GRAVITY						Analyst	CAS
Specific	Gravity	0.9995	0			1	6/9/2021 4:37:00 PM	R79010
EPA MET	HOD 300.0: ANIONS						Analyst	CAS
Chloride		520	50	*	mg/L	100	6/7/2021 6:46:51 PM	R78920
SM2540C	MOD: TOTAL DISSOLVED SOL	IDS					Analyst	KS
Total Dis	solved Solids	1210	40.0	*D	mg/L	1	6/11/2021 2:15:00 PM	60550
SM4500-I	H+B / 9040C: PH						Analyst	CAS
pН		7.78		Н	pH units	1	6/8/2021 1:03:43 PM	R78958
EPA 6010	B: TOTAL RECOVERABLE MET	ALS					Analyst	ags
Sodium		310	20		mg/L	20	6/11/2021 6:12:09 PM	60475

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

- D Sample Diluted Due to MatrixH Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 14 of 21



Pace Analytical® ANALYTICAL REPORT June 17, 2021

Hall Environmental Analysis Laboratory

Sample Delivery Group:

L1363019 06/08/2021

Project Number: Description:

Samples Received:

Report To:

Jackie Bolte 4901 Hawkins NE Albuquerque, NM 87109

Тс Ss Cn Sr ʹQc Gl AI Sc

Entire Report Reviewed By: John V Haulins

John Hawkins Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

ACCOUNT: Hall Environmental Analysis Laboratory

SDG: L1363019

DATE/TIME: 06/17/21 16:04 PAGE: 1 of 9

TABLE OF CONTENTS

Cp: Cover Page
Tc: Table of Contents
Ss: Sample Summary
Cn: Case Narrative
Sr: Sample Results
2106279-012C MW-3 L1363019-01
Qc: Quality Control Summary
Wet Chemistry by Method 2580
GI: Glossary of Terms
Al: Accreditations & Locations
Sc: Sample Chain of Custody

¹Cp ²Tc ³Ss ⁴Cn ⁵Sr ⁶Qc ⁷Gl ⁸Al ⁹Sc

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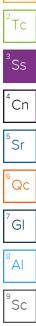
<mark>8</mark> 9

PROJECT:

SDG: L1363019 DATE/TIME: 06/17/21 16:04

SAMPLE SUMMARY

2106279-012C MW-3 L1363019-01 GW			Collected by	Collected date/time 06/03/21 14:55	Received date 06/08/21 09:0	
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Wet Chemistry by Method 2580	WG1688858	1	06/15/21 21:06	06/15/21 21:06	AMH	Mt. Juliet, TN



Ср

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

John V Hankins

John Hawkins Project Manager



SDG: L1363019

2106279-012C MW-3 Collected date/time: 06/03/21 14:55

SAMPLE RESULTS - 01

Wet Chemistry by Method 2580

	 Result	Qualifier	Dilution	Analysis	Batch	 Ср
Analyte	mV			date / time		2
ORP	194	<u>T8</u>	1	06/15/2021 21:06	WG1688858	Tc

VG1688858	et Chemistry by Method 2580
$\stackrel{\circ}{\geq}$	Wet

QUALITY CONTROL SUMMARY

-1363019-01 Original Sample (OS) • Duplicate (DUP)	OS) • Duplicate (DI	licate (DI	\equiv	(dr			0 U U
(OS) L1363019-01 06/15/21 21:06 • (DUP) R3667688-3 06/15/21 21:06	R3667688-3 06/15/.	06/15/.	21 21	1:06			-
Original Result DUP Result Dilution DUP Diff mV mV mV	DUP Result Dilut mV	DIIUT	ы	DUP DIIT	DUP Qualifier	DUP Diff Limits mV	² Tc
194 187 1	187 1	-		6.40		20	
							°SS

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

	Diff Limits	шV	20	
	LCSD Qualifier Diff	MV	0000	
	LCS Qualifier			
	Rec. Limits	%	86.0-105	
	LCSD Rec.	%	100	
9	LCS Rec.	%	100	
2 06/15/21 21:0	LCSD Result LCS Rec.	шV	106	
)) R3667688-	LCS Result	mV	106	
LCS) R3667688-1 06/15/21 21:06 • (LCSD) R3667688-2 06/15/21 21:06	Spike Amount LCS Result	шV	106	
(LCS) R3667688-1 0		Analyte	ORP	

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GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.
Qualifier	Description
	Sample(s) received past/too close to holding time expiration.

Sc

SDG: L1363019

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina 1	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky ¹⁶	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ¹⁴	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

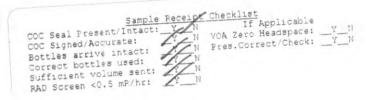
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





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

SUB CC	ONTRATOR: Pa	ace TN	COMPANY:	PACE TN		PHONE	(800) 767-3	5859 FAX:	(615) 758-5859
ADDRE	.SS: 12	2065 Lebanon Ro				ACCOUNT #:		EMAIL:	
CITY, S	TATE, ZIP: M	lt. Juliet, TN 371	22						
							# CON		A134
ITEM	SAMPL	LE CLIENT S	AMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	FAINERS	ANALYTIC	AL COMMENTS UB63019
1	2106279-0	012C MW-3		125HDP	Aqueous	6/3/2021 2:55:00 PM	1 ORP		-01



SPECIAL INSTRUCTIONS / COMMENTS:

HALL

ANALYSIS

LABORATORY

ENVIRONMENTAL

Relinquished By: 56	Date: 6/4/2021	Time: 11:50 AM	Received By:	Date:	Time:	REPORT TRANSMITTAL DESIRED:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Received By M	- 818/21	Time 0900	Temp of samples 2-7-, 1=2- C Attempt to Cool ?

WO#:	2106279
	21-Jun-21

Client: Daniel B. Stephens & Assoc. Project: Salty Dog	
Project: Salty Dog	
Sample ID: MB SampType: mblk TestCode: EPA Method 300.0: Anions	
Client ID: PBW Batch ID: R78920 RunNo: 78920	
Prep Date: Analysis Date: 6/7/2021 SeqNo: 2768606 Units: mg/L	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPD	Limit Qual
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPD Chloride ND 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50 <t< td=""><td></td></t<>	
Bromide ND 0.10	
Sulfate ND 0.50	
Sample ID: LCS SampType: Ics TestCode: EPA Method 300.0: Anions	
Client ID: LCSW Batch ID: R78920 RunNo: 78920	
Prep Date: Analysis Date: 6/7/2021 SeqNo: 2768609 Units: mg/L	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPD	Limit Qual
Chloride 4.6 0.50 5.000 0 92.0 90 110	
Bromide 2.4 0.10 2.500 0 95.6 90 110	
Sulfate 9.4 0.50 10.00 0 94.5 90 110	
Sample ID: MB SampType: mblk TestCode: EPA Method 300.0: Anions	
Client ID: PBW Batch ID: A79019 RunNo: 79019	
Prep Date: Analysis Date: 6/10/2021 SeqNo: 2772142 Units: mg/L	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPD	Limit Qual
Fluoride ND 0.10	
Chloride ND 0.50	
Phosphorus, Orthophosphate (As P ND 0.50	
Sample ID: LCS SampType: Ics TestCode: EPA Method 300.0: Anions	
Client ID: LCSW Batch ID: A79019 RunNo: 79019	
Prep Date: Analysis Date: 6/10/2021 SeqNo: 2772143 Units: mg/L	
	Limit Qual
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPD	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPD Fluoride 0.54 0.10 0.5000 0 108 90 110	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPD Fluoride 0.54 0.10 0.5000 0 108 90 110 Chloride 4.7 0.50 5.000 0 94.3 90 110	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPD Fluoride 0.54 0.10 0.5000 0 108 90 110 Chloride 4.7 0.50 5.000 0 94.3 90 110 Phosphorus, Orthophosphate (As P 4.7 0.50 5.000 0 93.4 90 110 Sample ID: MB SampType: mblk TestCode: EPA Method 300.0: Anions 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 500.00 <td></td>	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPD Fluoride 0.54 0.10 0.5000 0 108 90 110 Chloride 4.7 0.50 5.000 0 94.3 90 110 Phosphorus, Orthophosphate (As P 4.7 0.50 5.000 0 93.4 90 110	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPD Fluoride 0.54 0.10 0.5000 0 108 90 110 Chloride 4.7 0.50 5.000 0 94.3 90 110 Phosphorus, Orthophosphate (As P 4.7 0.50 5.000 0 93.4 90 110 Sample ID: MB SampType: mblk TestCode: EPA Method 300.0: Anions Client ID: PBW Batch ID: R79167 RunNo: 79167 Prep Date: Analysis Date: 6/17/2021 SeqNo: 2778673 Units: mg/L	Limit Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

RL Reporting Limit

WO#:	2106279
	21-Jun-21

Client:	Daniel B. St	tephens	& Asso	с.							
Project:	Salty Dog										
Sample ID: LCS		SampT	ype: Ics		Tes	tCode: EF	PA Method	300.0: Anions	5		
Client ID: LCSW		Batch	1D: R7	9167	R	unNo: 79	9167				
Prep Date:	A	nalysis D	ate: 6/	17/2021	S	eqNo: 2	778679	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N		3.4	0.20	3.500	0	98.3	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Client:	Daniel B. Stephens & Assoc.
Project:	Salty Dog

Sample ID: LCS-1 100.1US EC	SampTy	/pe: lcs	i	Tes	Code: SI	M2510B: Sp	ecific Condu	ictance		
Client ID: LCSW	Batch	ID: R7	9103	R	unNo: 7 9	9103				
Prep Date:	Analysis Da	ate: 6/	15/2021	S	eqNo: 2	776630	Units: µmhc	os/cm		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	100.1	0	100	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

WO#:	2106279
	21 Jun 21

21-Ju	ın-21
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Client:	Daniel	B. Stephens	& Asso	c.							
Project:	Salty D	og									
Sample ID:	MB-60475	SampT	ype: ME	BLK	Tes	tCode: EF	PA 6010B: 1	Total Recover	able Meta	als	
Client ID:	PBW	Batch	ID: 604	475	F	RunNo: 7 9	9050				
Prep Date:	6/7/2021	Analysis Da	ate: 6/	11/2021	S	SeqNo: 2	73736	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		ND	1.0								
Magnesium		ND	1.0								
Potassium		ND	1.0								
Sodium		ND	1.0								
Sample ID:	LCS-60475	SampT	ype: LC	S	Tes	tCode: EF	PA 6010B: 1	Total Recover	able Meta	als	
Client ID:	LCSW	Batch	ID: 604	475	F	RunNo: 7 9	9050				
Prep Date:	6/7/2021	Analysis Da	ate: 6/	11/2021	S	SeqNo: 2	73738	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		52	1.0	50.00	0	104	80	120			
Magnesium		51	1.0	50.00	0	102	80	120			
Potassium		50	1.0	50.00	0	99.6	80	120			
Sodium		51	1.0	50.00	0	103	80	120			
Sample ID:	LCSD-60475	SampT	ype: LC	SD	Tes	tCode: EF	PA 6010B: 1	Total Recover	able Meta	als	
Client ID:	LCSS02	Batch	ID: 604	475	F	RunNo: 7 9	9050				
Prep Date:	6/7/2021	Analysis Da	ate: 6/	11/2021	5	SeqNo: 27	73739	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		52	1.0	50.00	0	103	80	120	0.534	20	
Magnesium		51	1.0	50.00	0	101	80	120	0.497	20	
Potassium		50	1.0	50.00	0	99.0	80	120	0.612	20	
Sodium		50	1.0	50.00	0	101	80	120	2.03	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

WO#:	2106279
	21-Jun-21

 Client:
 Daniel B. Stephens & Assoc.

 Project:
 Salty Dog

Sample ID: 2106279-012A dup	SampType	: dup	Tes	tCode: SN	//4500-H+B	/ 9040C: pH			
Client ID: MW-3	Batch ID	R78958	F	RunNo: 78	3958				
Prep Date:	Analysis Date	6/8/2021	S	SeqNo: 27	770026	Units: pH ur	nits		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.53								Н

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

WO#:	2	2106279
	21	I 21

21-Jun-21

Client: Project:	Daniel B. Stephens a Salty Dog	& Asso	с.							
•										
Sample ID: mb-1 a						//2320B: All	kalinity			
Client ID: PBW		Batch ID: R78958			RunNo: 78					
Prep Date:	Analysis Da	ate: 6/8	8/2021	5	SeqNo: 27	69902	Units: mg/L	. CaCO3		
Analyte Total Alkalinity (as CaCC	Result 3) ND	PQL 20.00	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: Ics-1 al	,	ype: Ics		Tes	tCode: SN	//2320B: All	kalinity			
Client ID: LCSW		ID: R7			RunNo: 78					
Prep Date:	Analysis D	ate: 6/	8/2021	S	SeqNo: 27	769903	Units: mg/L	. CaCO3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCC		20.00	80.00	0	91.8	90	110			
Sample ID: Icsd all	k SampT	ype: Ics	d	Tes	tCode: SN	/12320B: All	kalinity			
Client ID: LCSS0	2 Batch	ID: R7	8958	F	RunNo: 78	3958				
Prep Date:	Analysis Da	ate: 6/8	8/2021	S	SeqNo: 27	69904	Units: mg/L	. CaCO3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCC	3) 74.72	20.00	80.00	0	93.4	90	110	1.73	20	
Sample ID: mb-2 a	ik SampT	ype: mb	lk	Tes	tCode: SN	/12320B: All	kalinity			
Client ID: PBW	Batch	ID: R7	8958	F	RunNo: 78	3958				
Prep Date:	Analysis Da	ate: 6/8	8/2021	S	SeqNo: 27	69926	Units: mg/L	. CaCO3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCC	3) ND	20.00								
Sample ID: Ics-2 al	k SampT	ype: I cs	i	Tes	tCode: SN	/12320B: All	kalinity			
Client ID: LCSW	Batch	ID: R7	8958	F	RunNo: 78	3958				
Prep Date:	Analysis Da	ate: 6/8	B/2021	S	SeqNo: 27	69927	Units: mg/L	. CaCO3		
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCC	3) 74.36	20.00	80.00	0	93.0	90	110			
Sample ID: 210627	9-012A dup SampT	ype: du	р	Tes	tCode: SN	/12320B: All	kalinity			
Client ID: MW-3	Batch	ID: R7	8958	F	RunNo: 78	3958				
Prep Date:	Analysis Da	ate: 6/8	B/2021	S	SeqNo: 27	69929	Units: mg/L	. CaCO3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCC	3) 227.1	20.00						0.353	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

WO#:	2106279
	21-Jun-21

Client:	Daniel B. Stephens & Assoc.
Project:	Salty Dog
Sample ID: MB-60	550 SampType: MBLK TestCode: SM2540C MOD: Total Dissolved Solids
Client ID: PBW	Batch ID: 60550 RunNo: 79026
Prep Date: 6/10/	2021 Analysis Date: 6/11/2021 SeqNo: 2772439 Units: mg/L
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Dissolved Solids	ND 20.0
Sample ID: LCS-6	SampType: LCS TestCode: SM2540C MOD: Total Dissolved Solids
Client ID: LCSW	Batch ID: 60550 RunNo: 79026
Prep Date: 6/10/	2021 Analysis Date: 6/11/2021 SeqNo: 2772440 Units: mg/L
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Dissolved Solids	1030 20.0 1000 0 103 80 120
Sample ID: 21062	Y9-014ADUP SampType: DUP TestCode: SM2540C MOD: Total Dissolved Solids
Client ID: Injecti	Dn Batch ID: 60550 RunNo: 79026
Prep Date: 6/10/	2021 Analysis Date: 6/11/2021 SeqNo: 2772462 Units: mg/L
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Dissolved Solids	1220 40.0 0.495 10 *D

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 21 of 21

ANAL	RONMENTAL	Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com				Sample Log-In Check List		
Client Name:	Daniel B. Stephens & Assoc.	Work Order Number:	2106	279		RcptNo: 1		
Received By:	Desiree Dominguez	6/4/2021 11:00:00 AM		T	Po			
Completed By:	Sean Livingston	6/4/2021 11:35:56 AM		<	$\langle \rangle$	mate		
Reviewed By:	JO	06.04.21		Ĩ.)r-L	- Jon-		
Chain of Cus	stody							
1. Is Chain of C	Custody complete?		Yes	~	No 🗌	Not Present		
2 How was the	sample delivered?		Clien	t				
Log In 3 Was an atter	npt made to cool the sampl	or?	N					
was an allel	npt made to cool the sampl	691	Yes	v 1	No 🗌			
4. Were all sam	ples received at a temperat	ure of >0° C to 6.0°C	Yes		No 🗌			
5. Sample(s) in proper container(s)?			Yes		10 🗆			
Sufficient san	st(s)?	Yes	v N	lo 🗌				
7. Are samples	perly preserved?	Yes	V N	lo 🗆				
8. Was preservative added to bottles?			Yes	N	lo 🗹	NA 🗌		
9. Received at le	east 1 vial with headspace	<1/4" for AQ VOA?	Yes [•	NA 🔽		
0. Were any sar	mple containers received br	oken?	Yes	1	10 🔽	# of preserved		
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)			Yes [✓ N	lo 🗌	for pH:		
2. Are matrices	correctly identified on Chair	of Custody?	Yes	V N	o 🗆	Adjusted? NO		
	t analyses were requested?		Yes [o 🗌	12 1 1		
	ng times able to be met? ustomer for authorization.)		Yes	✓ N	o 🗌	Checked by: JR 6/4/2		
pecial Handl	ling (if applicable)							
15. Was client no	otified of all discrepancies w	ith this order?	Yes	- N	lo 🗌	NA 🗹		
Person	Notified:	Date:						
By Who	om:	Via:] eMai	il 🗌 Phone	🗌 Fax	In Person		
Regarding:								
Client I	nstructions:							
16. Additional re	marks: pourod a	of 125ml fro	m	samo	ple	0124 for ORP analy		
7. <u>Cooler Infor</u> Cooler No	mation		eal Da			JR 614/21		

	1110110													
Client:	D	aniel B	s stephens	C Standard	□ Rush			1	ANAL		STS.		ANALYSTS LABORATORY	TORY
		1		Project Name:					MMM	www.hallenvironmental.com	vironm	ental.	com	
Mailing	Mailing Address:	AB	Q OFFICE	Salty	ty Dog	6	49	4901 Hawkins NE	vkins N	i.	puque	rque, l	Albuquerque, NM 87109	
				Project #:			-н 	Tel. 505-345-3975	345-36		Fax 5	05-34	Fax 505-345-4107	
Phone #:	#: SOS	5-822	0016-27	DB19.	.1198.0	00				Ana	Analysis Request	edue	st	
email	or Fax#: /	WZD1	email or Fax#: MZbrozck. @Geo-Log.c. cBroject Manager:	Brøject Mana	ger:	2	1.00	-	Ş	²OS		(tue:		
QA/QC Packa	Package: ndard		□ Level 4 (Full Validation)	.12	1020102		12222	10.0	SMIS	PO₄,		sdA\t		
Accred	Accreditation.		Az Compliance	Samular M	M. 7 brozek	X		28		^{'2} O		uəs	00	
	AC	□ Other		-	☑ Yes	ON D		08/s	-				_	
	EDD (Type)			# of Coolers:	-		_	əpi	_		(_	4	
				Cooler Temp(including CF).	Vi	(0.0 8.5= 2.04 (°C)		estic		-	AO\		14	
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.) XЭТВ 18:Н9Т	9 1808	r) 803 PAHs t	RCRA CI, F, I) 0928	8) 0728 Total C		
6/2/2	12 1615	GW	DRS-IR		NA				· · · · · ·				×	
	1645	~	DBS-2	1 1		200						-	X	
-	1550	-	1-MWd			283							X	
6/3/2	10930	_	DBS-4			1001							X	
-	0001		DBS-S			200						_	×	
	1035		DBS-3			000							X	
	1115		D35-9			400							X	
	1135		D85-E			008							×	
	1215		D05-10			600							X	
_	1515	-	DB5-6			010							X	
\geq	1330	>	S-MW	2	\mathbf{i}	110							×	
)			11			11	+		1	+	T	H	1	
Date: \$\4/z1	Time:		red by:	Received by:	CD6	Date Time 1. 4. 2/ 11:00	Remarks:	:S:	00	06	-	of	R	
Date:	Time:	Relinquished by	JAG pau	Received by:	Via:	Date Time))				

ClearL DSA Claradian Claradia Claradian Cl																
Project Name: Project Name: Soul HY Dory DBJ9.119%.CC DBJ9.119%.CC DBJ9.119%.CC Matrix Sampler: Ma		C Standard	D Rush					1 ×							12	
and Adress: $J \subseteq Q \in C_1 \subset C$ $\sum \Delta J + V D \odot$ By Adress: $J \subseteq Q \in C_1 \subset C$ $\sum D \subseteq J \cap D$ $D \subseteq J \cap D$ Project #: $D \subseteq J \cap D$ $D \subseteq J \cap D$ $D \subseteq J \cap D$ Project #: $D \subseteq J \cap D$ $D \subseteq J \cap D$ $D \subseteq J \cap D$ Project #: $D \subseteq J \cap D$ $D \subseteq J \cap D$ $D \subseteq J \cap D$ Project #: $D \subseteq J \cap D$ $D \subseteq J \cap D$ $D \subseteq J \cap D$ Project #: $D \subseteq J \cap D$ $D \subseteq J \cap D$ $D \subseteq J \cap D$ Project #: $D \subseteq J \cap D$ $D \subseteq J \cap D$ $D \subseteq J \cap D$ Project #: $D \subseteq D \cap D$ $D \subseteq J \cap D$ $D \cap D \cap D$ Project #: $D \subseteq D \cap D \cap D$ $D \cap D \cap D$ $D \cap D \cap D$ Project #: $D \cap D \cap D \cap D$ $D \cap D \cap D \cap D$ $D \cap D \cap D \cap D$ Project #: $D \cap D \cap$		Project Name:										2	1	5		
Project #: Project #: Tel. 605-355-70 O D6197.11 975, CO Project #: D6197.11 975, CO D6197.11 975, CO Analysis Reveal Project Manager: D72.02.2.970 O B72.02.2.970 O Analysis Reveal Project Manager: D72.02.11 975, CO Analysis Reveal Analysis Reveal Project Manager: D1 Level 4 (Full Validation) Reveal Reveal Analysis Reveal Sampler: Analysis Reveal Reveal Analysis Reveal Sampler: Analysis Reveal Analysis Reveal Analysis Reveal Sampler: Analysis Reveal Analysis Reveal Analysis Reveal Sampler: Analysis Reveal Analysis Reveal Analysis Reveal Reveal		S	tY D	60	490	1 Hawl	ins NF	- All		roue	NM S	37100				
Control Lave Level 4 Full Validation D D Control D Control Control		Project #:			Tel	. 505-3	45-397	2	AXE	05-34	15-41	20				
Matheware Handger: Matheware Handger: In Level 4 (Full Validation) Bampler: Sampler: Matheware Sampler: <td>Phone #: 505-822-9400</td> <td>DB17.</td> <td>36</td> <td>0</td> <td></td> <td></td> <td></td> <td>Anal</td> <td>/sis F</td> <td>seque</td> <td>st</td> <td>;</td> <td></td> <td></td> <td></td> <td></td>	Phone #: 505-822-9400	DB17.	36	0				Anal	/sis F	seque	st	;				
Image: Contraine fruit Con	email or Fax#: MZbrozeK@Geo-Lenic, co	Project Manag	er:			-		*O		(+-	(11	_			6	1
Image: Sample: M.C. Image: M.C. Image: M.C. Image: M.C. Image: M.C. Image: M.C. Image: M.C.	QA/QC Package: @CStandard □ I evel 4 (Full Validation)	0	0	7364		s,80	SMIS	S '*00		.0040/	11 11	11d		21	2002	8019
Line Date Interface Sampler: Interface Sampler: <t< td=""><td></td><td></td><td>1</td><td></td><td></td><td></td><td>502</td><td>3,F</td><td>4</td><td>fuc</td><td>></td><td>10</td><td>80</td><td>4/</td><td>T</td><td>9</td></t<>			1				502	3,F	4	fuc	>	10	80	4/	T	9
Matrix Sample Name Dotoels Matrix Sample Name Cooler Temponention on: Statule Container Preservative HEAL No. Finance Container Preservative Multi-S Statule Nulti-S Statule Multi-S Statule Container Preservative HEAL No. Container Preservative Nulti-S Statule Nulti-S Statule Brinne Zatule Nulti-S Statule Nulti-S Statule Statule Nulti-S Statule Statule Nulti-S Statule Statule Nulti			. é.	Ĩ	0.50	1	.82	QN	75		1991	202	010	17:	200	20
Matrix Sample Name For cooler An uncores: An uncores:		- Inde			1000				16		_	1	19	n.	18	N
Time Matrix Sample Name Container Preservative HEAL No. 21 $17/3G$ GW $MU-3$ 2 real # $70.02.746$ 8081 Pest 21 323 $17/3G$ GW $MU-3$ 3 real # $700.67.46$ 8081 Pest 21 323 $17/3G$ GW $MU-3$ 3 real # $700.67.46$ 8081 Pest 17 $17/3G$ GW 10.01 $17/3G$ $17/3G$ $17/3G$ $17/3G$ $17/3G$ GW 10.01 10.01 10.01 10.01 10.01 10.01 $17/3G$ 10.01 10.01 10.01 10.01 10.01 10.01 $17/3G$ 10.01 10.01 10.01 10.01 10.01 10.01 1100 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01 10.01		# of Cooler Toms	1	101	10.00	1.1.1	_) (4	-		4	5	pu	1>	4
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			cluding CF). 5. 0	Q.C *			1000	_	/OA		-	100	NV	(0)	110	60
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Time		reservative	HEAL No.			1	_) 09Z			of.	poo.	de	104	12
S30 Brine Brine Zpichten Zpik Old N X VXX $Tnjechten$ $Zpik$ $0ld$ $0ld$ X X VXX $Tnjechten$ $Zpik$ $0ld$ $0ld$ $0ld$ X VXX $Tnjechten$ $Zpik$ $0ld$ $0ld$ $0ld$ X VXX $Tnjechten Zpik 0ld 0ld 0ld VXX VXX Dite Tnjechten Dite Dite VXX $	145 GW	ŧ	hees	6100012			-	_	8 ×				57	S X	2 X	dx
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

December 20, 2021

John Ayarbe Daniel B. Stephens & Assoc. 6020 Academy NE Suite 100 Albuquerque, NM 87109 TEL: FAX:

OrderNo.: 2112013

RE: Salty Dog

Dear John Ayarbe:

Hall Environmental Analysis Laboratory received 14 sample(s) on 12/1/2021 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis	a Laboratory, Inc.				Date Reported: 12/20/	2021
CLIENT: Daniel B. Stephens & Assoc.		Client S	ample I	D: DI	3S-8	
Project: Salty Dog		Collec	tion Dat	te: 11	/28/2021 11:18:00 Al	М
Lab ID: 2112013-001	Matrix: GROUNDWA	Rece	ived Dat	te: 12	/1/2021 8:00:00 AM	
Analyses	Result R	L Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: CAS
Chloride	35 5	.0	mg/L	10	12/3/2021 8:38:07 AN	R83267

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceededND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 1 of 0

Hall Environmental Analysis	s Laboratory, In	c.			Date Reported: 12/20/	2021
CLIENT: Daniel B. Stephens & Assoc.		Cli	ient Sa	ample I	D: DBS-10	
Project: Salty Dog		(Collect	ion Dat	e: 11/28/2021 11:46:00 AN	M
Lab ID: 2112013-002	Matrix: GROUND	WA	Recei	ved Dat	e: 12/1/2021 8:00:00 AM	
Analyses	Result	RL	Qual	Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: CAS
Chloride	560	50	*	mg/L	100 12/3/2021 9:15:20 AM	R83267

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

Qualifiers: *

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

Page 2 of 0

Hall Environmental Analysis	s Laboratory, In	c.			Date Reported: 12/20/	2021
CLIENT: Daniel B. Stephens & Assoc.		Cl	ient Sa	ample I	D: MW-5	
Project: Salty Dog		(Collect	ion Dat	e: 11/28/2021 12:45:00 PM	Л
Lab ID: 2112013-003	Matrix: GROUND	WA	Recei	ved Dat	e: 12/1/2021 8:00:00 AM	
Analyses	Result	RL	Qual	Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: CAS
Chloride	680	50	*	mg/L	100 12/3/2021 9:40:08 AM	R83267

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

Qualifiers: * Valu

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

Page 3 of 0

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/20/2021

CLIENT:	Daniel B. Stephens & Assoc.	(Client Sample ID: MW-3
Project:	Salty Dog		Collection Date: 11/28/2021 1:52:00 PM
Lab ID:	2112013-004	Matrix: GROUNDWA	Received Date: 12/1/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SPECIFIC GRAVITY						Analyst	CAS
Specific Gravity	1.004	0			1	12/8/2021 3:22:00 PM	R84392
EPA METHOD 300.0: ANIONS						Analyst	LRN
Chloride	6100	250	*	mg/L	500) 12/8/2021 10:58:55 AM	R84398
SM2510B: SPECIFIC CONDUCTANCE						Analyst	LRN
Conductivity	22000	100		µmhos/c	10	12/8/2021 1:34:07 PM	R84394
SM2320B: ALKALINITY						Analyst	LRN
Bicarbonate (As CaCO3)	230.6	20.00		mg/L Ca	1	12/7/2021 12:53:49 PM	R84355
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/7/2021 12:53:49 PM	R84355
Total Alkalinity (as CaCO3)	230.6	20.00		mg/L Ca	1	12/7/2021 12:53:49 PM	R84355
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst	KS
Total Dissolved Solids	11200	100	*D	mg/L	1	12/2/2021 3:07:00 PM	64244
SM4500-H+B / 9040C: PH						Analyst	LRN
рН	7.66		Н	pH units	1	12/7/2021 12:53:49 PM	R84355
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst	JLF
Calcium	1100	100		mg/L	100) 12/14/2021 3:33:06 PM	64364
Magnesium	170	10		mg/L	10	12/14/2021 3:29:55 PM	64364
Potassium	17	1.0		mg/L	1	12/9/2021 8:29:10 PM	64364
Sodium	2700	100		mg/L	100) 12/14/2021 3:33:06 PM	64364

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

Qualifiers: * V

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

Page 4 of 0

Hall Environmental Analysis	Laboratory, I	nc.			Date Reported: 12/20 /2	2021
CLIENT: Daniel B. Stephens & Assoc.		Clie	ent Sa	mple II	D: DBS-6	
Project: Salty Dog		С	ollecti	on Dat	e: 11/28/2021 2:11:00 PM	
Lab ID: 2112013-005	Matrix: GROUN	DWA F	Receiv	ed Dat	e: 12/1/2021 8:00:00 AM	
Analyses	Result	RL (Qual	Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CAS
Chloride	270	50	*	mg/L	100 12/3/2021 11:06:59 AM	A R83267

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

- H Holding times for preparation or analysis exceeded
- NDNot Detected at the Reporting LimitPQLPractical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 0

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/20/2021

CLIENT: Project: Lab ID:	Daniel B. Stephens & Assoc. Salty Dog 2112013-006	Matrix:	GRO		Collect		e: 11/		:20:00 PM 00:00 AM	
Analyses		R	esult	RL	Qual	Units	DF	Date Ana	lyzed	Batch
SPECIFIC	GRAVITY								Analyst:	CAS
Specific 0	Gravity		1.200	0			1	12/8/2021	3:22:00 PM	R84392
EPA MET	HOD 300.0: ANIONS								Analyst:	LRN
Chloride		20	00000	10000	*	mg/L	2E-	+ 12/8/2021	11:11:20 AM	R84398
SM2540C	MOD: TOTAL DISSOLVED SOL	IDS							Analyst:	KS
Total Dise	solved Solids	30	3000	2000	*D	mg/L	1	12/2/2021	3:07:00 PM	64244
SM4500-H	I+B / 9040C: PH								Analyst:	LRN
pН			7.12		Н	pH units	1	12/7/2021	1:06:21 PM	R84355
EPA 6010	B: TOTAL RECOVERABLE MET	ALS							Analyst:	JLF
Sodium		5	51000	1000		mg/L	1E-	+ 12/14/202	1 3:48:38 PM	64364

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

Qualifiers: *

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

Page 6 of 0

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

SM2540C MOD: TOTAL DISSOLVED SOLIDS

EPA 6010B: TOTAL RECOVERABLE METALS

Chloride

pН

Sodium

Total Dissolved Solids

SM4500-H+B / 9040C: PH

Lab Order **2112013** Date Reported: **12/20/2021**

100 12/3/2021 11:56:39 AM R83267

12/7/2021 1:10:52 PM

12/2/2021 3:07:00 PM 64244

12/14/2021 3:51:37 PM 64364

Analyst: KS

Analyst: LRN

Analyst: JLF

R84355

CLIENT: Daniel B. Stephens & Assoc.		C	lient Sample I	D: In	jection	
Project: Salty Dog			Collection Dat	e: 11	/28/2021 2:25:00 PM	
Lab ID: 2112013-007	Matrix: GROUN	DWA	Received Dat	e: 12	2/1/2021 8:00:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
SPECIFIC GRAVITY					Analys	t: CAS
Specific Gravity	1.001	0		1	12/8/2021 3:22:00 PM	R84392
EPA METHOD 300.0: ANIONS					Analys	t: CAS

1100

2290

7.86

480

50

40.0

10

*

*D

н

mg/L

mg/L

mg/L

pH units 1

1

10

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range RL Reporting Limit
- Page 7 of 0

Hall Environmental Analysis	s Laboratory, In	ıc.		Date Reported: 12/20/2	2021
CLIENT: Daniel B. Stephens & Assoc.		Client Sar	nple II): DBS-9	
Project: Salty Dog		Collectio	on Date	e: 11/28/2021 2:44:00 PM	
Lab ID: 2112013-008	Matrix: GROUND	WA Receive	ed Date	e: 12/1/2021 8:00:00 AM	
Analyses	Result	RL Qual V	Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analys	t: CAS
Chloride	300	50 *	mg/L	100 12/3/2021 1:11:07 PM	R83267

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 8 of 0

Analytical Report Lab Order 2112013 Data Banartad: 12/20/2021

Hall Environmental Analysis	Laboratory, I	nc.			Date Reported: 12/20/2	021
CLIENT: Daniel B. Stephens & Assoc.		Client	Sample I	D: DE	3S-2	
Project: Salty Dog		Colle	ection Dat	e: 11/	28/2021 3:00:00 PM	
Lab ID: 2112013-009	Matrix: GROUN	OWA Rec	ceived Dat	e: 12/	1/2021 8:00:00 AM	
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CAS
Chloride	100	5.0	mg/L	10	12/3/2021 1:23:32 PM	R83267

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

* **Qualifiers:**

- Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits Sample pH Not In Range
- Р RL Reporting Limit

Page 9 of 0

Analytical Report Lab Order 2112013 Data Banartad: 12/20/2021

Han Environmental Analysis	Laboratory, II	IC.		Date Reported: 12/20/2	2021
CLIENT: Daniel B. Stephens & Assoc.		Client	Sample I	D: DBS-4	
Project: Salty Dog		Coll	ection Dat	e: 11/28/2021 3:15:00 PM	
Lab ID: 2112013-010	Matrix: GROUNI	DWA Re	ceived Dat	e: 12/1/2021 8:00:00 AM	
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analys	t: CAS
Chloride	40	5.0	mg/L	10 12/3/2021 1:48:20 PM	R83267

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

- H Holding times for preparation or analysis exceededND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range RL Reporting Limit

Page 10 of 0

Hall Environmental Analysis Laboratory Inc.

D Sample Diluted Due to Matrix

Analytical Report
Lab Order 2112013
Data Damanta de 12/20/2021

Hall Environmental Analysis	s Laboratory, Inc.		Date Reported: 12/20/2	2021
CLIENT: Daniel B. Stephens & Assoc.		Client Sample I	D: DBS-3	
Project: Salty Dog		Collection Dat	te: 11/28/2021 3:36:00 PM	
Lab ID: 2112013-011	Matrix: GROUNDWA	Received Dat	te: 12/1/2021 8:00:00 AM	
Analyses	Result R	Qual Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS			Analys	st: CAS
Chloride	53 5.	0 mg/L	10 12/3/2021 2:13:10 PM	R83267

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

Qualifiers: *

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

Page 11 of 0

Hall Environmental Analysis	s Laboratory, In	IC.		Date Reported: 12/20)/2021
CLIENT: Daniel B. Stephens & Assoc.		Client	Sample I	D: DBS-5	
Project: Salty Dog		Coll	ection Dat	te: 11/28/2021 3:50:00 PM	Λ
Lab ID: 2112013-012	Matrix: GROUND	WA Rec	ceived Dat	te: 12/1/2021 8:00:00 AM	[
Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Anal	yst: CAS
Chloride	200	5.0	mg/L	10 12/3/2021 3:02:50 P	M R83267

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

Qualifiers: *

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

Page 12 of 0

Han Environmental Analysis	5 Laboratory, 110	~•		Date Reported: 12/20/	2021
CLIENT: Daniel B. Stephens & Assoc.		Clie	nt Sample II	D:DBS-1R	
Project: Salty Dog		Co	llection Dat	e: 11/28/2021 4:05:00 PM	
Lab ID: 2112013-013	Matrix: GROUNDW	VA R	eceived Dat	e: 12/1/2021 8:00:00 AM	
Analyses	Result	RL Ç	Qual Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analys	st: LRN
Chloride	2100	100	* mg/L	200 12/8/2021 11:23:45 AI	M R84398

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/20/2021

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range RL Reporting Limit
- Page 13 of 0

Hall Environmental Analysis	s Laboratory, Inc.		Date Reported: 12/20,	/2021
CLIENT: Daniel B. Stephens & Assoc.		Client Sample 1	ID: PMW-1	
Project: Salty Dog		Collection Da	te: 11/28/2021 4:22:00 PM	1
Lab ID: 2112013-014	Matrix: GROUNDWA	Received Da	te: 12/1/2021 8:00:00 AM	
Analyses	Result R	L Qual Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS			Analy	st: LRN
Chloride	9800 50	0 * mg/L	1E+ 12/8/2021 11:36:10 A	M R84398

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

Qualifiers: *

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- JAnalyte detected below quantitation limitsPSample pH Not In Range
- RL Reporting Limit

Page 14 of 0



Pace Analytical® ANALYTICAL REPORT December 09, 2021

Hall Environmental Analysis Laboratory

Sample Delivery Group:

Samples Received:

L1436983 12/02/2021

Description:

Project Number:

Report To:

Andy Freeman 4901 Hawkins NE Albuquerque, NM 87109

Тс Ss Cn Sr ʹQc Gl AI Sc

Entire Report Reviewed By: John V Haulins

John Hawkins Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

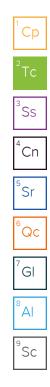
ACCOUNT: Hall Environmental Analysis Laboratory PROJECT:

SDG: L1436983

DATE/TIME. 12/09/21 13:25 PAGE: 1 of 10

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
2112013-004C MW-3 L1436983-01	5
Qc: Quality Control Summary	6
Wet Chemistry by Method 2580	6
GI: Glossary of Terms	8
Al: Accreditations & Locations	9
Sc: Sample Chain of Custody	10



SAMPLE SUMMARY

2112013-004C MW-3 L1436983-01 GW			Collected by	Collected date/time 11/28/21 13:52	Received dat 12/02/21 09:0	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2580	WG1784670	1	12/09/21 04:02	12/09/21 04:02	ARD	Mt. Juliet, TN



Ср

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

John V Howkins

John Hawkins Project Manager



2112013-004C MW-3 Collected date/time: 11/28/21 13:52

SAMPLE RESULTS - 01

Wet Chemistry by Method 2580

	 Result	Qualifier	Dilution	Analysis	Batch	 Ср
Analyte	mV			date / time		2
ORP	235	<u>T8</u>	1	12/09/2021 04:02	WG1784670	Tc

	2580
0	Method
178467	hemistry by
Ъ	Wet CI

QUALITY CONTROL SUMMARY

1 1436983-01 Original Samula (OS) • Dunlicate (DLIP)

רואסטסט-טו טווטוומו סמוווטוב (טט) • טעווטמוב (טטר)			hindre (r				
(OS) L1436983-01 12/09/21 04:02 • (DUP) R3738691-3 12/09/21 04:02)9/21 04:02 • (l	JUP) R3738691-3	12/09/21 0.	4:02			
	Original R	Original Result DUP Result	Dilution DUP Diff	DUP Diff	DUP Qualifier	DUP Diff Limits	
Analyte	шV	шV		шV		mV	
ORP	235	240	-	4.70		20	

Ч

Ss

L1437663-01 Original Sample (OS) • Duplicate (DUP)

רואט טטט-טט טוואושו טמוואש (טט) י טעאווטמוב (טטר)			חורמום וו				4 (
(OS) L1437663-01 12/09/21 04:02 • (DUP) R3738691-4 12/09/21 04:02	21 04:02 • (DU	IP) R3738691-4	12/09/21 C	04:02			5
	Original Resu	Original Result DUP Result Dilution DUP Diff	Dilution	DUP Diff	DUP Qualifier	DUP Diff Limits	U
Analyte	тV	шV		шV		mV	َں م
ORP	307	307	-	0.700		20	
							0 O C

L1437663-02 Original Sample (OS) • Duplicate (DUP)

LITU UUU UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU			1 hiran			7
(OS) L1437663-02 12/09/21 04:02 • (DUP) R3738691-5 12/09/21 04:02	2/09/21 04:02 • (DUP) R3738691-5	5 12/09/21	04:02		σ
	Original Re	Original Result DUP Result Dilution DUP Diff	Dilution	DUP Diff	DUP Qualifier DUP Diff Limits	
Analyte	МV	шV		МV	mV	∞⊲
ORP	276	276	-	0.100	20	

Sc

L1437663-03 Original Sample (OS) • Duplicate (DUP)

663-03 12/09	(OS) L1437663-03 12/09/21 04:02 • (DUP) R3738691-6 12/09/21 04:02	6 12/09/21(04:02		
	Original Result DUP Result	Dilution DUP Diff	DUP Diff	DUP Qualifier	DUP Diff Limits
	mV mV		MV		nV
	310 312	-	2.00		00

L1437663-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1437663-04 12/09/21 04:02 • (DUP) R3738691-7 12/09/21 04:02)9/21 04:02 • (l	JUP) R3738691-7	12/09/21 (04:02		
	Original Re	Original Result DUP Result Dilution DUP Diff	Dilution	DUP Diff	DUP Qualifier	er DUP Diff Limits
Analyte	шV	шV		тV		mV
ORP	109	113	-	4.30		20

L1437663-05 Original Sample (OS) • Duplicate (DUP)

	L DUP Diff Limits	mV
	DUP Qualifier	
09/21 04:02	Dilution DUP Diff	ΜV
R3738691-8 12/(шV
21 04:02 • (DUP)	Original Result DUP Result	шV
(OS) L1437663-05 12/09/21 04:02 • (DUP) R3738691-8 12/09/2		Analyte

	Original Result	DUP Result	Dilution	DUP Diff	DUP Qualifier	DUP Diff Limits
Analyte	mV mV	шV		шV		mV
ORP	97.4	101	-	3.80		20

Hall Environmental Analysis Laboratory

ACCOUNT:

PROJECT:

SDG: L1436983

DATE/TIME: 12/09/21 13:25

6 of 10 PAGE

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QUALITY CONTROL SUMMARY

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-	plicate
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	13/663-06
1	

		2	U H		°SS
		DUP Qualifier DUP Diff Limits	mV	20	
ate (DUP)	9/21 04:02	Original Result DUP Result Dilution DUP Diff	мV	3.10	
Duplica	591-9 12/0 [.]	sult Dilu		~	
nple (OS) •	(DUP) R3738(tesult DUP Rea	МV	246	
-1437663-06 Original Sample (OS) • Duplicate (DUP)	(OS) L1437663-06 12/09/21 04:02 • (DUP) R3738691-9 12/09/21 04:02	Original R	МV	243	
L1437663-	(OS) L1437663		Analyte	ORP	

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

	Diff Limits	mV	20
	LCSD Qualifier Diff	μV	3.30
	LCS Qualifier		
	Rec. Limits	%	86.0-105
	LCSD Rec.	%	102
2	LCS Rec.	%	100
12/09/21 04:0.	LCSD Result	шV	227
) R3738691-2	LCS Result	шV	223
09/21 04:02 • (LCSI	Spike Amount LCS Result	шV	223
(LCS) R3738691-1 12/09/21 04:02 • (LCSD) R3738691-2 12/09/21 04:02		Analyte	ORP

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GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.
Qualifier	Description
Т8	Sample(s) received past/too close to holding time expiration.

Sc

SDG: L1436983

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina 1	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky ¹⁶	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ¹⁴	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

SDG: L1436983

HALL	ENVIRONMENTAL	ANALYSIS	LABORATORY

CHAIN OF CUSTODY RECORD PAGE 1 0F 1

Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Website: clients.hallenvironmental.com

COMPANY PACE TN BOTTLE PLE ID 125HDP									
PLE ID 125HDP Groundw 11/28/2021 1:52:00 PM 1 ORP ACCOUNT #: EMAIL: ACCOUNT #: EMAIL	SUB CONTRATOR: Pace			CE IN		PHONE	(800) 767-5859	FAX:	(615) 758-5859
IN 37122 IN 37122 ILENT SAMPLE ID BOTTLE ILENT SAMPLE ID TYPE MATRIX COLLECTION I25HDP Groundw 125HDP Groundw 125HDP Groundw 1128LD2 1		5 Lebanon Rd				ACCOUNT #:		EMAIL	
PLE ID TYPE MATRIX DATE ANALYTICAL COMI 125HDP Groundw 11/28/2021 1:52:00 PM 1 ORP	CITY, STATE, ZIP: Mt	Juliet, TN 37122							
125HDP Groundw 11/28/2021 1:52:00 PM 1 ORP	ITEM SAMPLE	CLIENT SAMPLE I	Ð	BOTTLE TYPE	MATRIX		# CONTAINERS	ANALYTIC	AL COMMENTS
	1 2112013-004	C MW-3		125HDP	Groundw	11/28/2021 1:52:00 PM	1 ORP		10-

1129

0A Zero Headspace: BL HELLIGH Bottles arrive intact: Correct bottles used: COC Seal Present (Int. COC Signed Accurate: Suffictent

Jen 1.07021.0

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

celinquished By: Sec	2	Date: 12/1/2021	12/1/2021 9:46 AM	Received By:	1	OS (Jun Erigha	US Quit	REPORT TF	REPORT TRANSMITTAL DESIRED:	DESIRED:	
celinquished By:		Date:	Time:	Received By:		Date: V	Time:	LI HARDCOPY (extra cost) TFAX EMAIL	ECD 1 AD 119E CAR V	L EMAIL	ONLINE
telinquished By:		Date:	Time:	Received By:		Date:	Time:		TAP USE U	1	
TAT:	Stand	Standard 🕑	RUSH	Next BD	2nd BD	3rd BD		Temp of samples Comments:	C N	Attempt to Cool ?	

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Project:	Daniel B. Stephens & Assoc. Salty Dog
Sample ID: MB	SampType: mblk TestCode: EPA Method 300.0: Anions
Client ID: PBW	Batch ID: R83267 RunNo: 83267
Prep Date:	Analysis Date: 12/3/2021 SeqNo: 2961166 Units: mg/L
Analyte Chloride	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual ND 0.50
Sample ID: LCS	SampType: Ics TestCode: EPA Method 300.0: Anions
Client ID: LCSW	Batch ID: R83267 RunNo: 83267
Prep Date:	Analysis Date: 12/3/2021 SeqNo: 2961167 Units: mg/L
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	4.6 0.50 5.000 0 92.6 90 110
Sample ID: MB	SampType: mblk TestCode: EPA Method 300.0: Anions
Client ID: PBW	Batch ID: R84398 RunNo: 84398
Prep Date:	Analysis Date: 12/8/2021 SeqNo: 2964895 Units: mg/L
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND 0.50
Sample ID: LCS	SampType: Ics TestCode: EPA Method 300.0: Anions
Client ID: LCSW	Batch ID: R84398 RunNo: 84398
Prep Date:	Analysis Date: 12/8/2021 SeqNo: 2964896 Units: mg/L
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	4.7 0.50 5.000 0 93.0 90 110

Qualifiers:

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

n Bongo

Client: Danie Project: Salty	el B. Stephens & A Dog	Assoc.						
Sample ID: Ics-1 99.3uS e	C SampType	: Ics	Tes	tCode: SM2510	B: Specific Con	ductance		
Client ID: LCSW	Batch ID	: R84394	F	RunNo: 84394				
Prep Date:	Analysis Date	: 12/8/2021	S	SeqNo: 2964718	Units: µm	hos/cm		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC LowL	imit HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10 99.30	0	103	85 115			
Sample ID: Ics-2 99.3uS e	C SampType	: Ics	Tes	tCode: SM2510	B: Specific Con	ductance		
Client ID: LCSW	Batch ID	R84394	F	RunNo: 84394				
Prep Date:	Analysis Date	: 12/8/2021	S	SeqNo: 2964745	Units: µm	hos/cm		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC LowL	imit HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10 99.30	0	104	85 115			

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 2 of 0

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	2112013
	20 Dec 21

20-D	ec-21	

	el B. Stephens & Dog	Assoc	с.							
Sample ID: MB-64364	SampTyp	e: MB	LK	Tes	tCode: EF	PA 6010B: 1	Total Recover	able Meta	als	
Client ID: PBW	Batch II	D: 643	864	R	RunNo: 8 4	4455				
Prep Date: 12/7/2021	Analysis Date	e: 12	/9/2021	S	SeqNo: 29	966812	Units: mg/L			
Analyte	Result I	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Magnesium ^o otassium	ND ND	1.0 1.0								
•										
Potassium	ND	1.0 1.0	<u></u> s	Tes	tCode: EF	PA 6010B: 1	Fotal Recover	able Meta	als	
Potassium Sodium	ND ND	1.0 1.0 De: LC:			tCode: EF		Fotal Recover	able Meta	als	
Potassium Sodium Sample ID: LCS-64364	ND ND SampTyp	1.0 1.0 De: LCS D: 643	864	R		4455	Total Recover Units: mg/L	rable Meta	als	
Potassium Sodium Sample ID: LCS-64364 Client ID: LCSW	ND ND SampTyp Batch II Analysis Date	1.0 1.0 De: LCS D: 643	864 /9/2021	R	RunNo: 8 4	4455		vable Meta %RPD	als RPDLimit	Qual
Potassium Sodium Sample ID: LCS-64364 Client ID: LCSW Prep Date: 12/7/2021	ND ND SampTyp Batch II Analysis Date	1.0 1.0 De: LCS D: 643 e: 12	864 /9/2021	R	RunNo: 8 4 SeqNo: 2 9	4455 966814	Units: mg/L			Qual
Potassium Sodium Sample ID: LCS-64364 Client ID: LCSW Prep Date: 12/7/2021 Analyte	ND ND SampTyp Batch II Analysis Date Result F	1.0 1.0 De: LCS D: 643 e: 12 PQL	864 /9/2021 SPK value	R S SPK Ref Val	RunNo: 84 SeqNo: 29 %REC	4455 966814 LowLimit	Units: mg/L HighLimit			Qual
Potassium Sodium Sample ID: LCS-64364 Client ID: LCSW Prep Date: 12/7/2021 Analyte Calcium	ND ND SampTyp Batch II Analysis Date Result I 51	1.0 1.0 De: LC: D: 643 e: 12 PQL 1.0	864 /9/2021 SPK value 50.00	R S SPK Ref Val 0	RunNo: 84 SeqNo: 29 <u>%REC</u> 103	4455 966814 LowLimit 80	Units: mg/L HighLimit 120			Qual

Qualifiers:

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

Page 3 of 0

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	2112013
	00 D 01

Client: Project:	Daniel B. Stephens & Assoc. Salty Dog
Sample ID: mb-1 a	Ik SampType: mblk TestCode: SM2320B: Alkalinity
Client ID: PBW	Batch ID: R84355 RunNo: 84355
Prep Date:	Analysis Date: 12/7/2021 SeqNo: 2963279 Units: mg/L CaCO3
Analyte Total Alkalinity (as CaCO	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Sample ID: Ics-1 a	·
Client ID: LCSW	Batch ID: R84355 RunNo: 84355
Prep Date:	Analysis Date: 12/7/2021 SeqNo: 2963280 Units: mg/L CaCO3
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Alkalinity (as CaCO	D3) 84.96 20.00 80.00 0 106 90 110
Sample ID: mb-2 a	Ik SampType: mblk TestCode: SM2320B: Alkalinity
Client ID: PBW	Batch ID: R84355 RunNo: 84355
Prep Date:	Analysis Date: 12/7/2021 SeqNo: 2963302 Units: mg/L CaCO3
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Alkalinity (as CaCC	03) ND 20.00
Sample ID: Ics-2 a	Ik SampType: Ics TestCode: SM2320B: Alkalinity
Client ID: LCSW	Batch ID: R84355 RunNo: 84355
Prep Date:	Analysis Date: 12/7/2021 SeqNo: 2963303 Units: mg/L CaCO3
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Alkalinity (as CaCO	D3) 76.56 20.00 80.00 0 95.7 90 110

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits Р
- Sample pH Not In Range
- RL Reporting Limit

Daniel B. Stephens & Assoc.

Project:	Salty Dog	5									
Sample ID: 211	12013-004ADUP	SampT	/pe: DL	JP	Tes	tCode: Sp	pecific Grav	vity			
Client ID: MW	V-3	Batch	ID: R8	4392	F	unNo: 8 4	4392				
Prep Date:		Analysis Da	ate: 12	2/8/2021	5	eqNo: 2	964544	Units:			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Gravity		1.006	0						0.199	20	

Qualifiers:

Client:

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

Client: Project:	Daniel B. Salty Dog	-	& Asso	ос.							
Sample ID: MB-6	64244	SampT	ype: ME	BLK	Tes	tCode: SN	M2540C MC	D: Total Diss	olved So	lids	
Client ID: PBW	I	Batch	n ID: 64	244	F	RunNo: 8 3	3248				
Prep Date: 12/	1/2021	Analysis D	ate: 12	2/2/2021	S	SeqNo: 29	957843	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	3	ND	20.0								
Sample ID: LCS	-64244	SampT	ype: LC	S	TestCode: SM2540C MOD: Total Dissolved Solids						
Client ID: LCS	w	Batch	n ID: 64	244	F	RunNo: 83	3248				
Prep Date: 12/	1/2021	Analysis D	ate: 12	2/2/2021	5	SeqNo: 29	957844	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	6	996	20.0	1000	0	99.6	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL Analysis Laboratory	TEL: 505-345-3	ntal Analysis Labor 4901 Hawkin Albuquerque, NM 8 975 FAX: 505-345- s.hallenvironmental	^{15 NE} 7109 San 4107	nple Log-In Check List
Client Name: Daniel B. Stephens & Assoc.	Work Order Num	ber: 2112013		RcptNo: 1
Received By: Sean Livingston	12/1/2021 8:00:00	AM	S-L	John
Completed By: Sean Livingston	12/1/2021 9:22:29	AM	Sala Sala	not
Reviewed By: JA 12/1/2/1 Jn 12/1/2/.	on 12/1/21			
Chain of Custody				
1. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present
2. How was the sample delivered?		Courier		
<u>Log In</u>				
3. Was an attempt made to cool the sample	es?	Yes 🗹	No 🗌	NA 🗌
4. Were all samples received at a temperation	ure of >0° C to 6.0°C	Yes 🗹	No 🗌	na 🗌
5. Sample(s) in proper container(s)?		Yes 🗹	No 🗌	
6. Sufficient sample volume for indicated test	st(s)?	Yes 🔽	No 🗌	
7. Are samples (except VOA and ONG) prop	perly preserved?	Yes 🖌	No 🗆	
8. Was preservative added to bottles?		Yes 🗌	No 🔽	NA 🗆
9. Received at least 1 vial with headspace <	:1/4" for AQ VOA?	Yes 🗌	No 🗌	NA 🗹
10. Were any sample containers received br	oken?	Yes	No 🗹 [
			_	# of preserved bottles checked
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	for pH: $(<2 \text{ gr} > 12 \text{ unless noted})$
12. Are matrices correctly identified on Chain	of Custody?	Yes 🗹	No 🗆	Adjusted? he
13. Is it clear what analyses were requested?		Yes 🔽	No 🗌	
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by: CMC 12/1/4
			-	
<u>Special Handling (if applicable)</u>				
15. Was client notified of all discrepancies w	ith this order?	Yes 🗌	No 🗌	
Person Notified:	Date:		a a construction de la construction	
By Whom:	Via:	🗌 eMail 🔲 P	hone 🗌 Fax	In Person
Regarding:		antananan kana kana kana kana kana kana	annan ang ng Ng ng ng Agus (an ang ang agus (an ang an	nen anna anns a' a' a' a' Bhairte Albain ann ann an Arrainn an Arrainn an Arrainn an Arrainn an Arrainn an Arr
Client Instructions:		······································		
16. Additional remarks:				
17. <u>Cooler Information</u> <u>Cooler No</u> Temp °C Condition 1 0.2 Good 2 2.8 Good	Seal Intact Seal No	Seal Date	Signed By	

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Swite	te loo	JIA C	Albuquerue NM 87123	Project #:				Tel. 505-345-3975)5-34	3-3975		Eax 505-345-4107	9444, 1	5-410	201.1			
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HALL ENVIRONMENTAL	ANALYSIS	LABORATORY

CHAIN OF CUSTODY RECORD PAGE: 1 0F.

Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975

TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

SUB CONTRATOR								
Pace TN	COMPANY: P.	PACE TN		PHONE:	(800) 767-5859	FAX:	(615) 758-5850	
ADDRESS: 12065 Lebanon Rd	p			ACCOUNT #:		EMAIL:		
CITY, STATE, ZIP: Mt. Juliet, TN 37122	122							
		BOTTLE		COLLECTION	# CONTAI			
ITEM SAMPLE CLIENT	CLIENT SAMPLE ID	TYPE	MATRIX	DATE		NALYTICA	ANALYTICAL COMMENTS	
1 2112013-004C MW-3		125HDP	Groundw 1	Groundw 11/28/2021 1:52:00 PM 1 ORP				
			rote					

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: Suc	Suc	Date: Time	9:46 AM	Received By;	Da	Date:	Time:	REPORT TRANSMITTAL DESIRED:
Relinquished By:		Date:	Time:	Received By:	Á	Date:	Time:	HARDCOPY (extra cost)
Relinquished By:		Date:	Time;	Received By:	ă	Date:	Time:	FOR LAB USE ONLY
TA	TAT: Stanc	Standard I	RUSH	Next BD	2nd BD	3rd BD		Temp of samples C Attempt to Cool ?
								Comments

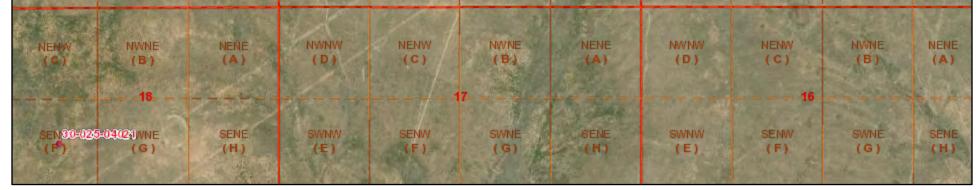
Appendix E

Area of Review Evaluation



30-025-26307 - BW-8 Area of Review

SES80-025 (№)	42762 30 (O)	SESE (P)	•80-025-42805 swsw (M)	SESW 2 (N) 2	9 SWSE (0)	SESE (P)	SWSW (M)	SESW 28 (N-) 28	swse (0)	SESE (P)
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SENW (F)	SWNE (G)	SENE (H)	SWNW (E)	SENW (F)	SWNE (G) 18S 36E 2	SENE (H)	SWNW (E)	SENW (F)	SWNE 30-025-2809	SENE 33 (H)
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L3	12	L1	L4	L3	-L2		£4	L3	31-625-6 L=2	13981 L 1
SENW (F)	SWNE (G) 08	SENE (H)	SWNW (E)	SENW (F)	SWNE (G) 5	SENE (H)	SWNW (E)	SENW (F) 04	SWNE (G)	SENE (H)
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NESW (K)	NWSE (J)	NESE (1)	NWSW (L)	NESW (K)	NWSF (J)	NESE (1)	NWSW (L)	NESW (K)	NWSE (J)	NESE (1)
SESW (N) 30-0	SWSE (0) 128-49300	SESE (P)	SWSW (M)	SESW (N)	SWSE (0)	SESE (P)	SWSW (M)	SESW (N)	SWSE (0)	SESE (P)



4/12/2022, 9:21:04 AM

Wells - Large Scale

- ? undefined
- Miscellaneous
- * CO2, Active
- CO2, Cancelled
- * CO2, New
- CO2, Plugged
- CO2, Temporarily Abandoned
- Gas, Active
 Gas, Cancelled
 Gas, New
 Gas, Plugged
 Gas, Temporarily Abandoned
 Injection, Active
 Injection, Cancelled
 - Injection, New

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Injection, Plugged Injection, Temporarily Abandoned Oil, Active Oil, Cancelled

Oil, New

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- Oil, Plugged
- Oil, Temporarily Abandoned
- Salt Water Injection, Active

		1:20,000	
0	0.17	0.35	0.7 mi
	- \ _	', ', ', ',	
0	0.3	0.6	1.2 km

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department. BLM

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

Appendix F

2021 Survey Data for Land Surface Subsidence Monitoring





06/29/2021

Michael C Zbrozek Geologist Daniel B. Stephens & Associates, Inc. 6020 Academy Road NE, Suite 100 Albuquerque, NM 87109

Emailed to: mzbrozek@geo-logic.com on date of letter.

RE: Salty Dog Brine Facility

Atkins Engineering Associates, Inc. (AEA) has completed the survey at the Salty Dog Brine Facility. The following table summarizes the coordinate and elevation data for the subsidence monitoring locations located on site.

Name	Northing (USft)	Easting (USft)	Latitude (DMS)	Longitude (DMS)	Elevation (USft)
SMP-1	615475.977	836301.437	32° 41'17.960 "	-103°22'28.520"	3810.10
SMP-2	615354.850	836264.338	32°41'16.795"	-103°22'28.966"	3809.02
SMP-3	615673.004	836230.089	32°41'19.945"	-103°22'29.334"	3808.83
SMP-4	615615.830	836543.487	32°41'19.352"	-103°22'25.673"	3806.33
SMP-5	615539.029	836348.733	32°41'18.609"	-103°22'27.960"	3810.06
Benchmark	615608.14	836310.07	32°41'19.27"	-103°22'28.40"	3808.62

Horizontal coordinates shown are coordinates provided by earlier survey. Previous survey was conducted by Gary L. Jones, NMPS 7977. Coordinates are in NM State Plane East (NAD83).

Elevations for subsidence monitoring locations were established by using closed level loops, referenced to onsite benchmark previously set by Gary L. Jones. Benchmark is a ½" rebar with plastic cap 7977.

Attached to this email is a .xlsx spreadsheet of the table above.

If you have any questions, please contact me at (575) 624-2420 or ryan@atkinseng.com

Ryan C. Cortez, PS 22761

Date (Signed)





2904 W 2nd St. Roswell, NM 88201 voice: 575.624.2420 fax: 575.624.2421 www.atkinseng.com

11/29/2021

Michael C Zbrozek Geologist Daniel B. Stephens & Associates, Inc. 6020 Academy Road NE, Suite 100 Albuquerque, NM 87109

Emailed to: mzbrozek@geo-logic.com on date of letter.

RE: Salty Dog Brine Facility

Atkins Engineering Associates, Inc. (AEA) has completed the survey at the Salty Dog Brine Facility. Field work was performed on 11/23/2021. The following table summarizes the coordinate and elevation data for the subsidence monitoring locations located on site.

Name	Northing (USft)	Easting (USft)	Latitude (DMS)	Longitude (DMS)	Elevation (USft)
SMP-1	615475.977	836301.437	32°41'17.960"	-103°22'28.520"	3810.10
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Benchmark	615608.14	836310.07	32°41'19.27"	-103°22'28.40"	3808.62

Horizontal coordinates shown are coordinates provided by earlier survey. Previous survey was conducted by Gary L. Jones, NMPS 7977. Coordinates are in NM State Plane East (NAD83).

Elevations for subsidence monitoring locations were established by using closed level loops, referenced to onsite benchmark previously set by Gary L. Jones. Benchmark is a 1/2" rebar with plastic cap 7977.

If you have any questions, please contact me at (575) 624-2420 or ryan@atkinseng.com

Cortez, PS 22/61

Date (Signed)

