# 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   |

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

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

The contents of this e-mail message, including any attachments, are for the sole use of the intended recipient named above. This email may contain confidential and/or legally privileged information. If you are not the intended recipient of this message, be advised that any dissemination, distribution, or use of the contents of this message is strictly prohibited. If you receive this message in error, please notify the sender by return e-mail and permanently delete all copies of the original email and any attached documentation. Thank you.



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/cm<sup>3</sup>). 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<br/>Chemical and Physical Characteristics

|                             | Average Concentration (mg/L <sup>a</sup> ) |                |  |  |
|-----------------------------|--|----------------|--|--|
| 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        |  |  |

<sup>a</sup> 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<br>Point | Initial<br>3/23/2018 | First Semiannual<br>6/29/2021 | Second Semiannual<br>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.

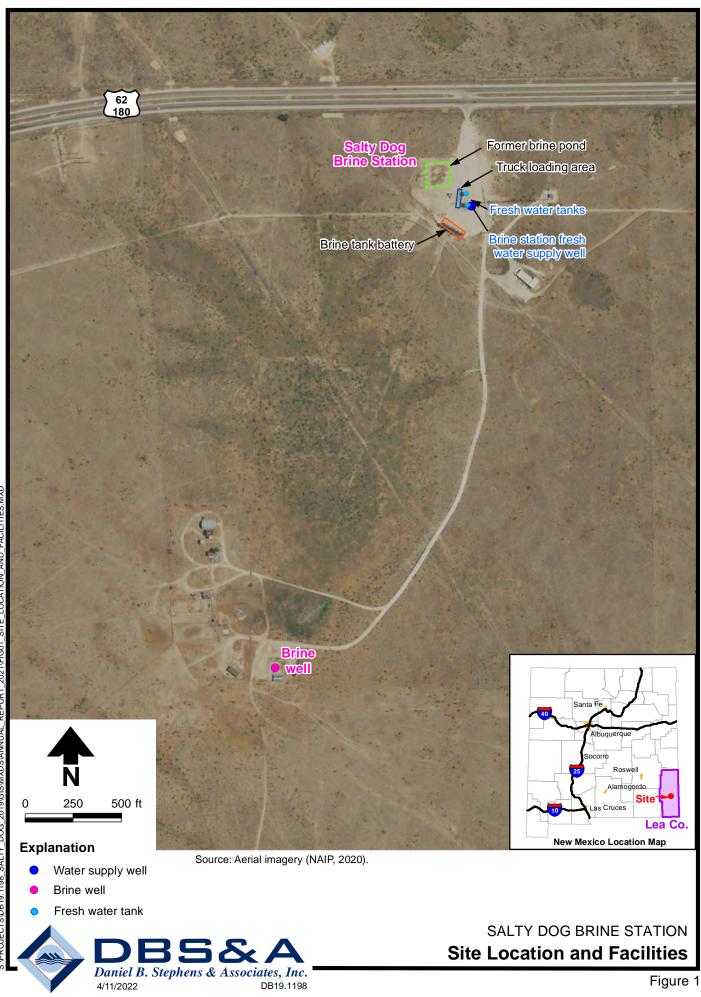
- DBS&A. 2018a. 2017 annual Class III well report, Salty Dog Brine Station, DP BW-8, API No. 30-025-26307, Lea County, New Mexico. Prepared for the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division. May 1, 2018.
- DBS&A. 2018b. Letter report from John Ayarbe and Michael 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.
- DBS&A. 2021. Letter report from John Ayarbe to Eugene Bolton, Oil Conservation Division, regarding Soil sampling results for the Salty Dog brine supply well (#001) site (API No. 30-025-26307). August 18, 2021.
- DBS&A. 2022. Second semiannual 2021 groundwater monitoring and operation and maintenance report, Salty Dog Brine Station, Lea County, New Mexico. Prepared for the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division, Santa Fe, New Mexico. April 15, 2022.
- 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.
- New Mexico Energy, Minerals and Natural Resources Department (NMEMNRD). 2012. Presentation from pre-proposal conference, Request for professional & technical services, I&W Brine Cavern project, Carlsbad, New Mexico. May 9, 2012.
- 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.

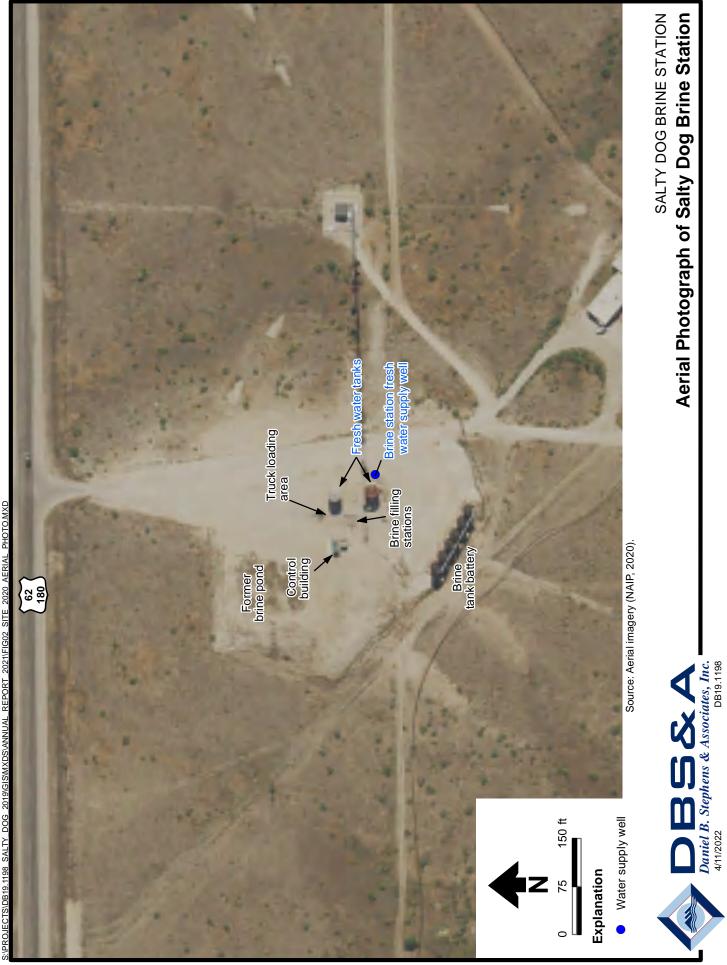


- OCD. 2021. Letter from Eugene Bolton to Salty Dog, Inc. regarding Letter of violation Field inspection. May 20, 2021.
- Salty Dog, Inc. (Salty Dog). 1988. Letter report outlining facility data for quarter ending September 1987. February 25, 1988.
- Salty Dog. 1999. Form C-103 report on Brine supply 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

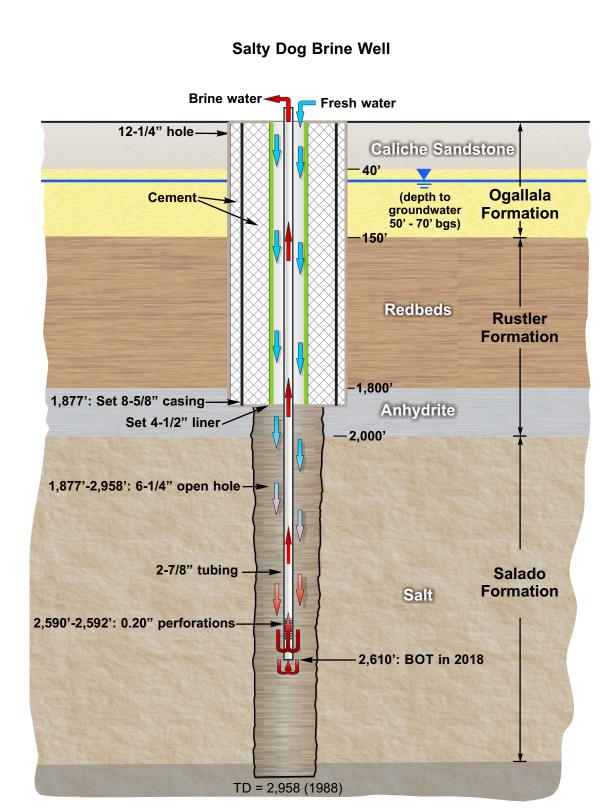






SVPROJECTS/DB19.1198 SALTY DOG 2019/GIS/MXDS/ANNUAL REPORT 2021/FIG02 SITE 2020 AERIAL PHOTO.MXD

Figure 2



#### Notes:

S:\Projects\ES08.0118\_Salty\_Dog\_2018\VR\_drawings\Fig03\_Generalized\_brine\_well\_schematic.cdr

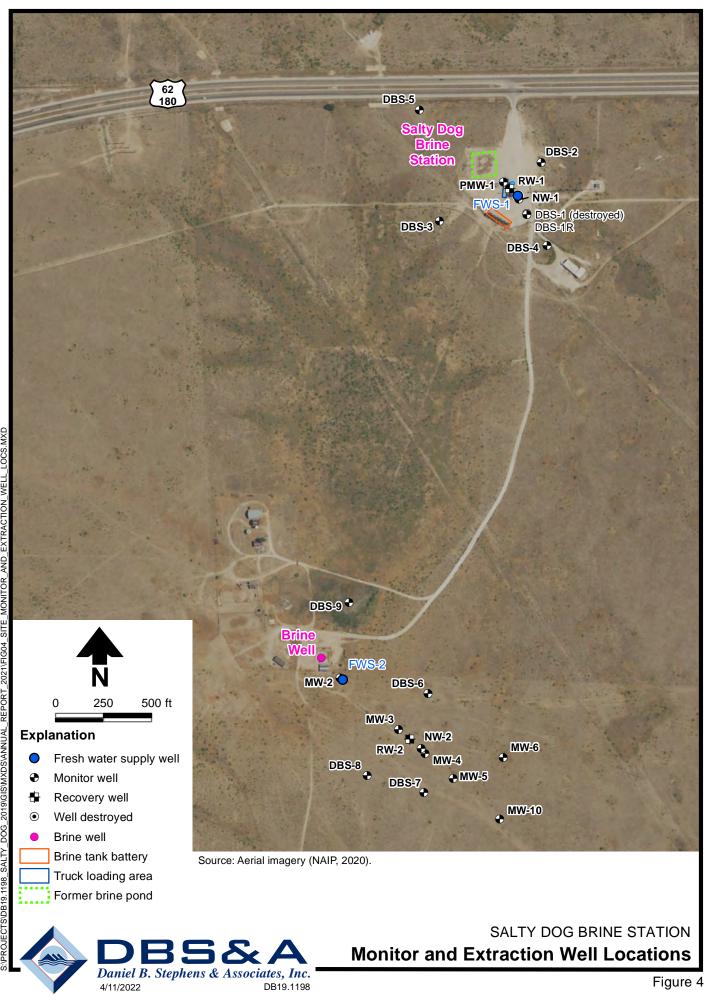
- 1. BOT = Bottom of tubing
- 2. Figure not to scale

#### 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        |          |
|---|--|--|----------------|----------------|---------------|----------|
|   | 1 1 4<br>1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | FACILITY/LOCATIO                       |                | 2009           |               |          |
|   |  | MONTH/YEAR                             | Tanal          | Joal           |               | 2.<br>1. |
|   |  | WONTH/ ILAN                            | January'z      |                |               |          |
|   |  |  |                |                |               |          |
|   |  | AMOUNT OF FRESH                        | AMOUNT OF      |                |               |          |
|   |  | WATER PUMPED                           | BRINE WATER    | DAILY TUBING   | DAILY CASING  | FRESH    |
|   |  | DOWN HOLE                              | OUT OF HOLE    | PRESSURES      | PRESSURES     | WATER    |
| Da  | ate  | BBLS                                   | BBLS SOLD      | PSI            | PSI           | SOLD     |
|   | 1  | 1,100                                  | 1,100          | 125            | 375           |          |
|   | 2  | 1000                                   | 1000           |                | 375           |          |
|   | 3  | 500                                    | 300            | 1-13-2-        | 375           |          |
|   | 4  | 122                                    | · · ·          | 1.20-          | 475-1         | 170      |
|   | 5  | 100                                    | 100            |                |               | 14       |
| F   | 6  | 7,5                                    | 365            | 135            | 375           |          |
|   | 7  | 340                                    | 260            | 100-           | 775           |          |
|   |  |  |                |                |               |          |
|   | B  | 500                                    | 1.00           |                |               |          |
|   | 9  |  | 420            | 1_2            |               |          |
| 1   | _  | 100                                    | +00            | 123            | -30           |          |
| 1   | _  | 1020                                   | 1020           | 1-125          | 5.75          |          |
| 1   |  | 230                                    | 230            | 125            | 375           |          |
| 1   | 3  | 370                                    | 370            | 1.25           | 345-1         |          |
| 1.  | 4  |  |                | · · · · ·      |               | 40       |
| 11  | 5  | ×                                      |                |                |               | _130     |
| 16  | 6  |  |                |                |               |          |
| 17  | 7  |  |                |                |               | 120      |
| 18  | 8  |  |                |                |               | 30       |
| 19  | 9  | 1                                      |                | 1              |               | 60       |
| 20  | 0  |  |                | 1              |               |          |
| 21  |  |  |                |                |               | 130.     |
| 22  |  | 000                                    | 0-000          | 170            | 325           |          |
| 23  |  | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | - 200          | -12)           |               |          |
| 24  | _  |  |                |                |               |          |
| 25  | _  |  |                |                |               |          |
| 26  |  |  |                |                |               |          |
| the second se |  | 200                                    |                |                |               |          |
| 27  | _  | 200                                    | 200            |                | -37)-+        | 30       |
| 28  | _  | 1152                                   | - 11           |                |               | _320 _   |
| 29  |  | 720                                    | 45 A           | 125            | 172           |          |
| 30  | _  | -100                                   | 100            | 125            | -375-1        |          |
| 31  |  | .100                                   |                |                |               |          |
| TOT   |  |  |                |                |               |          |
|   |  |  | REPAIRS AND/O  | R EXPENSES     |               |          |
|   |  | Company                                |                |                |               |          |
| 1   |  | Performing                             | Descritpion of |                |               |          |
| Date  | el   | Work/Repairs                           | Work/Repairs   | Estimated Cost | Work Authoria | zed hv   |
|   |  |  | Tonartopano    | Loundley Cost  | HVIR AUGUNA   |          |
|   |  |  |                |                |               |          |
|   |  |  |                |                |               |          |
| -   |  |  |                |                |               |          |
| ,   |  |  |                |                |               |          |

-

C Documents and Settings Jim Local Settings Temporary Internet Filos/OLK6A Wonthly FW-BW Report - Orginal

- -

|               | FACILITY/LOCATIO | M DOULY                         | -1)09                               |               |                          |
|---------------|------------------|---------------------------------|-------------------------------------|---------------|--------------------------|
|               | MONTH/YEAR       | burery 1                        | 1021-                               |               | Ĺ                        |
|               |                  |                                 |                                     |               |                          |
|               | AMOUNT OF FRESH  |                                 |                                     |               |                          |
|               | WATER PUMPED     | BRINE WATER                     |                                     | DAILY CASING  | FRES                     |
|               | DOWN HOLE        | OUT OF HOLE                     | PRESSURES                           | PRESSURES     | WATE                     |
| Date          | BBLS             | BBLS SOLD                       | PSI                                 | PSI           | SOLD                     |
| 1             | 1-12             | 15                              | 125                                 | 375           | · 1/27                   |
| 2             | -515             | 515                             | 125                                 | 375           | 1-60                     |
| 3             | F                | <u>FIC</u>                      | 125-                                | -375          |                          |
| 4             |                  |                                 |                                     | 2776          |                          |
| 5             | - 210            | 1210-                           | -122                                | 375           |                          |
| <u>6</u><br>7 | 100              | 200                             | 1-102-                              | 375           | 716                      |
|               | ~ <u>000</u>     | 200                             | 123                                 | 375           | 40                       |
| 9             |                  | 1100                            | 125                                 | -545-         | 120                      |
| 10            | 400              | 400                             | 125                                 | 572           | 130                      |
| 11            | 1400             | 450                             | 1-125-                              | 375           |                          |
| 12            | 360              |                                 | 1.00                                | 375           |                          |
| 13            | 5.00             | - 3.60                          |                                     | 375           |                          |
| 14            | -1520            |                                 |                                     | 375           |                          |
| 15            |                  |                                 |                                     | 3/3           |                          |
| 16            | 200              | 200                             | 125                                 | 375           |                          |
| 17            | -1100            | 1100                            | 100                                 | 375           |                          |
| 18 1          | 276              | 375                             |                                     | 2175          |                          |
| 19            | -212             | 2.1.2                           | 125                                 |               |                          |
| 20            | 100              | 100                             |                                     | 375           |                          |
| 21            | - 100            | 100                             | -123                                | 212           |                          |
| 22            | 200              | 300                             | 12 2                                | 375           |                          |
| 23            | +<br>+           |                                 |                                     |               |                          |
| 24            | 110              | 710                             | -+2-5                               | 375           |                          |
| 25            |                  | _61D                            |                                     | 2726          |                          |
| 26            | - 5-10           | 910                             |                                     | 2-2           |                          |
| 27            | 1950             | 1020                            |                                     |               |                          |
| 28            | · t. · · 200     | 500                             |                                     | - 210         |                          |
| 29            |                  | - in the second                 | -125                                |               |                          |
| 30            |                  |                                 |                                     |               |                          |
| 31            |                  |                                 |                                     |               |                          |
| TOTALS        |                  |                                 |                                     |               |                          |
|               | ° µ14*≖ 1        | TEPANAS MUNO                    |                                     |               | 71                       |
|               | Company          | And the Alexander States of the |                                     |               | 1997 - C. S. S. S. S. S. |
|               | Performing       | Department of                   |                                     |               |                          |
| Date          | Work/Repairs     | Descritpion of<br>Work/Repairs  | Estimated Cost                      | Work Authoriz | ad by                    |
|               |                  | TOINICEPairs                    | Launated COST                       | WOR AUTION    | eu ny                    |
|               |                  |                                 |                                     |               |                          |
|               |                  |                                 |                                     |               |                          |
|               |                  |                                 | sujimiLocal Sollings\Temporary Inte |               |                          |

 $\sim$ 

|  | FACILITY/LOCATIO                        | ON Salle                | Dog                               |                              |                    |
|--|---|-------------------------|-----------------------------------|------------------------------|--------------------|
|  | MONTH/YEAR M                            | 160C 1021               |                                   |                              | 1                  |
| N 1915 1994 104                          |   |                         |                                   |                              |                    |
|  | 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                          |                    |
| OTALS                                    | 18420                                   | 18420                   | 1.25                              | -795                         | 2330               |
| an a |   | REPAIRS AND/OF          | SEXPENSES                         |                              | NT CONTRACTOR      |
|  | Company                                 |                         |                                   |                              |                    |
|  | Performing                              | Descritpion of          |                                   |                              |                    |
| Date                                     | Work/Repairs,                           |                         | Estimated Cost                    | Work Authori                 | zed by             |
|  | Postodent                               | Well down               |                                   | 10-                          |                    |
|  |   |                         |                                   | -0-                          |                    |
|  | Vana:                                   | well down               |                                   |                              |                    |
|  |   | CIPANIMAN               | A light good David Sector         |                              | Dial Board And     |
|  |   | o. woonnents and oating | sUml.ocal Settings/Temporary Inte | urer uneser novendendig eAA- | or rupol • Unginei |
|  |   |                         |                                   |                              |                    |

|        | FACILITY/LOCATIO   | en varia de Sudra en Maerica | E WATER F              | <b>NY TANÀNA AN</b> |         |
|--------|--|------------------------------|------------------------|---------------------|---------|
|        |  | 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     |
| 9      | 300  | <u></u> 300                  |                        | RAL                 |         |
| 10     |  | E00                          |                        | 1575                |         |
| 11     | TRIFT  | 200                          |                        | 375                 | 120     |
| 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                 |         |
| TOTALS |  |                              |                        |                     |         |
|        |  | REPAIRS AND/O                | <u> পর্ভাগির</u> াজন 🚽 |                     |         |
|        | Company  |                              |                        |                     |         |
|        | Performing   | Descritpion of               |                        |                     |         |
| Date   | Work/Repairs   | Work/Repairs                 | Estimated Cost         | Work Author         | ized by |
|        |  |                              |                        |                     |         |
|        |  |                              |                        |                     |         |
|        |  |                              |                        |                     |         |

٠

. •

-

•

|     |                      | MONTHLY                                      | FRESH & BRI    | NE WATER F     |                              |                         |
|-----|----------------------|--|----------------|----------------|------------------------------|-------------------------|
|     |                      | FACILITY/LOCATIO                             |                | Dag            |                              |                         |
|     | - ALT - STATE        |  | UNC 2021       | <u> </u>       |                              |                         |
|     | V. 17 - 18 - 18 - 18 | MONTH/YEAR                                   |                |                |                              |                         |
| 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            |                | <b>└───</b>                  |                         |
|     | 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                     |
|     | 20                   | 100  | /06            |                |                              | -30                     |
|     | 21                   | 206  | 200            |                |                              | 155                     |
|     | 22                   | 600  | 600            |                |                              |                         |
|     | 24                   | - 400  | 900            |                |                              | 10                      |
| ł   | 25                   |  |                |                |                              | μ                       |
|     | 26                   | 200  | 100            |                |                              |                         |
|     | 27                   |  | 200            |                |                              |                         |
|     | 28                   | 925  | - > 400        |                |                              |                         |
|     | 29                   | 925  |                |                | ;                            |                         |
| 1   | 30                   | 495  | 495            |                |                              |                         |
| [   | 31                   |  |                |                |                              |                         |
| E   | TOTALS               |  |                |                |                              |                         |
| 5   |                      | aller en | NERMACS (ME/F) | NEXPENSES      |                              |                         |
|     |                      | Company                                      |                | -              | -                            |                         |
| - 1 |                      | Performing                                   | Descritpion of |                |                              |                         |
| ļ   | Date                 | Work/Repairs                                 | Work/Repairs   | Estimated Cost | Work Author                  | rized by                |
|     |                      |  |                |                |                              |                         |
| •   |                      |  |                |                |                              |                         |
| Y   |                      |  |                |                |                              |                         |
|     |                      |  | A.15           |                | and Ellost al KRAMAnothic El | At Dial Presses Outrant |

Documents and SattingsUlmLocal Saturgs(Temporary Internet FilestOLKSAMonthly FW-BW Report - Orig

|        | MONTHLY F        | RESH & BRI     | NE WATER F     | REPORT       |          |
|--------|------------------|----------------|----------------|--------------|----------|
|        | 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           |          |
| 22     | 300              | -500           |                | 22           |          |
| 23     | -760             | <u> </u>       |                | - 2/25       |          |
| 24     | · / /            | 4(1)           | 125            | 22           |          |
| 25     | IDUK FOO         | 1,000          | 105            | 20-          |          |
| 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          |          |
| TOTALS |                  |                |                |              |          |
| P L    | enderse          | REPAIRS AND OF | CENSES.        |              | <u>.</u> |
|        | Company          |                | ~              |              |          |
|        | Performing       | Descritpion of |                |              |          |
|        | Work/Repairs     | Work/Repairs   | Estimated Cost | Work Authori | zed by   |
|        |                  |                |                |              |          |
|        |                  |                |                |              |          |
|        |                  |                |                |              |          |
|        |                  |                |                |              |          |

•

----

. . ...

| MONTHLY FRESH & BRINE WATER REPORT |                       |                         |                |   |          |          |
|------------------------------------|-----------------------|-------------------------|----------------|---|----------|----------|
|                                    | FACILITY/LOCATIC      | SI                      | 4 Doa          | n na series de la constante de<br>La constante de la constante de |          |          |
|                                    | MONTH/YEAR            | 7021                    | 7003           | September   |          |          |
|                                    |                       |                         |                |   |          | <b>5</b> |
|                                    | 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<br>1        |   |          | 4        |
| 3                                  | TOU                   |                         |                |   | 120      | 4        |
| 4                                  | 1800                  | 1800 -                  |                |   |          | -        |
| 6                                  | -2700                 |                         | ,<br>,         |   |          | 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                |                |   |          | -        |
| 31<br>TOTALS                       |                       | 119-1-22                |                | 1   |          | -        |
| TOTALS                             |                       | 42, 670<br>REPARS AND/O |                |   |          |          |
| STATES OF STATES                   | Company               |                         |                |   |          |          |
|                                    | Company<br>Performing | Descritpion of          |                |   |          |          |
| Date                               | Work/Repairs          | Work/Repairs            | Estimated Cost | Work Author   | ized hy  |          |
|                                    |                       | tronucopano             |                | HVIR AULIOI   |          | 1        |
| N                                  |                       |                         |                |   |          | 1        |
| 1                                  |                       |                         |                |   |          | -        |
|                                    |                       |                         |                |   |          | 1        |

C:Documents and Settings\Jim\Local Settings\Temporary Internet Files\OLKSAWonthly FW-BW Report - Original

•---

## 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<br>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     |                   |                   |                     |              |             |  |
| 13     |                   |                   |                     |              |             |  |
| 15     |                   |                   |                     |              |             |  |
| 16     |                   |                   |                     |              |             |  |
| 17     |                   |                   |                     |              |             |  |
| 18     |                   |                   |                     |              |             |  |
| 19     |                   |                   |                     |              |             |  |
| 20     |                   |                   |                     |              |             |  |
| 21     |                   |                   |                     |              |             |  |
| 22     |                   |                   |                     |              |             |  |
| 23     |                   |                   |                     |              |             |  |
| 24     |                   |                   |                     |              |             |  |
| 25     |                   |                   |                     |              |             |  |
| 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        |

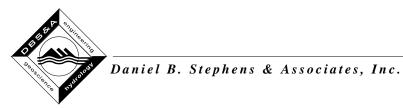
# Appendix C

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<br>poratory analytical reports<br>storical documents and in | s for brine and fr | eshwater sa   | mpling           |                  |                  |               |
| The above<br>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

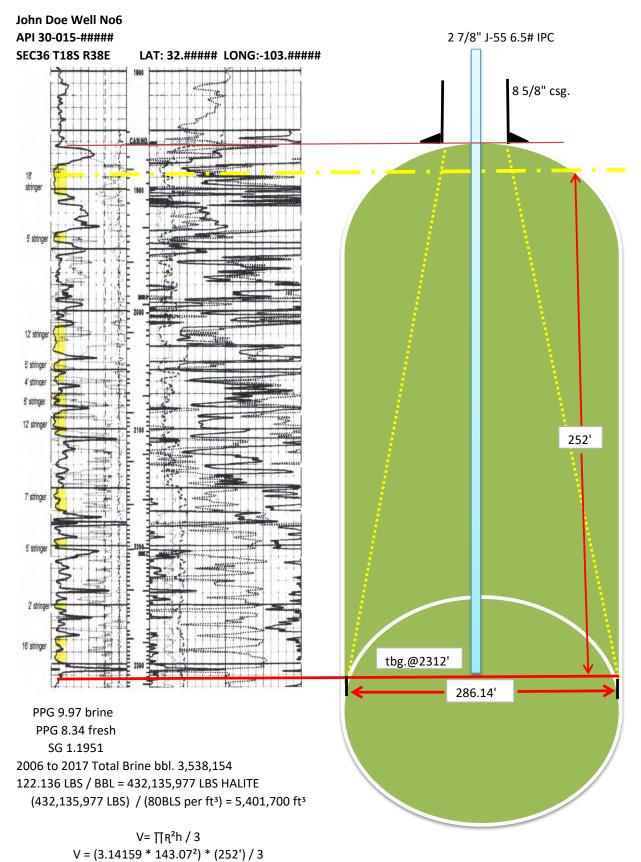
Cavern height calculated as the difference between the bottom of the well casing and the 2018 tubing depth of 2,610 feet bgs.

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.<sup>3</sup>

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                   |                |  |  |
| <b>Project:</b> 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: <b>JMT</b> |  |  |
| 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                   |         |  |
| <b>Project:</b> 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    | <b>F</b> 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 | <b>ID:</b> PMW-1          |                |  |  |
| <b>Project:</b> 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: <b>JMT</b> |  |  |
| 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 <b>e:</b> 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 | <b>D:</b> DBS-5         |        |  |
| <b>Project:</b> 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                |        |  |
| <b>Project:</b> Salty Dog        |                            | Colle   | ection Dat | t <b>e:</b> 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      | <b>D:</b> DBS-9          |         |  |
| Project:         Salty Dog         Collection Date: 6/3/2021 11:15:00 AM |                            |                    |                          |         |  |
| Lab ID: 2106279-007  | Matrix: AQUEOUS            | <b>Received Da</b> | 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         |         |        |
| <b>Project:</b> Salty Dog           |                            | Coll   | ection Dat | e: 6/3         | 8/2021 11:35 | :00 AM  |        |
| Lab ID: 2106279-008                 | Matrix: AQUEOUS            | Re     | ceived Dat | <b>:e:</b> 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 | <b>D:</b> DBS-10         |         |  |
| <b>Project:</b> 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  | <b>D:</b> DBS-6          |         |
| <b>Project:</b> 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      | <b>D:</b> MW-5           |         |
| <b>Project:</b> Salty Dog           |                   | <b>Collection Da</b> | te: 6/3/2021 1:30:00 PM  |         |
| <b>Lab ID:</b> 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     | <b>D:</b> MW-3           |
| <b>Project:</b> Salty Dog           |                 | Collection Dat      | te: 6/3/2021 2:55:00 PM  |
| Lab ID: 2106279-012                 | Matrix: AQUEOUS | <b>Received Dat</b> | 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

| <ul><li>CLIENT: Daniel B. Stephens &amp; Assoc.</li><li>Project: Salty Dog</li><li>Lab ID: 2106279-013</li></ul> | Matrix: AQUEOUS |       | Collect |          | :6/3 | ine<br>3/2021 3:30:00 PM<br>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.<br>Salty Dog |                 |      | Collect |          | e: 6/3/        | /2021 3:45:00 PM     |        |
|-----------|--|-----------------|------|---------|----------|----------------|----------------------|--------|
| Lab ID:   | 2106279-014                              | Matrix: AQUEOUS |      | Receiv  | ved Date | <b>e:</b> 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    |
|                                |

<sup>1</sup>Cp <sup>2</sup>Tc <sup>3</sup>Ss <sup>4</sup>Cn <sup>5</sup>Sr <sup>6</sup>Qc <sup>7</sup>Gl <sup>8</sup>Al <sup>9</sup>Sc

1

2 3 4

5 5

6 6

7

<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<br>06/03/21 14:55 | Received date<br>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

|         | <br>Result | Qualifier | Dilution | Analysis         | Batch     | <br>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<br>U<br>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<br>mV mV mV          | DUP Result Dilut<br>mV | DIIUT      | ы        | DUP DIIT | DUP Qualifier | DUP Diff Limits<br>mV | <sup>2</sup> 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      |  |

Б

പ്

Ū

∢

SC

## 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<br>for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or<br>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<br>(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<br>Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or<br>analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not<br>being performed on your samples typically, but on laboratory generated material.  |
| Sample Chain of<br>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 <sup>1</sup>     | TN00003          |
| Colorado                      | TN00003     | New York                    | 11742            |
| Connecticut                   | PH-0197     | North Carolina              | Env375           |
| Florida                       | E87487      | North Carolina 1            | DW21704          |
| Georgia                       | NELAP       | North Carolina <sup>3</sup> | 41               |
| Georgia <sup>1</sup>          | 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 <sup>16</sup>        | KY90010     | South Carolina              | 84004002         |
| Kentucky <sup>2</sup>         | 16          | South Dakota                | n/a              |
| Louisiana                     | AI30792     | Tennessee <sup>14</sup>     | 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 <sup>5</sup> | 1461.02     | DOD                         | 1461.01          |
| Canada                        | 1461.01     | USDA                        | P330-15-00234    |
| EPA–Crypto                    | TN00003     |                             |                  |

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

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

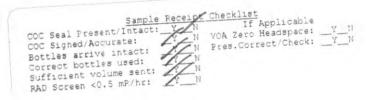
\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





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<br>TYPE | MATRIX  | COLLECTION<br>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:<br>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: <b>PBW</b> Batch ID: <b>R78920</b> RunNo: <b>78920</b>  |            |
| 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 <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: <b>PBW</b> Batch ID: <b>A79019</b> RunNo: <b>79019</b>  |            |
| 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 <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: <b>R7</b> | 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: <b>lcs</b> | i         | Tes         | Code: SI         | M2510B: Sp | ecific Condu | ictance |          |      |
|-----------------------------|-------------|-----------------|-----------|-------------|------------------|------------|--------------|---------|----------|------|
| Client ID: LCSW             | Batch       | ID: <b>R7</b>   | 9103      | R           | unNo: <b>7</b> 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 |
|-------|-------|
|-------|-------|

| 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: <b>7</b> 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: <b>7</b> 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: <b>7</b> 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: <b>78</b> | 3958       |                     |      |          |      |
| Prep Date:                  | Analysis Date | 6/8/2021     | S           | SeqNo: 27        | 770026     | Units: <b>pH ur</b> | 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:<br>Project:                  | Daniel B. Stephens a<br>Salty Dog | & Asso                  | с.        |             |                  |              |             |         |          |      |
|--------------------------------------|-----------------------------------|-------------------------|-----------|-------------|------------------|--------------|-------------|---------|----------|------|
| •                                    |                                   |                         |           |             |                  |              |             |         |          |      |
| Sample ID: mb-1 a                    |                                   |                         |           |             |                  | //2320B: All | kalinity    |         |          |      |
| Client ID: PBW                       |                                   | Batch ID: <b>R78958</b> |           |             | RunNo: 78        |              |             |         |          |      |
| Prep Date:                           | Analysis Da                       | ate: 6/8                | 8/2021    | 5           | SeqNo: 27        | 69902        | Units: mg/L | . CaCO3 |          |      |
| Analyte<br>Total Alkalinity (as CaCC | Result<br>3) ND                   | PQL<br>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: <b>R7</b>           |           |             | 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: <b>R7</b>           | 8958      | F           | RunNo: <b>78</b> | 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: <b>mb</b>          | lk        | Tes         | tCode: SN        | /12320B: All | kalinity    |         |          |      |
| Client ID: PBW                       | Batch                             | ID: <b>R7</b>           | 8958      | F           | RunNo: <b>78</b> | 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 <b>cs</b>        | i         | Tes         | tCode: SN        | /12320B: All | kalinity    |         |          |      |
| Client ID: LCSW                      | Batch                             | ID: <b>R7</b>           | 8958      | F           | RunNo: <b>78</b> | 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: <b>du</b>          | р         | Tes         | tCode: SN        | /12320B: All | kalinity    |         |          |      |
| Client ID: MW-3                      | Batch                             | ID: <b>R7</b>           | 8958      | F           | RunNo: <b>78</b> | 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<br>4901 Hawkins NE<br>Albuquerque, NM 87109<br>TEL: 505-345-3975 FAX: 505-345-4107<br>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<br>3 Was an atter  | npt made to cool the sampl                              | or?   | N          |            |                   |                          |  |  |
| was an allel  | npt made to cool the sampl                              | 691   | Yes        | <b>v</b> 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 🗆              |                          |  |  |
| <ol><li>Sufficient san</li></ol>  | st(s)?  | Yes   | <b>v</b> 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?<br>(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?<br>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><br>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<br>           | 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:<br>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                |                  | <sup>'2</sup> 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<br>Type and #    | Preservative<br>Type | HEAL No.                    | ) XЭТВ<br>18:Н9Т | 9 1808            | r) 803<br>PAHs t | RCRA<br>CI, F, I          | ) 0928           | 8) 0728<br>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:<br>\$\4/z1 | Time:             |                 | red by:  | Received by:               | CD6                  | Date Time<br>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  |   | <b>C</b> 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:<br>@CStandard □ I evel 4 (Full Validation) | 0                 | 0                 | 7364                      |          | s,80    | SMIS   | S '*00 |        | .0040/ | 11<br>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>&gt;</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 $10.01$ $10.01$ $10.01$ $10.01$ $10.01$ $10.01$ $17/3G$ $10.01$ $10.01$ $10.01$ $10.01$ $10.01$ $10.01$ $17/3G$ $10.01$ $10.01$ $10.01$ $10.01$ $10.01$ $10.01$ $1100$ $10.01$   |   | # 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   |
| NSUS     Thiedlen     Zeit $NSUS$ $NSUS$ $NSUS$ $NSUS$ Thiedlen     Zeit $014$ $110$ $XX$ $NSUS$ $100$ $014$ $100$ $XX$ $NSUS$ $100$ $014$ $100$ $XX$ $NSUS$ $100$ $100$ $100$ $XX$ $NSUS$ $100$ $100$ $100$ $100$ $NSUS$ $100$ $1000$ $1000$ $100$  | 1220  |                   | 1                 | 5                         |          |         |        |        |        | ł      | >        | 2     | >    | 1   |      | 1    |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $  | 1 2001  | x ray             |                   | OI S                      |          |         | 1      |        | 1      | +      | <        | -     | 0    |     | 1    | T    |
| Image: Notest in the second system  | / JSUS V Injecti  | ZPOLY             | X                 | 10                        |          | -       |        |        |        | +      | X        |       | ×    |     |      |      |
| Image: Network         Image:   |   |                   |                   |                           |          |         |        | -      | 1      | +      | +        |       |      | T   | +    | Т    |
| Image         Relinquished by:         Nai:         Date         Time           Image         Mark         Keceived by:         Via:         Date         Time  |   |                   |                   |                           |          | -       |        |        |        | +      | -        | -     |      |     |      | -    |
| Image: Second by:     Image: Second by:     Via:     Date     Image: Second by:     Date     Image: Second by:     Via:     Date     Image:   |   |                   |                   |                           |          |         |        | _      |        | -      | _        |       |      |     |      |      |
| Image: Relinquished by:     Image: Relinquished by:     Via:     Date     Image: Received by:     Via:     Date     Image: Via: <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td>_</td> <td>_</td> <td></td> <td></td> <td></td> <td></td>   |   |                   |                   |                           |          |         |        |        |        | -      | _        | _     |      |     |      |      |
| Image     Relinquished by:     Via:     Date     Time       Aloco     Aloco     Aloco     Aloco     Aloco     Aloco       Time:     Relinquished by:     Via:     Date     Time       Time:     Relinquished by:     Via:     Date     Time       Time:     Relinquished by:     Via:     Date     Time   |   |                   |                   |                           |          |         |        |        |        | +      | _        | 126   | ×.   |     |      | T    |
| Time:     Relinquished by:     Via:     Date     Time       Aloro     Aloro     Aloro     6·4·21     1(:00       Time:     Relinquished by:     Via:     Date     Time  |   |                   |                   |                           |          |         |        |        |        | -      | _        | _     |      |     |      | 1    |
| Time:     Relinquished by:     Via:     Date     Time       Aloro     Aloro     Aloro     Cost     6·4·21     11:00       Time:     Relinquished by:     Received by:     Via:     Date     Time  |   |                   |                   |                           |          |         |        |        |        |        | -        |       |      |     |      | 1    |
| Time:     Relinquished by:     Via:     Date     Time       Aloro     Aloro     Aloro     Bit     Crob     Bit     Bit       Time:     Relinquished by:     Received by:     Via:     Date     Time   |   |                   |                   |                           |          |         |        |        |        |        |          |       |      |     |      | 1    |
| Time: Relinquished by: Date Date  | Ziloro  | (B)               | 0                 | Date Time<br>6-4-21 [[:00 | Remarks: | L+      | 0      | 0      | 5      | 0      |          | 0     |      |     |      | -    |
|   | Time:   | Received by:      | Via:              |                           |          |         | 5      | )      | )      | )      | )        | )     |      |     |      |      |



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                  |         |
| <b>Project:</b> Salty Dog           |                    | Collec   | tion Dat | te: 11 | /28/2021 11:18:00 Al  | М       |
| <b>Lab ID:</b> 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 | <b>D:</b> DBS-10          |         |
| <b>Project:</b> 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 | <b>D:</b> MW-5            |         |
| <b>Project:</b> 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 | <b>Received Date:</b> 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: <b>12/20</b> /2 | 2021     |
|-------------------------------------|---------------|-------|---------|---------|--------------------------------|----------|
| CLIENT: Daniel B. Stephens & Assoc. |               | Clie  | ent Sa  | mple II | <b>D:</b> DBS-6                |          |
| <b>Project:</b> 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:<br>Project:<br>Lab ID: | Daniel B. Stephens & Assoc.<br>Salty Dog<br>2112013-006 | Matrix: | GRO   |       | Collect |          | <b>e:</b> 11/ |             | :20:00 PM<br>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   | <b>e:</b> 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: <b>12/20/2</b> | 2021   |
|-------------------------------------|------------------|------------|---------|-------------------------------|--------|
| CLIENT: Daniel B. Stephens & Assoc. |                  | Client Sar | nple II | <b>):</b> DBS-9               |        |
| <b>Project:</b> Salty Dog           |                  | Collectio  | on Date | e: 11/28/2021 2:44:00 PM      |        |
| <b>Lab ID:</b> 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                   |        |
| <b>Project:</b> 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   | <b>D:</b> DBS-4          |        |
| <b>Project:</b> Salty Dog           |                | Coll   | ection Dat | e: 11/28/2021 3:15:00 PM |        |
| <b>Lab ID:</b> 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   | <b>D:</b> DBS-3           |         |
| <b>Project:</b> 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           | <b>Qual Units</b> | 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   | <b>D:</b> DBS-5           |          |
| <b>Project:</b> 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                  |          |
| <b>Project:</b> Salty Dog           |                   | Co   | llection Dat | e: 11/28/2021 4:05:00 PM  |          |
| <b>Lab ID:</b> 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      | <b>ID:</b> PMW-1          |          |
| <b>Project:</b> Salty Dog           |                    | <b>Collection Da</b> | te: 11/28/2021 4:22:00 PM | 1        |
| <b>Lab ID:</b> 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

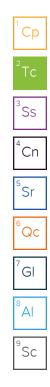
ACCOUNT: Hall Environmental Analysis Laboratory PROJECT:

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<br>11/28/21 13:52 | Received dat<br>12/02/21 09:0 |                |
|----------------------------------|-----------|----------|--------------------------|---------------------------------------|-------------------------------|----------------|
| Method                           | Batch     | Dilution | Preparation<br>date/time | Analysis<br>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

|         | <br>Result | Qualifier | Dilution | Analysis         | Batch     | <br>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 | <b>)9/21 04:02 • (l</b> | 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<br>(      |
|---|----------------|--|------------|----------|----------------------|-----------------|-------------|
| (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 | <b>DUP</b> Qualifier | DUP Diff Limits | U           |
| Analyte   | тV             | шV   |            | шV       |                      | mV              | َں<br>م     |
| ORP   | 307            | 307  | -          | 0.700    |                      | 20              |             |
|   |                |  |            |          |                      |                 | 0<br>O<br>C |

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

| LITU UUU UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU                          |                   |  | 1<br>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 | <b>DUP</b> 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      |
|--|----------------------------|---------|
|  | <b>DUP</b> 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

|           | 2580             |
|-----------|------------------|
| 0         | Method           |
| 'G1784670 | t Chemistry by M |
| ≥         | Wet              |

### QUALITY CONTROL SUMMARY

|   | _   |
|---|---|
| 1 | $\bigcirc$  |
| - | plicate   |
| 1 | D   |
|   | •   |
| 1 | S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S |
|   | 0<br>0<br>0   |
| ( | Sam   |
|   | iginal  |
| ( | ō   |
|   | 13/663-06   |
| 1 |   |
|   |   |

|  |   | 2  | U<br>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 <sup>.</sup>   | 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      |

Б

ğ

Ū

∢

ភ

Sc

### 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<br>for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or<br>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<br>(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<br>Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or<br>analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not<br>being performed on your samples typically, but on laboratory generated material.  |
| Sample Chain of<br>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 <sup>1</sup>     | TN00003          |
| Colorado                      | TN00003     | New York                    | 11742            |
| Connecticut                   | PH-0197     | North Carolina              | Env375           |
| Florida                       | E87487      | North Carolina 1            | DW21704          |
| Georgia                       | NELAP       | North Carolina <sup>3</sup> | 41               |
| Georgia <sup>1</sup>          | 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 <sup>16</sup>        | KY90010     | South Carolina              | 84004002         |
| Kentucky <sup>2</sup>         | 16          | South Dakota                | n/a              |
| Louisiana                     | AI30792     | Tennessee <sup>14</sup>     | 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 <sup>5</sup> | 1461.02     | DOD                         | 1461.01          |
| Canada                        | 1461.01     | USDA                        | P330-15-00234    |
| EPA–Crypto                    | TN00003     |                             |                  |

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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<br>BOTTLE<br>PLE ID 125HDP   |                      |                  |   |                |         |                       |                |          |                |
|--|----------------------|------------------|---|----------------|---------|-----------------------|----------------|----------|----------------|
| PLE ID<br>125HDP<br>Groundw 11/28/2021 1:52:00 PM<br>1 ORP<br>ACCOUNT #: EMAIL:<br>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<br>TYPE MATRIX DATE ANALYTICAL COMI<br>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<br>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:<br>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<br>Comments:        | C N                         | Attempt to Cool ? |        |

### QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

| Client:<br>Project: | Daniel B. Stephens & Assoc.<br>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<br>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: <b>R84398</b> RunNo: <b>84398</b>   |
| 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<br>Project: Salty | el B. Stephens & A<br>Dog | Assoc.             |             |                       |                 |          |          |      |
|---------------------------------|---------------------------|--------------------|-------------|-----------------------|-----------------|----------|----------|------|
| Sample ID: Ics-1 99.3uS e       | C SampType                | : Ics              | Tes         | tCode: SM2510         | B: Specific Con | ductance |          |      |
| Client ID: LCSW                 | Batch ID                  | : <b>R84394</b>    | F           | RunNo: <b>84394</b>   |                 |          |          |      |
| Prep Date:                      | Analysis Date             | : <b>12/8/2021</b> | S           | SeqNo: <b>2964718</b> | 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: <b>84394</b>   |                 |          |          |      |
| Prep Date:                      | Analysis Date             | : <b>12/8/2021</b> | S           | SeqNo: <b>2964745</b> | 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 &<br>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: <b>8</b> 4  | 4455                             |  |                    |                 |      |
| Prep Date: 12/7/2021   | Analysis Date  | e: <b>12</b>   | /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<br><sup>o</sup> otassium   | ND<br>ND   | 1.0<br>1.0   |                                      |                            |  |                                  |  |                    |                 |      |
| •  |  |  |                                      |                            |  |                                  |  |                    |                 |      |
| Potassium  | ND   | 1.0<br>1.0   | <u></u> s                            | Tes                        | tCode: EF  | PA 6010B: 1                      | Fotal Recover                              | able Meta          | als             |      |
| Potassium<br>Sodium  | ND<br>ND   | 1.0<br>1.0<br>De: LC:                                  |                                      |                            | tCode: EF  |                                  | Fotal Recover                              | able Meta          | als             |      |
| Potassium<br>Sodium<br>Sample ID: LCS-64364  | ND<br>ND<br>SampTyp  | 1.0<br>1.0<br>De: LCS<br>D: 643                        | 864                                  | R                          |  | 4455                             | <b>Total Recover</b><br>Units: <b>mg/L</b> | rable Meta         | als             |      |
| Potassium<br>Sodium<br>Sample ID: LCS-64364<br>Client ID: LCSW   | ND<br>ND<br>SampTyp<br>Batch II<br>Analysis Date                   | 1.0<br>1.0<br>De: LCS<br>D: 643                        | 864<br>/9/2021                       | R                          | RunNo: <b>8</b> 4  | 4455                             |  | vable Meta<br>%RPD | als<br>RPDLimit | Qual |
| Potassium<br>Sodium<br>Sample ID: LCS-64364<br>Client ID: LCSW<br>Prep Date: 12/7/2021                       | ND<br>ND<br>SampTyp<br>Batch II<br>Analysis Date                   | 1.0<br>1.0<br>De: LCS<br>D: 643<br>e: 12               | 864<br>/9/2021                       | R                          | RunNo: <b>8</b> 4<br>SeqNo: <b>2</b> 9                     | 4455<br>966814                   | Units: mg/L                                |                    |                 | Qual |
| Potassium<br>Sodium<br>Sample ID: LCS-64364<br>Client ID: LCSW<br>Prep Date: 12/7/2021<br>Analyte            | ND<br>ND<br>SampTyp<br>Batch II<br>Analysis Date<br>Result F       | 1.0<br>1.0<br>De: LCS<br>D: 643<br>e: 12<br>PQL        | 864<br>/9/2021<br>SPK value          | R<br>S<br>SPK Ref Val      | RunNo: 84<br>SeqNo: 29<br>%REC                             | 4455<br>966814<br>LowLimit       | Units: <b>mg/L</b><br>HighLimit            |                    |                 | Qual |
| Potassium<br>Sodium<br>Sample ID: LCS-64364<br>Client ID: LCSW<br>Prep Date: 12/7/2021<br>Analyte<br>Calcium | ND<br>ND<br>SampTyp<br>Batch II<br>Analysis Date<br>Result I<br>51 | 1.0<br>1.0<br>De: LC:<br>D: 643<br>e: 12<br>PQL<br>1.0 | 864<br>/9/2021<br>SPK value<br>50.00 | R<br>S<br>SPK Ref Val<br>0 | RunNo: <b>84</b><br>SeqNo: <b>29</b><br><u>%REC</u><br>103 | 4455<br>966814<br>LowLimit<br>80 | Units: <b>mg/L</b><br>HighLimit<br>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:<br>Project:                  | Daniel B. Stephens & Assoc.<br>Salty Dog                                    |
|--------------------------------------|---|
| Sample ID: mb-1 a                    | Ik SampType: mblk TestCode: SM2320B: Alkalinity                             |
| Client ID: PBW                       | Batch ID: <b>R84355</b> RunNo: <b>84355</b>                                 |
| Prep Date:                           | Analysis Date: 12/7/2021 SeqNo: 2963279 Units: mg/L CaCO3                   |
| Analyte<br>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: <b>R84355</b> RunNo: <b>84355</b>                                 |
| 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: <b>R84355</b> RunNo: <b>84355</b>                                 |
| 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: <b>R84355</b> RunNo: <b>84355</b>                                 |
| 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: <b>DL</b> | JP        | Tes         | tCode: Sp        | pecific Grav | vity      |       |          |      |
| Client ID: MW    | V-3           | Batch       | ID: <b>R8</b>  | 4392      | F           | unNo: <b>8</b> 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:<br>Project:    | Daniel B.<br>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: <b>8</b> 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<br>ENVIRONMENTAL<br>Analysis<br>Laboratory   | TEL: 505-345-3        | ntal Analysis Labor<br>4901 Hawkin<br>Albuquerque, NM 8<br>975 FAX: 505-345-<br>s.hallenvironmental | <sup>15 NE</sup><br>7109 <b>San</b><br>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<br>Sala  | not  |
| Reviewed By: JA 12/1/2/1<br>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<br>bottles checked  |
| 11. Does paperwork match bottle labels?<br>(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?<br>(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><br><u>Cooler No</u> Temp °C Condition<br>1 0.2 Good<br>2 2.8 Good | Seal Intact Seal No   | Seal Date   | Signed By   |  |

|                |                | > .               | ninner (manner in inner               |                            |                      |              |          | 1   |        |  | Ĩ                               | A R R R R        |                   |       |       |       |       |      |
|----------------|----------------|-------------------|---------------------------------------|----------------------------|----------------------|--------------|----------|---|--------|--|---------------------------------|------------------|-------------------|-------|-------|-------|-------|------|
| Client:        | D 35 8.4       | BA                |                                       | Standard                   | Rush                 |              |          |   |        | AALL ENVIKONMENTAL   | ц х<br>Х                        | VETS   APORATOR  |                   | Z     | M     | Z     | A S   | ,>   |
|                |                |                   |                                       | Project Name:              |                      |              | K        | 10  | ۲ :    |  |                                 |                  | 5                 |       | 2     |       | ¥     | -    |
| Mailing        | Addres         | SCORI             | Mailing Address: SOZO A CODE MY RONE  | SALTY                      | Y DOG                |              | 4        | www.rialienvironmental.com<br>4901 Hawkins NE - Albitcherghe NM 87109 | awkir  | www.riailerivironmental.com<br>ns NE - Albitotierotie NM 8 | - Alb                           |                  | ental.            | NM 8  | 7109  |       |       |      |
| 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 |       |       |      |
| Phone          | #: 505         | :83.              |                                       | DB19.1198                  | 3,00                 |              |          |   |        |  | Anal                            | Analysis Request | edue              | st    |       |       |       |      |
| email o        | r Fax#:        | JAYAI             | email or Fax#: JAYARBE(0620-109)c.com | Project Manager:           | iger:                |              |          | 10  |        | _  | <b>*</b> 0                      |                  | (tr               | 1.    |       |       | 9.    | 6    |
| QA/QC Packa    | QA/QC Package: |                   | -                                     | J. AYARBE                  | BE                   |              | 1208) s' | PCB's<br>O / MR(  |        | SWISC  | PO₄, Si                         | ,                | nəsdA\t           | HC    | 2     | (tivi | , Car | 2010 |
| Accreditation: | itation:<br>AC | □ Az Co           | mpliance                              | Sampler: M. 2607           | Zbrozek              | CN L         |          |   |        | _  | 'ZON                            | 991              |                   | 'SQL  | 1do   | ton   | Tros  | 910  |
|                | □ EDD (Type)   |                   |                                       | # of Coolers:              | 2                    | 2            |          | _   |        | slet   | ' <sup>2</sup> O <sup>3</sup> ' | 0_               |                   | 1     | 9     | PU    | 81    | N    |
|                |                |                   |                                       | Cooler Temp(including CF); | (including CF): 0.   | 1=0=0.2 (°C) |          |   | odteM) | py 83  | Вґ, И                           | (401)            | -imə2)<br>Colifor | 09    | wi    | 2.    | IAIK  | X 6  |
| Date           | Time           | Matrix            | Sample Name                           | Container<br>Type and #    | Preservative<br>Type | HEAL No.     |          |   |        | 1000   |                                 |                  | -                 | pod(  | pos   | Sper  | otol  | NT   |
| 11/23/21       | 1113           | GW                | DB5-B                                 |                            | Port                 | 100          |          |   |        | -  | _                               | -                | -                 | >     |       | 2     | -     |      |
| -              | 1146           | -                 | D85-10                                |                            | 1                    | 2007         |          |   |        |  |                                 |                  | -                 |       |       |       |       | ×    |
|                | 245            |                   | MW-S                                  |                            |                      | 200          |          |   |        |  |                                 |                  | -                 |       |       |       |       | X    |
|                | 1352           |                   | mw-3                                  | 4 Poly                     | 3 none               | 100          |          |   |        |  | X                               | X                | -                 | X     |       | X     | X     | X    |
|                | lihl           |                   | D35-6                                 |                            | none                 | SOO          |          |   |        |  |                                 |                  |                   | à     |       |       | -     | X    |
|                | ochi           |                   | BRINE                                 | 100                        | I Nene               | coc          |          |   |        |  |                                 |                  |                   | Х     | X     |       | -     | X    |
|                | Schl           |                   | Injection                             |                            | 1 none               | <b>t</b> 50  |          |   |        |  |                                 |                  |                   | X     | X     |       |       | X    |
|                | lyyy           |                   | DBS-9                                 | 1201                       | none                 | 800          |          |   |        |  |                                 |                  |                   |       |       |       |       | ×    |
|                | 1500           |                   | DBS-2                                 |                            | -                    | 600          |          |   |        |  |                                 |                  |                   |       |       |       |       | ×    |
|                | 1515           | _                 | DB5-4                                 |                            |                      | 0VO          |          |   |        |  |                                 |                  | 2                 |       |       |       |       | ×    |
|                | 1536           | -                 | DBS-3                                 |                            |                      | 011          |          |   |        |  |                                 |                  |                   |       |       |       | -     | X    |
| -              | 1550           |                   | 08545 /                               |                            |                      | 210          |          |   |        |  |                                 |                  |                   |       |       |       |       | X    |
| Date:          | Time:          | Relinquished by:  | ed by:                                | Received by:               | Via:                 | Date Time    | Remarks: | ks:   |        |  |                                 |                  |                   |       |       |       |       |      |
| 11/29/11       | 11-100         | Polinovicehod hur | od bur                                | 11 UUW                     | 2                    | noll hubal   |          |   |        |  |                                 |                  |                   |       |       |       |       |      |
| 5              |                | BA. F.            |                                       |                            | La                   | 12/12/ 2,00  |          |   |        |  |                                 |                  |                   |       |       |       |       |      |
|                |                | rrn               |                                       | ,                          |                      |              |          |   |        |  |                                 |                  |                   |       |       |       |       |      |

| Clinet         | Chain-of-Custody Record              |                   | Turn-Around Time:       | Time:                 |                                  |             |                 | Т            | I        | Ш                | HALL ENVIRONMENTAL                      | BO           | N         | ШУ       | Hz     |              |     |  |
|----------------|--------------------------------------|-------------------|-------------------------|-----------------------|----------------------------------|-------------|-----------------|--------------|----------|------------------|---|--------------|-----------|----------|--------|--------------|-----|--|
| Client Dan     | Ullent Daniel B Stephens & ASSOC     |                   | Destandard              | 🗆 Rush                |                                  |             |                 |              | AN       | Ľ                | ANALYSIS LABORATORY                     |              | BO        | N N      |        |              |     |  |
|                |                                      |                   | Project Name:           |                       |                                  |             | ik.             |              | 10000    | nolle            | www.hallonvironmontal.com               |              |           |          | )      |              |     |  |
| Mailing Addre  | Mailing Address: 6020 Academy RD NE  |                   | Sal                     | Salty Dog             |                                  |             | 49011           | lawkii       | IN SI    | - Alk            | 4901 Hawkins NE - Albuquerque, NM 87109 | que, l       | NM 8      | 7109     |        |              |     |  |
| Swite #10      | O AlbhoLelohe, NMS                   |                   | Project #:              | $\mathbf{D}$          |                                  |             | Tel 5           | 505-345-3975 | 5-397    | 5                | Fax 5                                   | 505-345-4107 | 5-410     | ~        |        |              |     |  |
| Phone #: 50.   | Phone #: 505-822-9400                |                   | DB19                    | 0319.1198.00          | 0                                |             |                 |              | 100 0    | Anal             |   | edues        | st        |          |        |              |     |  |
| email or Fax#  | email or Fax#: JAYARB600e0-1091c.com |                   | Project Manager:        | ger:                  |                                  | _           | (0              |              | -        | *O               |   | (tr          | 1.        |          |        | 93           |     |  |
| QA/QC Package: | e:<br>□ Level 4 (Full Validation)    |                   | J. AYA                  | J. AYARBE             |                                  | .208) e'    | PCB's           |              | SWIS     | PO4, S           |   | ıəsdA\tr     | Ha        | 2        | 1+1    | Soic<br>mo a | Q   |  |
| Accreditation: |                                      | Sar               | npler: M                | Sampler: M. Zbrozeh   | Ч                                | _           | _               | (٢.          | 9728     | 10 <sup>5'</sup> | C                                       |              | 2.        | 90       | N:+    | 19           | 02. |  |
| D NELAC        | Other                                | On                | On Ice:                 | ⊡ Yes                 | ON D                             |             |                 | 709          | _        |                  | 12                                      |              | .U.T      | 10       | Sul    | 19           |     |  |
| □ EDD (Type)   |                                      | 10 #              | lers:                   | 王浩                    |                                  |             |                 | g po         |          | _                |   |              |           |          | pr     | 17           | 1-  |  |
|                |                                      | Co                | oler Temp <sub>(i</sub> | I CF): 0.             | (0°) J.0-025                     |             | -               | oqte         | -        |                  |   |              |           |          | 10     | X            | N   |  |
| Date Time      | Matriv Sample Name                   | Cor               | Container               | Preservative          | 2.0220240.<br>HEAL No.           |             | го <u>8:</u> НЧ | M) 803       | vd eHA   | 8 AR28           | <del>500 (A</del>                       | 270 (Se      | Dog       | nibo     | ) sad  | 10+01        | 25  |  |
| 1              | 441                                  |                   |                         | 2 June                | 2.2                              | _           | 1.0             | 3            |          | -                | -                                       | 1            | -         |          | S      |              | 2>  |  |
|                | -                                    |                   | 10                      | )                     | 012                              |             | -               |              | +        |                  |   |              |           |          |        | -            | <   |  |
| 1622           | - MM X                               |                   | _                       | -                     | 014                              |             | _               |              | _        |                  |   | _            |           |          | -      | -            | ×   |  |
| 1              |                                      |                   |                         |                       |                                  |             |                 |              |          |                  |   |              |           |          | 100    |              |     |  |
|                | 7                                    |                   |                         |                       |                                  |             |                 |              |          |                  |   |              |           |          |        |              |     |  |
|                | /                                    |                   |                         |                       |                                  |             |                 |              |          |                  |   |              |           |          | -      |              |     |  |
|                |                                      | /                 |                         |                       |                                  |             |                 |              |          |                  |   |              |           |          | -      | -            |     |  |
|                |                                      |                   |                         |                       |                                  |             |                 |              | -        |                  |   | -            |           |          | -      |              |     |  |
|                |                                      |                   |                         |                       |                                  |             | -               |              |          |                  |   |              |           | N        | -      |              |     |  |
|                |                                      |                   |                         |                       |                                  | /           |                 |              |          |                  |   |              |           |          |        |              |     |  |
|                |                                      |                   |                         |                       |                                  |             |                 |              | /        | /                |   |              |           |          | -      | -            |     |  |
|                |                                      |                   |                         |                       |                                  |             |                 |              | -        |                  |   |              | Y         | 1        |        |              |     |  |
|                | / /                                  |                   |                         |                       |                                  |             | -               |              | -        |                  |   |              |           | 1        |        | $\vdash$     |     |  |
| Date: Time:    | Relinquished by:                     | Rece              | Received by:            | Via:                  | Date Time                        | Remarks:    | rks:            |              |          |                  |   |              |           | 1        | 1      |              |     |  |
| 121            |                                      |                   | CI NAAA                 | · w                   | W 29/21 1700                     |             |                 |              |          |                  |   |              |           |          |        |              |     |  |
| Date: Time:    | Relinquisher by:                     | Rece              | sived by:               | Via:                  | Date Time                        |             |                 |              |          |                  |   |              |           |          |        |              |     |  |
| 1907 1900      | UNITATION                            | Se                | See u                   | LOUNAL (              | (2/1/2)                          |             |                 |              |          |                  |   |              |           |          |        |              |     |  |
| If necessa     | /. samples submitted to              | mav be subcontrac | ted to other act        | credited laboratories | s. This serves as notice of this | ilidisson : | v. Anv s        | ub-contr     | acted da | ta will be       | clearly r                               | otated o     | in the ai | alutical | renort |              | 1   |  |

| HALL<br>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                            |

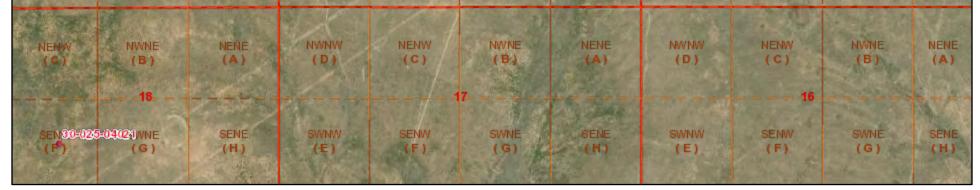
Appendix E

Area of Review Evaluation



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

| SES80-025<br>(№)    | 42762 30<br>( O )           | SESE<br>(P)                        | •80-025-42805<br>swsw<br>( M ) | SESW 2<br>(N) 2 | 9 SWSE<br>(0)               | SESE<br>(P)                     | SWSW<br>(M) | SESW 28<br>(N-) 28    | swse (0)            | SESE<br>(P)             |
|---------------------|-----------------------------|------------------------------------|--------------------------------|-----------------|-----------------------------|---------------------------------|-------------|-----------------------|---------------------|-------------------------|
| NENW<br>(C)         | NWNE<br>(B)                 | NENE<br>(A)                        | NWNW<br>(D)                    | NENW<br>(C)     | NWNE<br>(B)                 | NENE<br>(A)                     | NWNW<br>(D) | NENW<br>(C)           |                     | 025 1270<br>NENE<br>(A) |
| SENW<br>(F)         | SWNE<br>(G)                 | SENE<br>(H)                        | SWNW<br>(E)                    | SENW<br>(F)     | SWNE<br>(G)<br>18S 36E<br>2 | SENE<br>(H)                     | SWNW<br>(E) | SENW<br>(F)           | SWNE<br>30-025-2809 | SENE<br>33 (H)          |
| NE 80-025<br>(12)   | 03979 <sub>WSE</sub><br>(J) | NESE<br>(1)                        | NWSW<br>(L)                    | NESW            | NWSE<br>(J)                 | NESE<br>(L)                     | NWSW<br>(L) | NESW<br>(K)           | NWSE<br>(J)         | NESE<br>(1)             |
| SESW<br>(N)         | SWSE<br>( 0.)               | SESE<br>(P)                        | SWSW<br>(M)                    | SESW<br>(N)     | swse<br>( 0)                | SESE<br>(P)                     | SWSW<br>(M) | SESW<br>(N)           | SWSE<br>(O)         | SESE<br>(P)             |
| L3                  | 12                          | L1                                 | L4                             | L3              | -L2                         |                                 | £4          | L3                    | 31-625-6<br>L=2     | 13981<br>L 1            |
| SENW<br>(F)         | SWNE<br>(G)<br>08           | SENE<br>(H)                        | SWNW<br>(E)                    | SENW<br>(F)     | SWNE<br>(G)<br>5            | SENE<br>(H)                     | SWNW<br>(E) | SENW<br>(F)<br>04     | SWNE<br>(G)         | SENE<br>(H)             |
| NESW<br>(K)         | NV 8E<br>(-)                | NESE<br>(1)                        | NWSW<br>(L)                    | NESW<br>(K)     | NV930-025<br>( 7)           | 26307 <mark>/IESE</mark><br>(1) | NWSW<br>(L) | NESW<br>(K)           | NV /SE<br>(J)       | NESE<br>(1)             |
| SESW<br>(N)         | sws):<br>(0)                | SE 80-025-<br>(P)<br>\$0-025-<br>• | (M)                            | SESW<br>(N)     | SWSE<br>(O)                 | SESE<br>(P)                     | SWSW<br>(M) | SESW<br>(N)           | WSE 80<br>(0)       | (P) <sup>9</sup>        |
| NENW<br>(C)         | NWNE<br>(B)                 | NENE<br>(A)                        | NWNW<br>(D)                    | NENW<br>(C)     | NWNE<br>(B)<br>-19S 36E     | NENE<br>(A)                     | NWNW<br>(D) | NENW<br>(C)           | NWNE<br>(B)         | NENE<br>(A)             |
| SENW<br>(F)         | SWNE<br>(G)<br>             | SENE<br>(H)                        | SWNW<br>(E)                    | SENW<br>(F)     | SWNE<br>(G)<br>8            | SENĘ<br>(H)                     | SWNW<br>(E) | SENW30-0<br>(F)<br>09 | (G)                 | SENE<br>(H)             |
| NESW<br>(K)         | NWSE<br>(J)                 | NESE<br>(1)                        | NWSW<br>(L)                    | NESW<br>(K)     | NWSF<br>(J)                 | NESE<br>(1)                     | NWSW<br>(L) | NESW<br>(K)           | NWSE<br>(J)         | NESE<br>(1)             |
| SESW<br>(N)<br>30-0 | SWSE<br>(0)<br>128-49300    | SESE<br>(P)                        | SWSW<br>(M)                    | SESW<br>(N)     | SWSE<br>(0)                 | SESE<br>(P)                     | SWSW<br>(M) | SESW<br>(N)           | SWSE<br>(0)         | SESE<br>(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

10

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

Oil, New

٠

.

٠

٠

 $\dot{\Delta}$ 

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

|   |                   | 1:20,000               |        |
|---|-------------------|------------------------|--------|
| 0 | 0.17              | 0.35                   | 0.7 mi |
|   | - <del>\</del> \_ | <del>', ', ', ',</del> | <br>   |
| 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° <b>41'17.960</b> " | -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          |
| 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 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)

