TIMBERWOLF ENVIRONMENTAL

1920 W. Villa Maria, Ste. 205
Bryan, Texas 77807
979.324.2139
www.teamtimberwolf.com

July 27, 2017

Olivia Yu
Environmental Specialist
New Mexico Oil Conservation Division, District 1
1625 N. French Drive
Hobbs, New Mexico 88240

Re: Site Characterization Report and Remedial Action Plan
State OG SWD No. 2 Release
Bagley North Oil Field, Lea County, New Mexico
NW1/4 SW1/4, Sec. 9, T11S, R33E

Dear Ms. Yu:

On behalf of Jay Management, LLC (Jay Management), Timberwolf Environmental, LLC (Timberwolf) prepared this site characterization report and remedial action plan for the State OG SWD No. 2 (Site) to address impacts related to a produced water release. The Site is located in the Bagley North Oil Field approximately 5.1 miles east-southeast of Caprock, Lea County, New Mexico (Figures 1 through 3). Work conducted at the Site has been authorized by the New Mexico Oil Conservation Division (NMOCD) District 1 Office under Remediation Permit No. 1RP-4703.

Site Setting

The Site consists of a saltwater disposal (SWD) wellhead, three above-ground produced water tanks, and one injection pump.

The surrounding area is characterized as flat to slightly sloping rural land used for cattle grazing and oil and gas production. According the United States Department of Agriculture – Natural Resources Conservation Service web soil survey of Lea County, New Mexico, soils at the Site are mapped as the Kimbrough – Lea complex, 0 to 3 percent slopes (KU). This soil type consists of gravelly loam in the upper 3 inches, loam from 3 to 10 inches, and underlain by cemented material to a depth of 80 inches.

Site History

The release occurred due to a nipple failure on the wellhead. Approximately 5 barrels (bbl) of produced water were released. Jay Management replaced the faulty nipple, recovered free fluids from the ground surface, and tilled most of the impacted area. Written notification of the release was made to the New Mexico Oil Conservation Division (NMOCD) on 05/16/17; a copy of Form C-141 is attached.

On 05/22/17, collected three (3) soil samples to assess the magnitude of the impacts (Figure 4). All samples were collected using a pick-ax and shovel from 0 to 1 foot below ground surface (ft bgs). Deeper samples were unobtainable with hand tools due to refusal from the rocky/cemented soil.

The soil samples were placed in laboratory-provided sample containers, stored on ice, and transported under proper chain-of-custody protocol to the TestAmerica Laboratories in Denver, Colorado. The laboratory reports and chain-of-custody documents are attached.

Details regarding the initial sampling event and analytical results are documented in Timberwolf's report entitled *Work Plan for Site Characterization*, dated 06/22/17.

Regulatory Criteria

The New Mexico Oil Conservation Division (NMOCD) established remediation action levels for soils impacted by oilfield products or wastes, which are documented under New Mexico Administrative Code (NMAC) Rule 19.15.29. The Rule was repealed and replaced by Oil Conservation Commission Order No.: R-14751, dated June 21, 2018.

Under Rule 19.15.29, soil cleanup criteria is determined primarily based on the distance between the base of impacted soil and the depth to usable groundwater. NMOCD laboratory methodology and soil closure criteria is presented in the following table.

Table 1. Closure Criteria for Soils Impacted by a Release

Depth to Groundwater[1]	Constituent	Method[2]	Regulatory Limit[3] (mg/kg)
≤ 50 feet	Chloride[4]	EPA 300.0	600
	TPH	EPA SW-846 Method 8015M	100
	Total BTEX	EPA SW-846 Method 8021B or 8260B	50
	Benzene	EPA SW-846 Method 8021B or 8015M	10
51 feet-100 feet	Chloride[4]	EPA 300.0	10,000
	TPH	EPA SW-846 Method 8015M	2,500
	GRO+DRO	EPA SW-846 Method 8015M	1,000
	Total BTEX	EPA SW-846 Method 8021B or 8260B	50
	Benzene	EPA SW-846 Method 8021B or 8260B	10
> 100 feet	Chloride[4]	EPA 300.0	20,000
	TPH	EPA SW-846 Method 8015M	2,500
	GRO+DRO	EPA SW-846 Method 8015M	1,000
	Total BTEX	EPA SW-846 Method 8021B or 8260B	50
	Benzene	EPA SW-846 Method 8021B or 8015M	10

[1]From base of impact to useable groundwater (i.e., less than 10,000 milligrams per liter (mg/L) total dissolved solids (TDS))
[2]Or other test methods approved by the division
[3]Numerical limits or natural background level, whichever is greater
[4]Applies to produced water releases or other fluids which may contain chloride
mg/kg – milligrams per kilograms
TPH – total petroleum hydrocarbons (TPH = GRO + DRO + ORO)

Prior environmental drilling in the Bagley North Oil Field revealed that groundwater is less than 50 feet below ground surface (ft bgs). Therefore, soil closure criteria at the Site is as follows:

- Chloride < 600 mg/kg
- TPH < 100 mg/kg
- Total BTEX < 50 mg/kg
- Benzene < 10 mg/kg.

Collection and Analysis of Soil Samples

On 11/09/17, crews excavated two (2) test pits to a depth of 1.5 ft bgs using a backhoe. The test pits were installed to duplicate two previous sample locations (i.e., SB2 and SB3) of the initial sampling event. Timberwolf collected samples from the base of each test pit. Deeper samples were unobtainable with the backhoe due to rocky/cemented soil.

Timberwolf collected one (1) background sample (i.e., Background) adjacent to the Site to assess native chloride concentrations.

On 06/05/18, Timberwolf installed one (1) borehole to a depth of 25 ft using a rotary drilling rig and flight augers (i.e., SB2A). The purpose of this boring was to vertically delineate impacted soil. Samples were collected from the borehole at five-foot intervals using a split spoon. Samples SB3 – SB9 were collected using a stainless steel handauger. The handauger and sampling equipment were decontaminated between samples using Alconox® and deionized water.

The soil samples were placed in laboratory-provided sample containers, stored on ice, and transported under proper chain-of-custody protocol to the TestAmerica Laboratories in Nashville, Tennessee. The laboratory reports and chain-of-custody documents are attached.

The soil samples were analyzed for total petroleum hydrocarbons (TPH) using laboratory method 8015 and chloride. Analytical methods are documented in the attached laboratory reports. Soil analytical results are shown in Table 3.

Table 3. Soil Analytical Results – 011/09/17 and 06/05/18

Sample ID	Sample Date	Total Petroleum Hydrocarbons (mg/kg)				Chloride (mg/kg)
		GRO	DRO	ORO	Total	
SB2 1.5'	11/09/17	--	--	--	--	5,300
SB2A 4-5'	06/05/18	5.7[J]	< 3.5	< 3.5	12.7	830
SB2A 9-10'	06/05/18	< 3.7	< 3.1	3.2[J]	10	1,600
SB2A 14-15'	06/05/18	--	--	--	--	1,000[H]
SB2A 19-20'	06/05/18	--	--	--	--	400[H]
SB2A 24-25'	06/05/18	--	--	--	--	140[H]
SB3 1.5'	11/09/17	< 2.6	3.0[J]	14	--	790
SB4 0-1'	06/05/18	< 3.6	< 3.1	4.0[J]	10.7	28
SB5 0-1'	06/05/18	< 3.3	13	34	50.3	25
SB6 0-1'	06/05/18	< 4.3	9.8	28	42.1	12[J]
SB7 0-1'	06/05/18	< 4.0	4.0[J]	13	21	17
SB8 0-1'	06/05/18	< 3.2	3.8[J]	10	17	20
SB9 0-1'	06/05/18	4.2[J]	28	51	83.2	890
Background	11/09/17	--	--	--	--	< 7.4
NMOCD Site-Specific Criteria		**--**	**--**	**--**	**100**	**600**

mg/kg – milligrams per kilogram
TPH – total petroleum hydrocarbons (TPH = GRO + DRO + ORO)
GRO – gasoline range organics
- exceeds regulatory limit

-- – regulatory limit not established
DRO – diesel range organics
ORO – oil range organics

Conclusions

Based on Timberwolf's field investigation, the NMOCD site-specific cleanup criteria, and analytical results, the following is concluded:

- The main body of the produced water spill area encompasses three separate areas which totals approximately 0.23 acres (Figure 5). The release traveled mostly east and south. Jay Management has tilled the majority of the impacted area
- Field observations while digging with a backhoe and the NRCS – Soil Survey revealed that;
  - The soil horizon is less than 1 ft thick
  - Excavation of the consolidated rock is technically impracticable
- Concentrations of TPH were below NMOCD site-specific cleanup criteria in all samples collected from the Site

- Concentrations of chlorides exceeded the NMOCD site-specific cleanup criteria in six soil samples
  - Samples collected from test pits (i.e., SB2 1.5' and SB3 1.5') contained concentrations of chloride at 5,300 and 790 milligrams per kilogram (mg/kg), respectively
  - Three samples collected from boring SB2A (i.e., SB2A 4-5', SB2A 9-10', and SB2A 14-15') exceeded NMOCD site-specific cleanup criteria. Vertical delineation was achieved; samples SB2A 19-20' and SB2A 24-25' were below site-specific cleanup criteria
  - SB9 0-1' exceeded NMOCD site-specific criteria for chloride; horizontal delineation will be achieved during remedial activities
  - Native soil chloride concentrations are non-saline.

Remedial Action Plan

Remedial Strategy

Since excavating the vertical extent of impacted media is technically impracticable, the proposed site remediation strategy is to excavate impacted soil until refusal, then backfill with clean fill. A groundwater monitoring well will be installed to evaluate and monitor groundwater. (Note: prior to installing a groundwater monitoring well, Timberwolf will secure a permit from the New Mexico Office of the State Engineer to drill a water well with no water rights.) The well will be monitored semi-annually for a period of two years for the following constituents: chloride.

If constituents of groundwater are below NMOCD/EPA guidelines for a period of two years the monitored program will be discontinued and a request for no further action (NFA) will be made with the NMOCD District 1 office. If groundwater constituents exceed NMOCD/EPA guidelines, the affected area will be delineated, and a remedial action plan will be submitted to address impacted groundwater.

Remedial Action Plan

Timberwolf proposes the following remedial action plan to bring the Site in regulatory compliance:

- Excavate the soil horizon (approximately 10 to 12 inches) within the impacted area (approximately 0.23 acres). Note: impacted consolidated rock will remain in place
- Transport excavated soil (approximately 371 cubic yards) to a commercial disposal facility
- Collect confirmation samples from the side walls of the excavation
- Backfill the excavation to 1 ft using clean fill as required under 19.15.29 (D)(1) NMAC
- Restore surface vegetation

Install one groundwater monitor well at the Site to monitor chloride in groundwater semi-annually for a period of two years. Soil samples will be collected during well installation. A proposed monitor well location map is shown in Figure 6.

If you have any questions regarding this report or remedial action plan, please call us at 979-324-2139.

Sincerely,
Timberwolf Environmental, LLC

Russell Greer
Project Manager

Jim Foster
President

Attachments: Figures
Form C-141
Photographic Log
Laboratory Report and Chain-of-Custody Documents

cc: Amir Sanker, Jay Management

FIGURES

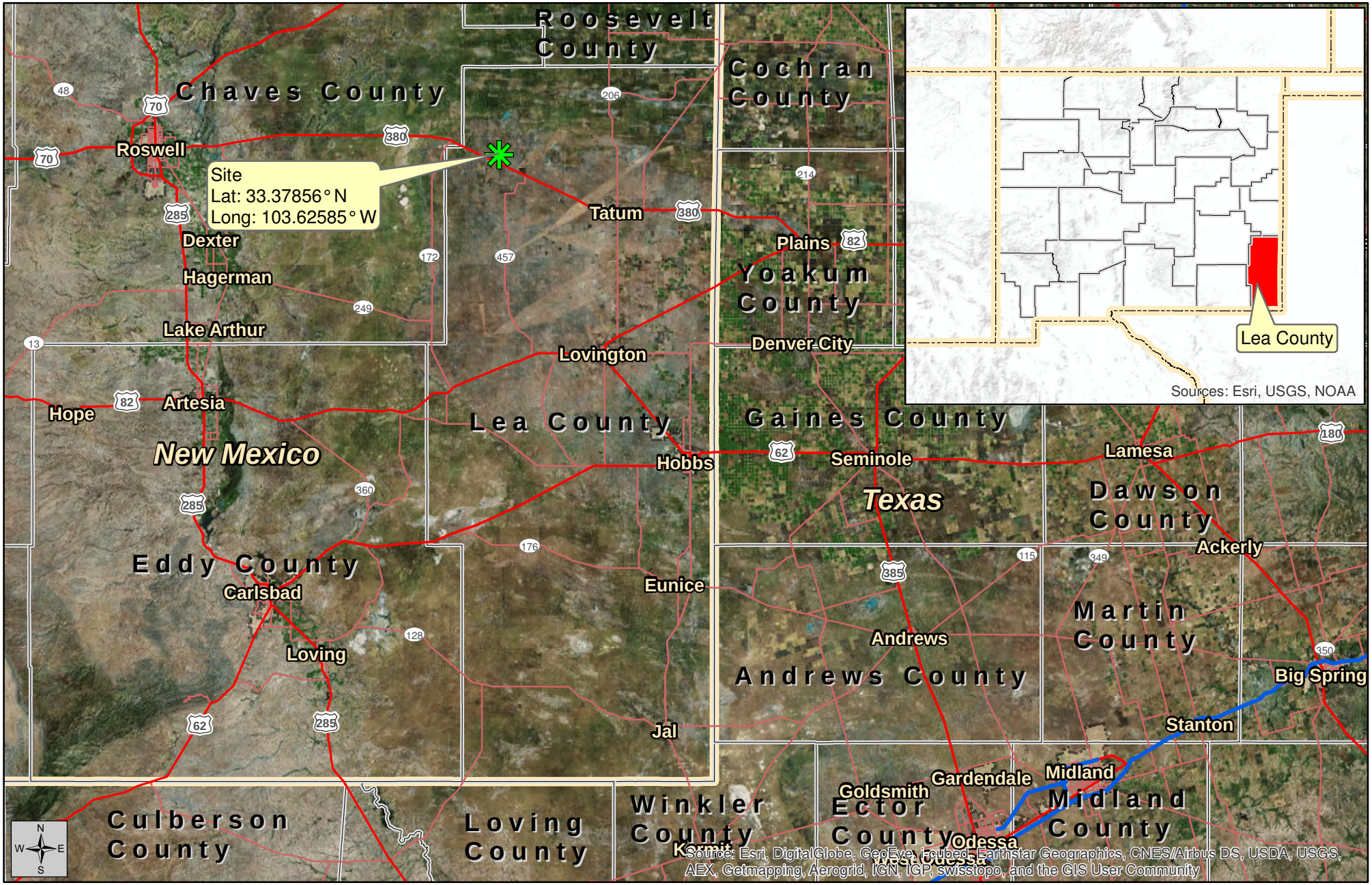

Figure 1 **Site Location Map**	**Site Characterization Report and Remedial Action Plan**	**June 20, 2018**
TIMBERWOLF ENVIRONMENTAL	1:1,500,000 0 25 50 75 100 125 150 Miles **State OG SWD No. 2 Release** **Jay Management, LLC** **Bagley North Oil Field, Lea County, New Mexico**	* Site
Created By: Blaine Stevens TE Project No.: ISR-170052	Datum: NAD83 Imagery Source: ESRI Vector Source: ESRI and TE	

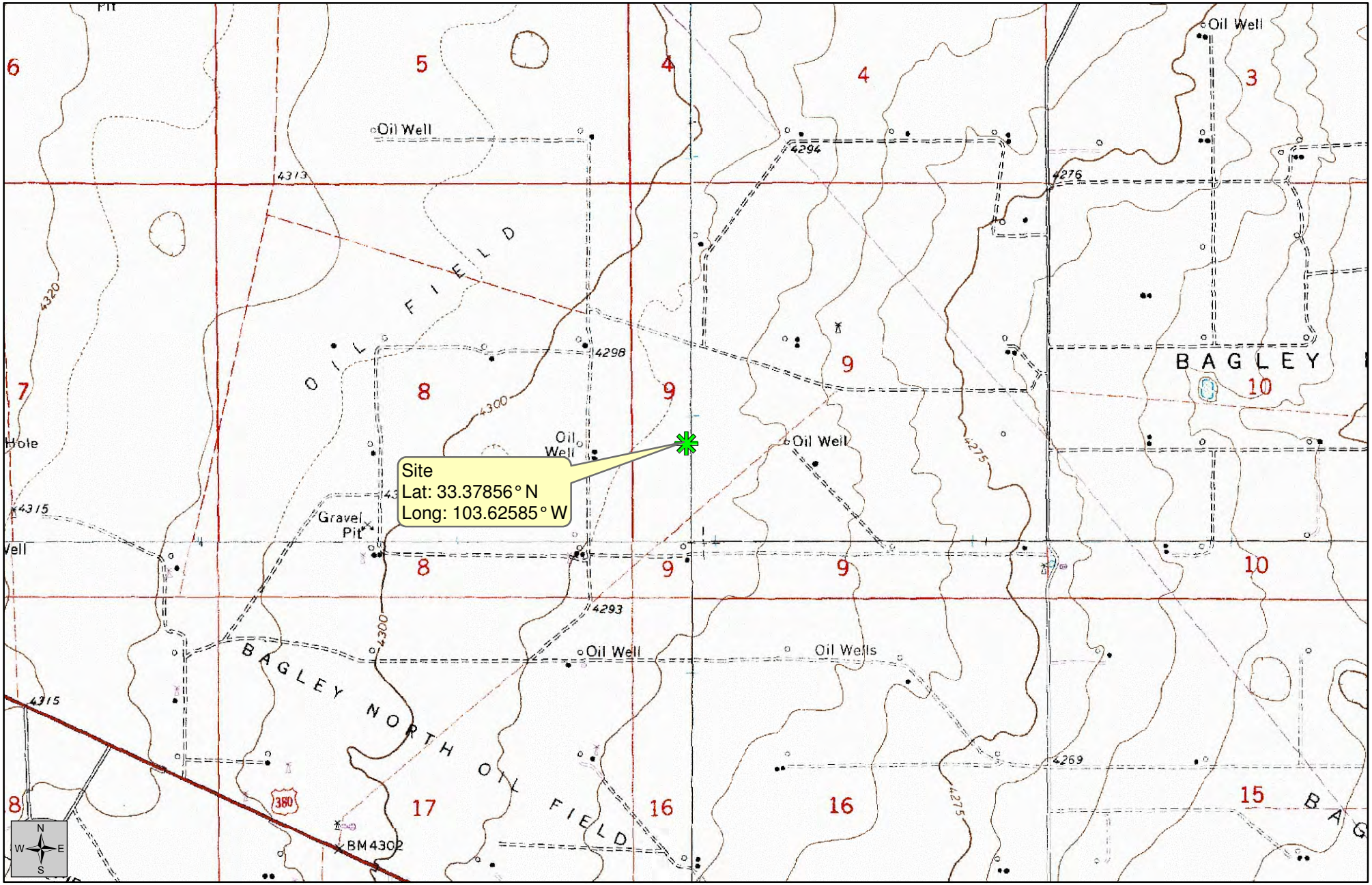

Figure 2
Topographic Map

Site Characterization Report and Remedial Action Plan

June 20, 2018

1:24,000

0 0.5 1 1.5 2 2.5 Miles

TIMBERWOLF ENVIRONMENTAL

Created By:
Blaine Stevens
TE Project No.: ISR-170052

State OG SWD No. 2 Release
Jay Management, LLC
Bagley North Oil Field, Lea County, New Mexico

Datum: NAD83
Imagery Source: USGS
Quads: Caprock, Lane Salt Lake, Soldier Hill, and Dallas Store
Vector Source: TE

Site

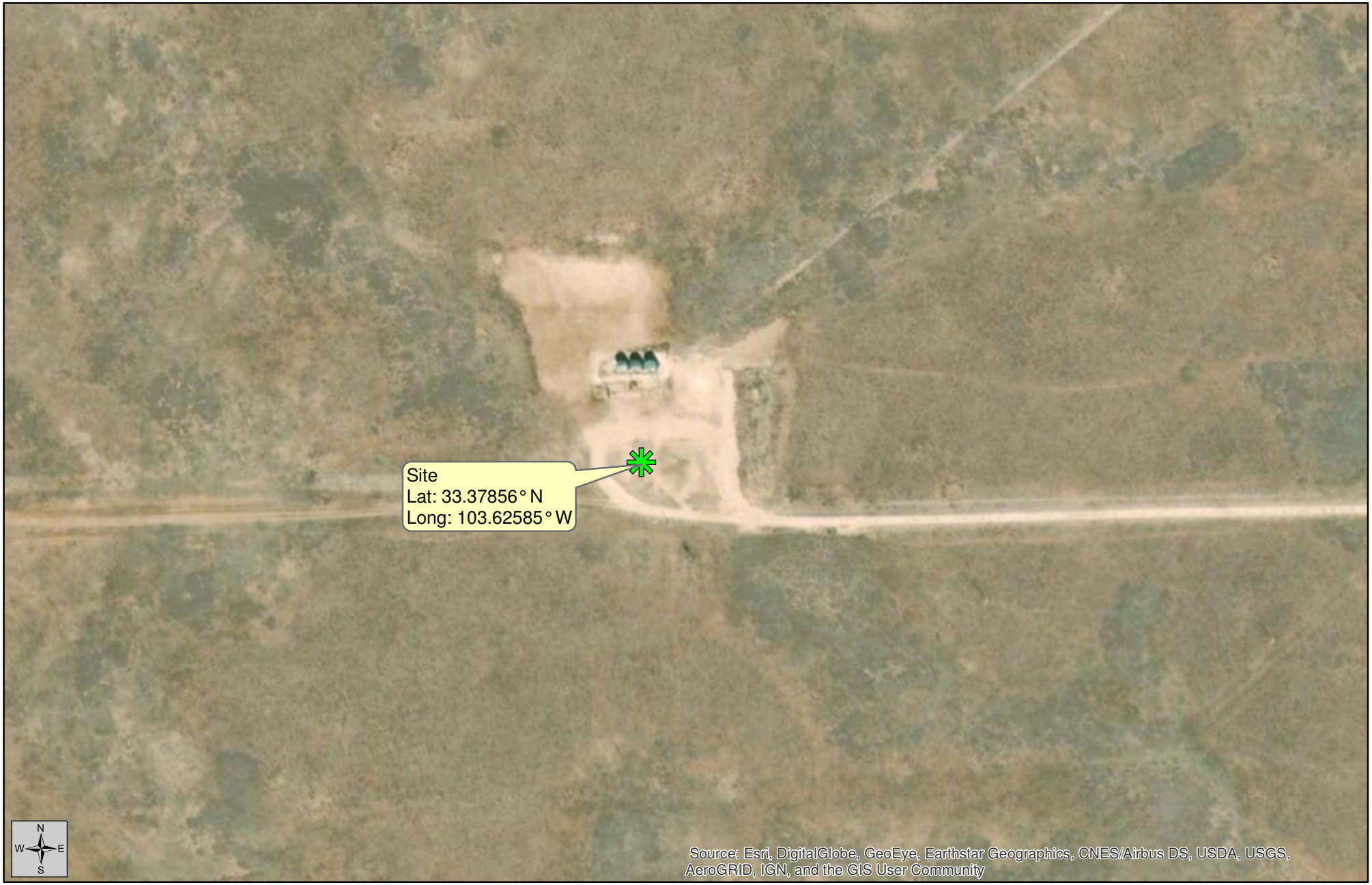

Figure 3
Aerial Map

Site Characterization Report and Remedial Action Plan

June 20, 2018

TIMBERWOLF ENVIRONMENTAL

1:2,500

0 250 500 750 1,000 1,250 Feet

Created By:
Blaine Stevens
TE Project No.: ISR-170051

State O.G. Release
Jay Management, LLC
Bagley North Oil Field, Lea County, New Mexico

Datum: NAD83
Imagery Source: ESRI
Vector Source: TE

Site

Sample ID	Sample Date	Volatile Organic Compounds (mg/kg)				Total BTEX (mg/kg)	Total Petroleum Hydrocarbons (mg/kg)				Chloride (mg/kg)
		B	T	E	X		GRO	DRO	ORO	Total	
SB1 0-1'	05/22/17	< 0.00076	< 0.0017	< 0.0012	< 0.0014	< 0.00506	--	--	--	2,000[H]	8,300
SB2 0-1'	05/22/17	< 0.00068	< 0.0015	< 0.0011	< 0.0012	< 0.00448	--	--	--	< 4.1[H]	9,100
SB3 0-1'	05/22/17	< 0.00070	< 0.0015	< 0.0011	< 0.0013	< 0.0046	--	--	--	300[H]	14,000
NMOCD Site-Specific Criteria		10	--	--	--	50	--	--	--	100	600

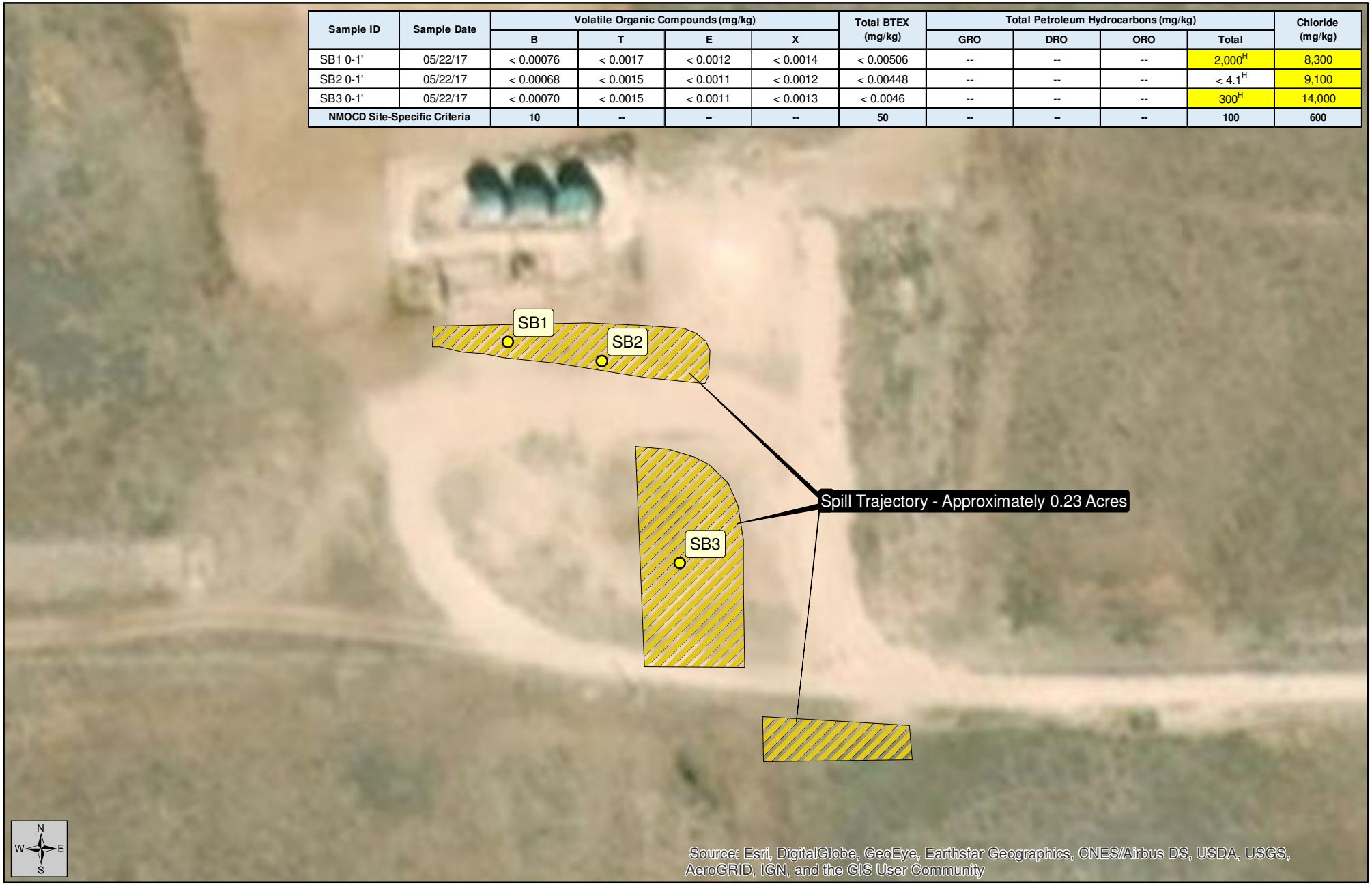

Figure 4
Initial Sample Location and Spill Trajectory Map

Site Characterization Report and Remedial Action Plan

Sample Date: May 22, 2017

TIMBERWOLF ENVIRONMENTAL

1:800

0 50 100 150 200 250 300 Feet

Created By:
Blaine Stevens
June 20, 2018
TE Project No.: ISR-170051

State O.G. Release
Jay Management, LLC
Bagley North Oil Field, Lea County, New Mexico

Datum: NAD83
Imagery Source: ESRI
Vector Source: TE

Soil Sample (Elevated)
Spill Trajectory

Sample ID	Sample Date	Total Petroleum Hydrocarbons (mg/kg)				Chloride (mg/kg)
		GRO	DRO	ORO	Total	
SB2 1.5'	11/09/17	--	--	--	--	5,300
SB2A 4-5'	06/05/18	5.7[J]	< 3.5	< 3.5	12.7	830
SB2A 9-10'	06/05/18	< 3.7	< 3.1	3.2[J]	10	1,600
SB3 1.5'	11/09/17	< 2.6	3.0[J]	14	--	790
SB4 0-1'	06/05/18	< 3.6	< 3.1	4.0[J]	10.7	28
SB5 0-1'	06/05/18	< 3.3	13	34	50.3	25
SB6 0-1'	06/05/18	< 4.3	9.8	28	42.1	12[J]
SB7 0-1'	06/05/18	< 4.0	4.0[J]	13	21	17
SB8 0-1'	06/05/18	< 3.2	3.8[J]	10	17	20
SB9 0-1'	06/05/18	4.2[J]	28	51	83.2	890
Background	11/09/17	--	--	--	--	< 7.4
NMOCD Site-Specific Criteria		**--**	**--**	**--**	**100**	**600**

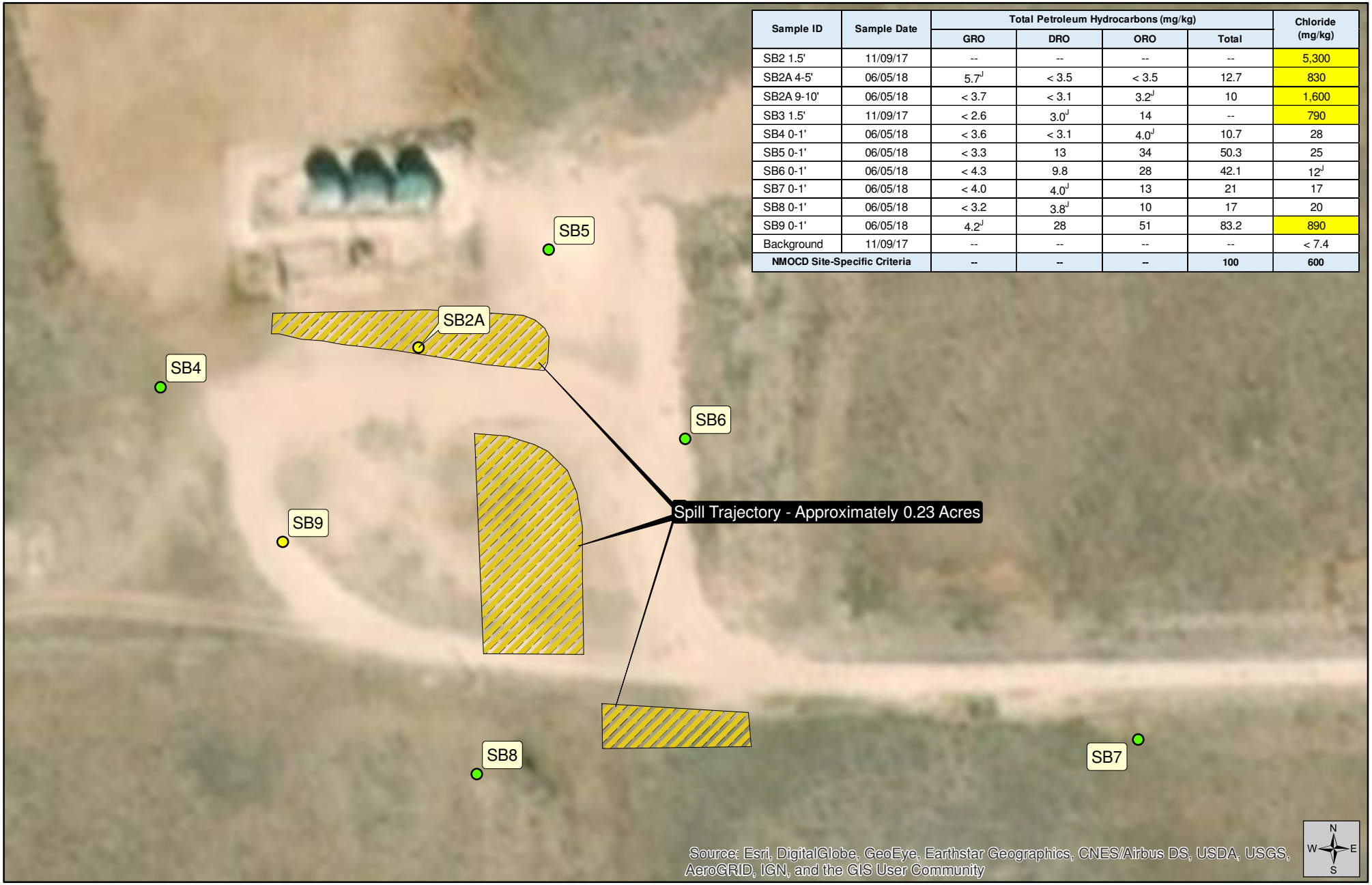

Figure 5
Additional Sample Location Map

Site Characterization Report and Remedial Action Plan

Sample Dates:
11/09/17 and 06/05/18

TIMBERWOLF ENVIRONMENTAL

1:800

0 50 100 150 200 250 300 Feet

Created By:
Russell Greer
June 20, 2018
TE Project No.: ISR-170052

State O.G. SWD No. 2 Release
Jay Management, LLC
Bagley North Oil Field, Lea County, New Mexico

Datum: NAD83
Imagery Source: ESRI
Vector Source: TE

- Soil Sample (Clean)
- Soil Sample (Elevated)
- Spill Trajectory

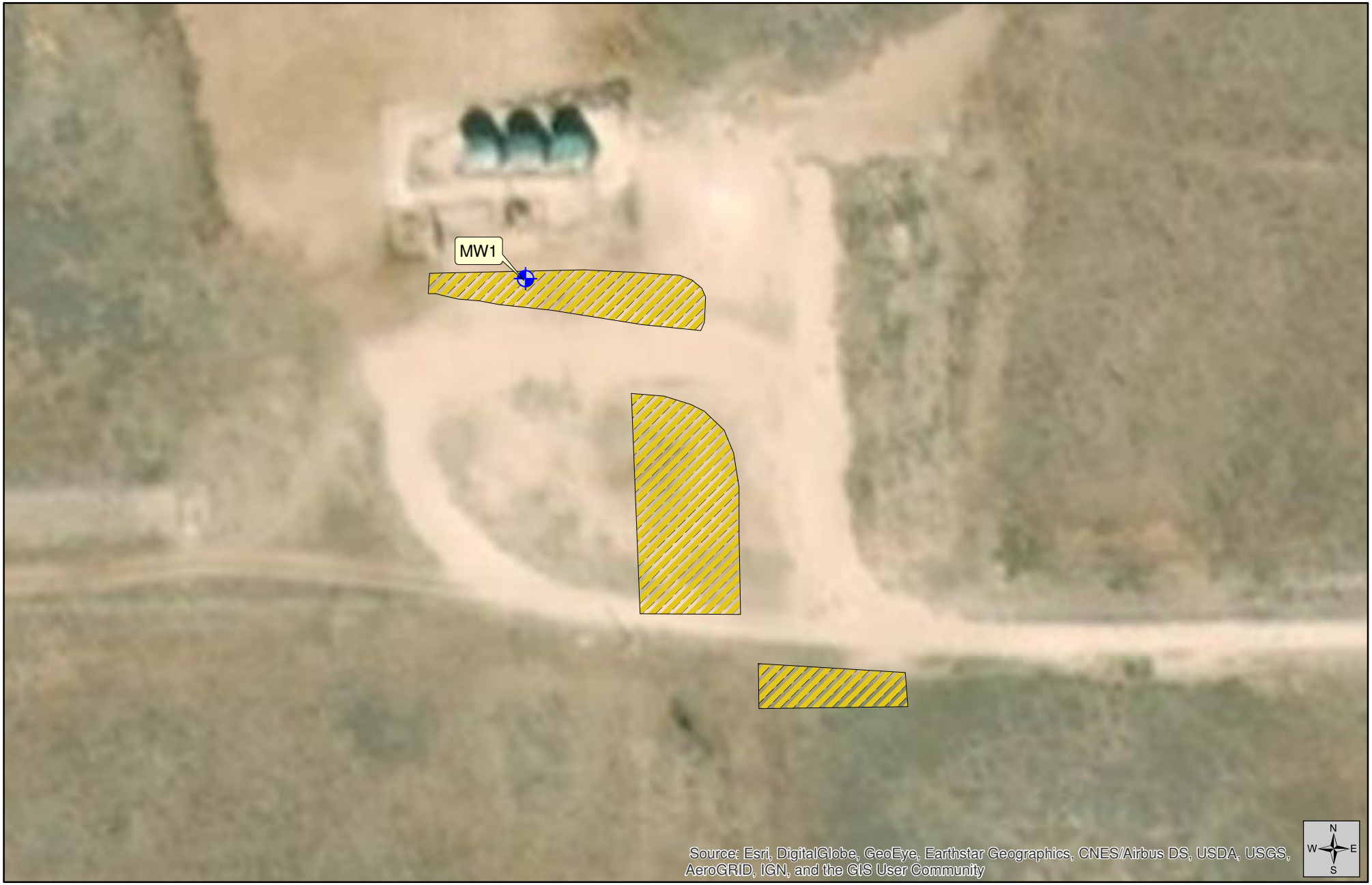

Figure 6
Proposed Monitor Well Location Map

Site Characterization Report and Remedial Action Plan

July 27, 2018

TIMBERWOLF ENVIRONMENTAL

1:800

0 50 100 150 200 250 300 Feet

State O.G. SWD No. 2 Release
Jay Management, LLC
Bagley North Oil Field, Lea County, New Mexico

Created By:
Russell Greer
TE Project No.: ISR-170052

Datum: NAD83
Imagery Source: ESRI
Vector Source: TE

Proposed Monitor Well

Spill Trajectory

Form C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Jay Management Company	Contact: Jim Foster
Address: 2425 W Loop South, Ste. 810, Houston, Texas 77027	Telephone No.: 979-324-2139
Facility Name: State OG SWD No. 2	Facility Type: SWD Tank Battery

Surface Owner: State of New Mexico	Mineral Owner: State of New Mexico	API No.: 30-025-31381

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	9	11S	33E	1,980	South	660	West	Lea

Latitude 33.378526° N **Longitude** 103.625848° W NAD83

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: >5	Volume Recovered: Approx. 99%
Source of Release: Faulty nipple at well head	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
No watercourse was impacted.

RECEIVED
By Olivia Yu at 9:41 am, May 18, 2017

Describe Cause of Problem and Remedial Action Taken.*
Failure of a nipple where flowline from well head goes underground. Faulty nipple has been replaced.

Describe Area Affected and Cleanup Action Taken.*
Release occurred adjacent to wellhead. Impacted soils have been excavated and replaced with clean soil.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION
Printed Name: Jim Foster	Approved by Environmental Specialist:
Title: Consultant	Approval Date: 5/18/2017 Expiration Date:
E-mail Address: jim@teamtimberwolf.com	Conditions of Approval: see attached directive Attached ☑
Date: 0516/17 Phone: 979-324-2139	

* Attach Additional Sheets If Necessary

1RP-4703 nOY1713835168 pOY1713835343

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _5/16/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number __1R-_4703_ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _6/18/2017__. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

● Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

● Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

● Nominal detection limits for field and laboratory analyses must be provided.

● Composite sampling is not generally allowed.

● Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

●Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

● If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

● Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

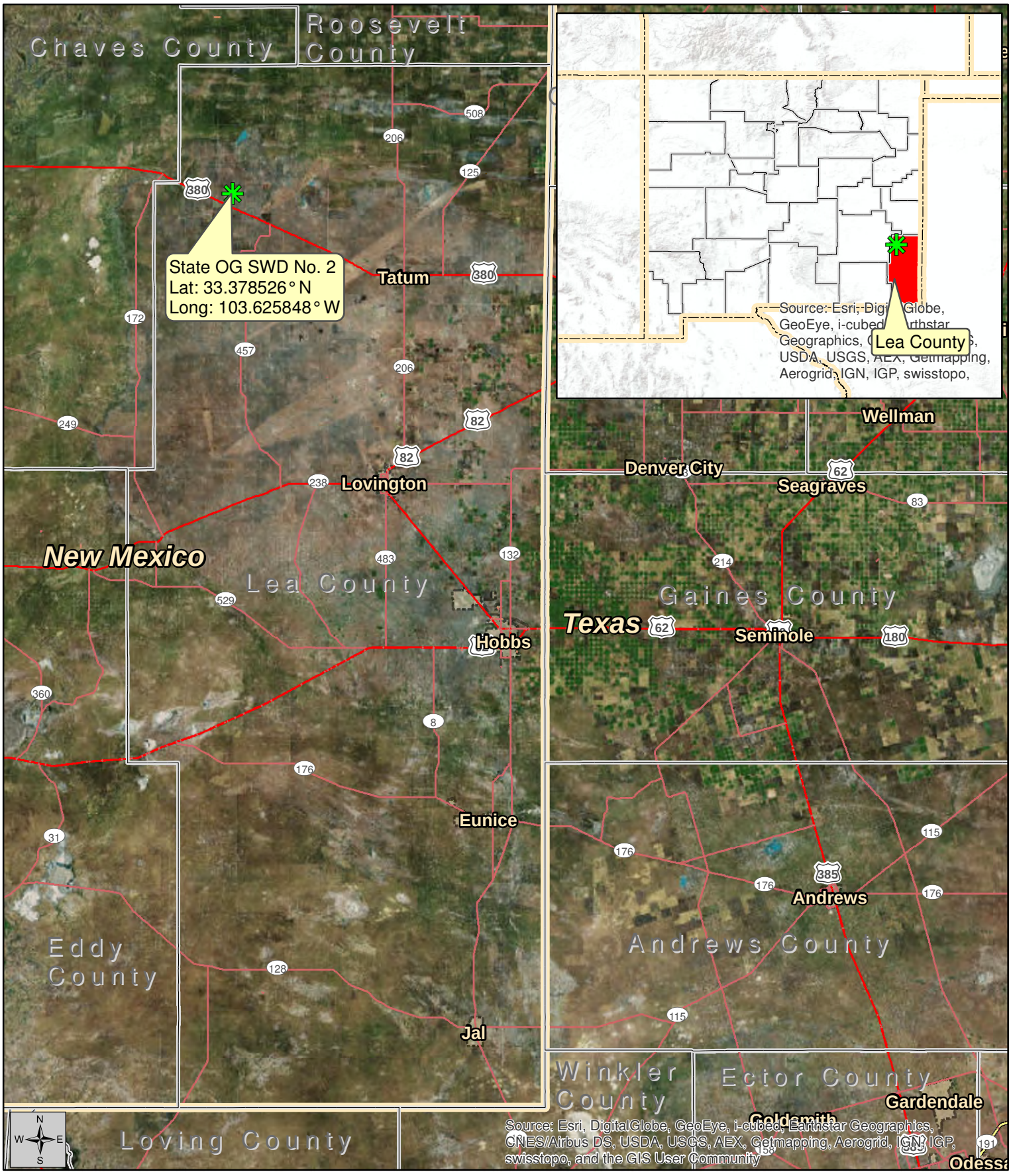

Figure 1 **Site Location Map**	**State OG SWD No. 2**	**May 15, 2017**
TIMBERWOLF ENVIRONMENTAL	1:1,000,000 0 10 20 30 40 50 Miles **Jay Management, LLC** **Bagley Field, Lea County, New Mexico** Created By: Austin Russell TE Project No.: ISR-170037 Datum: NAD83 Imagery Source: ESRI Vector Source: TE & ESRI	✳ Site

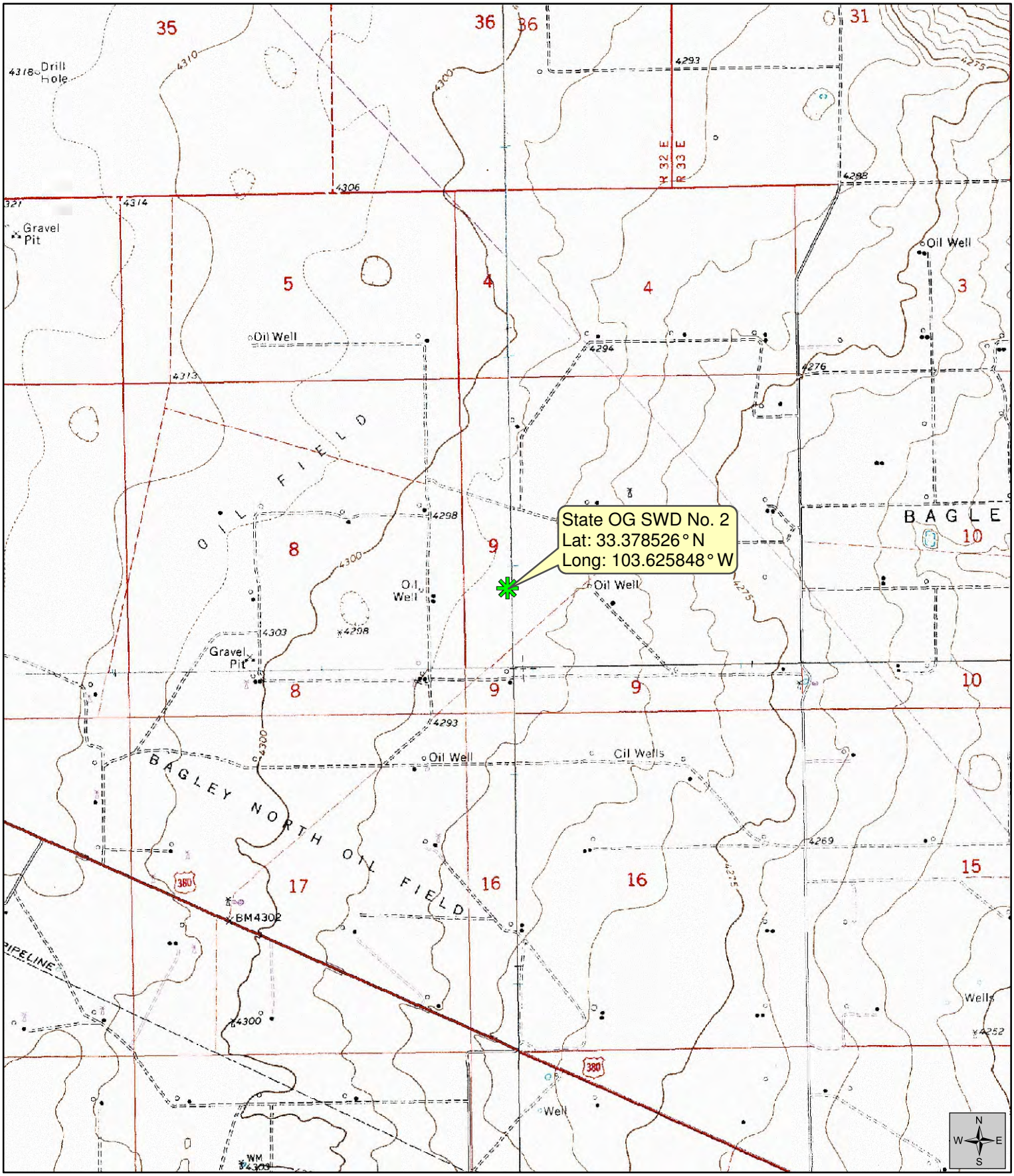

Figure 3 **2015 Aerial Map**	**State OG SWD No. 2**	**May 15, 2017**
TIMBERWOLF ENVIRONMENTAL	1:24,000 0 1,000 2,000 3,000 4,000 5,000 Feet **Jay Management, LLC** **Bagley Field, Lea County, New Mexico** Created By: Austin Russell TE Project No.: ISR-170050 Datum: NAD83 Imagery Source: USGS Quad: Caprock Vector Source: TE	* Site

Figure 3 **2015 Aerial Map**	**State OG SWD No. 2**	**May 15, 2017**
TIMBERWOLF ENVIRONMENTAL	1:1,000 0 50 100 150 200 250 Feet **Jay Management, LLC** **Bagley Field, Lea County, New Mexico** Created By: Austin Russell TE Project No.: ISR-170050 Datum: NAD83 Imagery Source: ESRI Vector Source: TE	* Site

JAY MANAGEMENT COMPANY, LLC
STATE OG SWD #2
660' FWL & 1980' FSL
UNIT L, SEC. 9-T11S-R33E
API #30-025-31381
LEA COUNTY, NEW MEXICO

04/27/2017


04/27/2017


04/27/2017


04/27/2017

PHOTOGRAPHIC DOCUMENTATION

1920 W Villa Maria, Ste. 205
Bryan, TX 77807
(979) 324-2139
www.teamtimberwolf.com

PHOTOGRAPHIC LOG

Project No.:	ISR-170052	**Client:**	Jay Management, LLC
Project Name:	State OG No. 2 Release	**Site Location:**	Lea County, New Mexico
Task Description:	Site Characterization	**Date:**	June 5, 2018

Photo No.:
1

Direction:
Northwest

Comments:
Photo taken during 06/05/18 sampling event. View of SB2A (33.37851°N, 103.62577°W).

Photo No.:
2

Direction:
North

Comments:
Photo taken during 06/05/18 sampling event. View of SB4 (33.37849°N, 103.62611°W).

1920 W Villa Maria, Ste. 205
Bryan, TX 77807
(979) 324-2139
www.teamtimberwolf.com

PHOTOGRAPHIC LOG

Project No.:	ISR-170052	**Client:**	Jay Management, LLC
Project Name:	State OG No. 2 Release	**Site Location:**	Lea County, New Mexico
Task Description:	Site Characterization	**Date:**	June 6, 2018

Photo No.: 3

Direction: Northeast

Comments: Photo taken during 06/05/18 sampling event. View of SB2A (33.37851°N, 103.62577°W).

Photo No.: 4

Direction: West

Comments: Photo taken during 06/05/18 sampling event. A view of SB9 (33.37831°N, 103.62594°).

LABORATORY REPORT AND CHAIN OF CUSTODY DOCUMENTS

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-140799-1
Client Project/Site: State OG 170052 11-9-17

For:
Timberwolf Environmental LLC
1920 W. Vill Maria
Suite 305-2 Box 205
Bryan, Texas 77807

Attn: Mr. James Foster

Dean A. Joiner

Authorized for release by:
11/22/2017 5:12:54 PM

Dean Joiner, Project Manager II
(713)690-4444
dean.joiner@testamericainc.com

Table of Contents

Sample Summary

Client: Timberwolf Environmental LLC
Project/Site: State OG 170052 11-9-17

TestAmerica Job ID: 490-140799-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-140799-1	SB2	Solid	11/09/17 16:29	11/14/17 15:32
490-140799-2	SB3	Solid	11/09/17 16:27	11/14/17 15:32
490-140799-3	Background	Solid	11/09/17 09:30	11/14/17 15:32

Job ID: 490-140799-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-140799-1

Comments
No additional comments.

Receipt
The samples were received on 11/11/2017 10:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.6º C.

HPLC/IC
Method(s) 9056: The following samples was diluted due to the nature of the sample matrix: SB2 (490-140799-1) and SB3 (490-140799-2). Elevated reporting limits (RLs) are provided.

Method(s) 9056: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 490-476741 and analytical batch 490-476742 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method(s) 8015B, 8015C: The surrogate recovery for the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) associated with preparation batch 490-475567 and analytical batch 490-475993 was outside the upper control limits. All associated sample surrogate and LCS/LCSD spike analyte recoveries were within control limits; therefore, the data has been qualified and reported.

Method(s) 8015B, 8015C, NWTPH-Gx: Surrogate recovery for the following samples was outside control limits: (LCS 490-475567/2-A), (LCS 490-476658/5), (LCS 490-476658/63), (LCSD 490-475567/3-A), (LCSD 490-476658/6), (LCSD 490-476658/64), (490-140576-A-2-A MS), (490-140576-A-2-A MSD), (490-141079-F-1-A MS) and (490-141079-F-1-A MSD). Evidence of matrix interferences is not obvious.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8015C, 8015D: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 490-476769 and analytical batch 490-477140 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method(s) TX 1005_S_Prep: The following samples analyzed for method <TX1005S> were received and analyzed from an unpreserved bulk soil jar: SB2 (490-140799-1), SB3 (490-140799-2) and Background (490-140799-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Timberwolf Environmental LLC
Project/Site: State OG 170052 11-9-17

TestAmerica Job ID: 490-140799-1

Client Sample ID: SB2
Date Collected: 11/09/17 16:29
Date Received: 11/14/17 15:32

Lab Sample ID: 490-140799-1
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.3		0.1	0.1	%			11/15/17 10:31	1
Percent Solids	92.7		0.1	0.1	%			11/15/17 10:31	1

Client Sample Results

Client: Timberwolf Environmental LLC
Project/Site: State OG 170052 11-9-17

TestAmerica Job ID: 490-140799-1

Client Sample ID: SB2
Date Collected: 11/09/17 16:29
Date Received: 11/14/17 15:32

Lab Sample ID: 490-140799-1
Matrix: Solid
Percent Solids: 92.7

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5300		220	150	mg/Kg	☼		11/17/17 01:44	20

Client: Timberwolf Environmental LLC
Project/Site: State OG 170052 11-9-17

TestAmerica Job ID: 490-140799-1

Client Sample ID: SB3
Date Collected: 11/09/17 16:27
Date Received: 11/14/17 15:32

Lab Sample ID: 490-140799-2
Matrix: Solid
Percent Solids: 96.0

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	2.6	U	5.2	2.6	mg/Kg	☼	11/15/17 12:14	11/16/17 03:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*74*		*50 - 150*	*11/15/17 12:14*	*11/16/17 03:08*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**3.0**	**J**	4.9	2.4	mg/Kg	☼	11/17/17 07:46	11/19/17 02:02	1
C24-C40	**14**		4.9	2.4	mg/Kg	☼	11/17/17 07:46	11/19/17 02:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*70*		*50 - 150*	*11/17/17 07:46*	*11/19/17 02:02*	*1*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**790**		110	74	mg/Kg	☼		11/17/17 02:20	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**4.0**		0.1	0.1	%			11/15/17 10:31	1
Percent Solids	**96.0**		0.1	0.1	%			11/15/17 10:31	1

Client Sample Results

Client: Timberwolf Environmental LLC
Project/Site: State OG 170052 11-9-17

TestAmerica Job ID: 490-140799-1

Client Sample ID: Background

Lab Sample ID: 490-140799-3

Date Collected: 11/09/17 09:30

Matrix: Solid

Date Received: 11/14/17 15:32

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.6		0.1	0.1	%			11/15/17 10:31	1
Percent Solids	96.4		0.1	0.1	%			11/15/17 10:31	1

Client: Timberwolf Environmental LLC
Project/Site: State OG 170052 11-9-17

TestAmerica Job ID: 490-140799-1

Client Sample ID: Background — **Lab Sample ID: 490-140799-3**
Date Collected: 11/09/17 09:30 — **Matrix: Solid**
Date Received: 11/14/17 15:32 — **Percent Solids: 96.4**

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.4	U	11	7.4	mg/Kg	☼		11/17/17 02:56	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 490-476059/1-A
Matrix: Solid
Analysis Batch: 475993

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 476059

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	2.5	U	5.0	2.5	mg/Kg		11/15/17 10:38	11/15/17 21:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*71*		*50 - 150*	*11/15/17 10:38*	*11/15/17 21:43*	*1*

Lab Sample ID: LCS 490-476059/2-A
Matrix: Solid
Analysis Batch: 475993

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 476059

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	500	536		mg/Kg		107	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*145*		*50 - 150*

Lab Sample ID: LCSD 490-476059/3-A
Matrix: Solid
Analysis Batch: 475993

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 476059

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	500	526		mg/Kg		105	70 - 130	2	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*144*		*50 - 150*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 490-476769/1-A
Matrix: Solid
Analysis Batch: 476838

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 476769

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	2.5	U	5.0	2.5	mg/Kg		11/17/17 07:46	11/18/17 02:11	1
C24-C40	2.5	U	5.0	2.5	mg/Kg		11/17/17 07:46	11/18/17 02:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*88*		*50 - 150*	*11/17/17 07:46*	*11/18/17 02:11*	*1*

Lab Sample ID: LCS 490-476769/2-A
Matrix: Solid
Analysis Batch: 476838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 476769

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C10-C28	40.0	33.0		mg/Kg		82	54 - 130

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 490-476769/2-A
Matrix: Solid
Analysis Batch: 476838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 476769

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	104		50 - 150

Lab Sample ID: LCSD 490-476769/3-A
Matrix: Solid
Analysis Batch: 476838

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 476769

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28			40.0	29.9		mg/Kg		75	54 - 130	10	47

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl (Surr)	95		50 - 150

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 490-476741/1-A
Matrix: Solid
Analysis Batch: 476742

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.0	U	10	7.0	mg/Kg			11/16/17 23:37	1

Lab Sample ID: LCS 490-476741/2-A
Matrix: Solid
Analysis Batch: 476742

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	98.8		mg/Kg		98	80 - 120		

Lab Sample ID: LCSD 490-476741/3-A
Matrix: Solid
Analysis Batch: 476742

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			101	102		mg/Kg		102	80 - 120	4	20

Lab Sample ID: 490-140799-1 MS
Matrix: Solid
Analysis Batch: 476742

Client Sample ID: SB2
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	7200	E	110	7020	E 4	mg/Kg	☼	-189	80 - 120		

Method: 9056 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 490-140799-1 MSD
Matrix: Solid
Analysis Batch: 476742

Client Sample ID: SB2
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	7200	E	109	7330	E 4	mg/Kg	☼	92	80 - 120	4	20

Method: Moisture - Percent Moisture

Lab Sample ID: 490-140799-3 DU
Matrix: Solid
Analysis Batch: 476051

Client Sample ID: Background
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	3.6		3.8		%		4	20
Percent Solids	96.4		96.2		%		0.2	20

GC VOA

Analysis Batch: 475993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-140799-2	SB3	Total/NA	Solid	8015C	476059
MB 490-476059/1-A	Method Blank	Total/NA	Solid	8015C	476059
LCS 490-476059/2-A	Lab Control Sample	Total/NA	Solid	8015C	476059
LCSD 490-476059/3-A	Lab Control Sample Dup	Total/NA	Solid	8015C	476059

Prep Batch: 476059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-140799-2	SB3	Total/NA	Solid	5030B	
MB 490-476059/1-A	Method Blank	Total/NA	Solid	5030B	
LCS 490-476059/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 490-476059/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

GC Semi VOA

Prep Batch: 476769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-140799-2	SB3	Total/NA	Solid	3550C	
MB 490-476769/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 490-476769/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 490-476769/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	

Analysis Batch: 476838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 490-476769/1-A	Method Blank	Total/NA	Solid	8015C	476769
LCS 490-476769/2-A	Lab Control Sample	Total/NA	Solid	8015C	476769
LCSD 490-476769/3-A	Lab Control Sample Dup	Total/NA	Solid	8015C	476769

Analysis Batch: 477140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-140799-2	SB3	Total/NA	Solid	8015C	476769

HPLC/IC

Leach Batch: 476741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-140799-1	SB2	Soluble	Solid	DI Leach	
490-140799-2	SB3	Soluble	Solid	DI Leach	
490-140799-3	Background	Soluble	Solid	DI Leach	
MB 490-476741/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 490-476741/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 490-476741/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
490-140799-1 MS	SB2	Soluble	Solid	DI Leach	
490-140799-1 MSD	SB2	Soluble	Solid	DI Leach	

Analysis Batch: 476742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-140799-1	SB2	Soluble	Solid	9056	476741
490-140799-2	SB3	Soluble	Solid	9056	476741
490-140799-3	Background	Soluble	Solid	9056	476741
MB 490-476741/1-A	Method Blank	Soluble	Solid	9056	476741

HPLC/IC (Continued)

Analysis Batch: 476742 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 490-476741/2-A	Lab Control Sample	Soluble	Solid	9056	476741
LCSD 490-476741/3-A	Lab Control Sample Dup	Soluble	Solid	9056	476741
490-140799-1 MS	SB2	Soluble	Solid	9056	476741
490-140799-1 MSD	SB2	Soluble	Solid	9056	476741

General Chemistry

Analysis Batch: 476051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-140799-1	SB2	Total/NA	Solid	Moisture	
490-140799-2	SB3	Total/NA	Solid	Moisture	
490-140799-3	Background	Total/NA	Solid	Moisture	
490-140799-3 DU	Background	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Timberwolf Environmental LLC
Project/Site: State OG 170052 11-9-17

TestAmerica Job ID: 490-140799-1

Client Sample ID: SB2
Date Collected: 11/09/17 16:29
Date Received: 11/14/17 15:32

Lab Sample ID: 490-140799-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			476051	11/15/17 10:31	BAA	TAL NSH

Client Sample ID: SB2
Date Collected: 11/09/17 16:29
Date Received: 11/14/17 15:32

Lab Sample ID: 490-140799-1
Matrix: Solid
Percent Solids: 92.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2.98 g	30 mL	476741	11/16/17 22:09	JML	TAL NSH
Soluble	Analysis	9056		20			476742	11/17/17 01:44	LDC	TAL NSH

Client Sample ID: SB3
Date Collected: 11/09/17 16:27
Date Received: 11/14/17 15:32

Lab Sample ID: 490-140799-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			476051	11/15/17 10:31	BAA	TAL NSH

Client Sample ID: SB3
Date Collected: 11/09/17 16:27
Date Received: 11/14/17 15:32

Lab Sample ID: 490-140799-2
Matrix: Solid
Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.20 g	5.0 mL	476059	11/15/17 12:14	JLP	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	475993	11/16/17 03:08	AK1	TAL NSH
Total/NA	Prep	3550C			26.67 g	1.00 mL	476769	11/17/17 07:46	MNM	TAL NSH
Total/NA	Analysis	8015C		1			477140	11/19/17 02:02	GMH	TAL NSH
Soluble	Leach	DI Leach			2.96 g	30 mL	476741	11/16/17 22:09	JML	TAL NSH
Soluble	Analysis	9056		10			476742	11/17/17 02:20	LDC	TAL NSH

Client Sample ID: Background
Date Collected: 11/09/17 09:30
Date Received: 11/14/17 15:32

Lab Sample ID: 490-140799-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			476051	11/15/17 10:31	BAA	TAL NSH

Client Sample ID: Background
Date Collected: 11/09/17 09:30
Date Received: 11/14/17 15:32

Lab Sample ID: 490-140799-3
Matrix: Solid
Percent Solids: 96.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2.95 g	30 mL	476741	11/16/17 22:09	JML	TAL NSH

Lab Chronicle

Client: Timberwolf Environmental LLC
Project/Site: State OG 170052 11-9-17

TestAmerica Job ID: 490-140799-1

Client Sample ID: Background

Date Collected: 11/09/17 09:30
Date Received: 11/14/17 15:32

Lab Sample ID: 490-140799-3

Matrix: Solid
Percent Solids: 96.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Analysis	9056		1			476742	11/17/17 02:56	LDC	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Timberwolf Environmental LLC
Project/Site: State OG 170052 11-9-17

TestAmerica Job ID: 490-140799-1

Method	Method Description	Protocol	Laboratory
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL NSH
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL NSH
9056	Anions, Ion Chromatography	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Accreditation/Certification Summary

Client: Timberwolf Environmental LLC
Project/Site: State OG 170052 11-9-17

TestAmerica Job ID: 490-140799-1

Laboratory: TestAmerica Nashville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	A2LA		NA: NELAP & A2LA	12-31-17
A2LA	ISO/IEC 17025		0453.07	12-31-17
Alaska (UST)	State Program	10	UST-087	01-01-18
Arizona	State Program	9	AZ0473	05-05-18
Arkansas DEQ	State Program	6	88-0737	04-25-18
California	State Program	9	2938	10-31-18
Connecticut	State Program	1	PH-0220	12-31-17
Florida	NELAP	4	E87358	06-30-18
Georgia	State Program	4	E87358(FL)/453.07(A2LA)	12-31-17
Illinois	NELAP	5	200010	12-09-17
Iowa	State Program	7	131	04-01-18
Kansas	NELAP	7	E-10229	12-31-17
Kentucky (UST)	State Program	4	19	06-30-18
Kentucky (WW)	State Program	4	90038	12-31-17
Louisiana	NELAP	6	30613	06-30-18
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-18
Massachusetts	State Program	1	M-TN032	06-30-18
Minnesota	NELAP	5	047-999-345	12-31-17
Mississippi	State Program	4	N/A	06-30-18
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-18
New Hampshire	NELAP	1	2963	10-09-18
New Jersey	NELAP	2	TN965	06-30-18
New York	NELAP	2	11342	03-31-18
North Carolina (WW/SW)	State Program	4	387	12-31-17
North Dakota	State Program	8	R-146	06-30-18
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-18
Oregon	NELAP	10	TN200001	04-27-18
Pennsylvania	NELAP	3	68-00585	06-30-18
Rhode Island	State Program	1	LAO00268	12-30-17
South Carolina	State Program	4	84009 (001)	02-28-18
South Carolina (Do Not Use - DW)	State Program	4	84009 (002)	12-16-17
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-18
USDA	Federal		P330-13-00306	12-01-19
Utah	NELAP	8	TN00032	07-31-18
Virginia	NELAP	3	460152	06-14-18
Washington	State Program	10	C789	07-19-18
West Virginia DEP	State Program	3	219	02-28-18
Wisconsin	State Program	5	998020430	08-31-18
Wyoming (UST)	A2LA	8	453.07	12-31-17

Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18

Accreditation/Certification Summary

Client: Timberwolf Environmental LLC
Project/Site: State OG 170052 11-9-17

TestAmerica Job ID: 490-140799-1

Laboratory: TestAmerica Houston (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-22	10-31-18
USDA	Federal		P330-17-00132	04-20-20

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-140799 Chain of Custody

Cooler Received/Opened On 11/11/2017 @ 1005

Time Samples Removed From Cooler _____ Time Samples Placed In Storage _____ (2 hour window)

1. Tracking # 7035 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17610176 pH Strip Lot _____ Chlorine Strip Lot _____

2. Temperature of rep. sample or temp blank when opened: 0.6 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (Front)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) JJ

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? ~~Bubblewrap~~ Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (intial) EVA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) EVA

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) EVA

I certify that I attached a label with the unique LIMS number to each container (intial) EVA

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

No. 51974

CHAIN OF CUSTODY RECORD

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: Timberwolf	PROJECT NAME/NUMBER: State OG 170052
SEND REPORT TO: Jim Foster	**BILLING INFORMATION**
ADDRESS: 1920 W. Villa Maria	BILL TO: Timberwolf
Bryan TX	ADDRESS: 1920 W. Villa Maria
	Bryan TX 77807
PHONE:	PHONE:
FAX:	FAX: PO NO:

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER OF CONTAINERS	ANALYSIS/METHOD REQUEST: TPH 8015	ANALYSIS/METHOD REQUEST: Cl	ANALYSIS/METHOD REQUEST: Loc: 490 140799	REMARKS/PRECAUTIONS.
	SB2	11/9/17	1629	Soil	4 oz	None	1		✓		
	SB3	1	1627	1	1	1	1	✓	✓		
	Background		930						✓		

LAB JOB NO.

SEAL INTACT_____
TEMP C_____
CORR TEMP C_____
IR GUN ID_____
INITIAL/DATE_____

SAMPLER: RG
SHIPMENT METHOD:
AIRBILL NO.:

REQUIRED TURNAROUND ☑ ROUTINE TAT (10 BUSINESS DAYS) ☐ RUSH TAT (MAY REQUIRE SURCHARGE) _____

1. RELINQUISHED BY:	DATE	2. RELINQUISHED BY:	DATE	3. RELINQUISHED BY:	DATE
SIGNATURE: Russell Greer	11/10/17	SIGNATURE: TAN	11-11-17	SIGNATURE:	
PRINTED NAME/COMPANY: Russell Greer Timberwolf	TIME 1120	PRINTED NAME/COMPANY:	TIME 1005	PRINTED NAME/COMPANY:	TIME
1. RECEIVED BY:	DATE	2. RECEIVED BY:	DATE	3. RECEIVED BY:	DATE
SIGNATURE:		SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME

TestAmerica
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Phone: 361.289.2673/Fax: 361.289.2471

0.6

TAL-8222-560 (0412)

11/22/2017

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-153484-1
Client Project/Site: Timberwolf - New Mexico Star OG 170052

For:
Timberwolf Environmental LLC
1920 W. Vill Maria
Suite 305-2 Box 205
Bryan, Texas 77807

Attn: Mr. James Foster

Dean A. Joiner

Authorized for release by:
6/19/2018 6:35:29 PM

Dean Joiner, Project Manager II
(713)690-4444
dean.joiner@testamericainc.com

Table of Contents

Sample Summary

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-153484-1	SB4 0-1'	Solid	06/05/18 12:05	06/08/18 09:20
490-153484-2	SB5 0-1'	Solid	06/05/18 12:15	06/08/18 09:20
490-153484-3	SB6 0-1'	Solid	06/05/18 11:30	06/08/18 09:20
490-153484-4	SB7 0-1'	Solid	06/05/18 11:40	06/08/18 09:20
490-153484-5	SB8 0-1'	Solid	06/05/18 11:48	06/08/18 09:20
490-153484-6	SB9 0-1'	Solid	06/05/18 12:00	06/08/18 09:20
490-153484-7	SB2A 4-5'	Solid	06/05/18 11:55	06/08/18 09:20
490-153484-8	SB2A 9-10'	Solid	06/05/18 12:00	06/08/18 09:20

Case Narrative

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-1

Job ID: 490-153484-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-153484-1

Comments
No additional comments.

Receipt
The samples were received on 6/8/2018 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7º C.

HPLC/IC
Method(s) 9056: The method blank for analytical batch 490-521653 contained Chloride above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

Method(s) 9056: The method blank for analytical batch 490-521724 contained Chloride above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

Method(s) 9056: The following samples were diluted due to the nature of the sample matrix: SB9 0-1' (490-153484-6), SB2A 4-5' (490-153484-7) and SB2A 9-10' (490-153484-8). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: SB4 0-1'
Date Collected: 06/05/18 12:05
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-1
Matrix: Solid
Percent Solids: 80.4

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	3.6	U	7.3	3.6	mg/Kg	☼	06/12/18 09:38	06/16/18 10:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*92*		*50 - 150*	*06/12/18 09:38*	*06/16/18 10:52*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	3.1	U	6.1	3.1	mg/Kg	☼	06/16/18 14:50	06/18/18 13:02	1
C24-C40	**4.0**	**J**	6.1	3.1	mg/Kg	☼	06/16/18 14:50	06/18/18 13:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*111*		*50 - 150*	*06/16/18 14:50*	*06/18/18 13:02*	*1*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**28**		12	8.7	mg/Kg	☼		06/14/18 08:09	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**19.6**		0.1	0.1	%			06/12/18 15:05	1
Percent Solids	**80.4**		0.1	0.1	%			06/12/18 15:05	1

Client Sample ID: SB5 0-1'
Date Collected: 06/05/18 12:15
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-2
Matrix: Solid
Percent Solids: 84.9

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	3.3	U	6.7	3.3	mg/Kg	☼	06/12/18 09:38	06/16/18 11:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*90*		*50 - 150*	*06/12/18 09:38*	*06/16/18 11:21*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**13**		5.8	2.9	mg/Kg	☼	06/16/18 14:50	06/18/18 13:20	1
C24-C40	**34**		5.8	2.9	mg/Kg	☼	06/16/18 14:50	06/18/18 13:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*95*		*50 - 150*	*06/16/18 14:50*	*06/18/18 13:20*	*1*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25**		12	8.4	mg/Kg	☼		06/14/18 08:24	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15.1**		0.1	0.1	%			06/12/18 15:05	1
Percent Solids	**84.9**		0.1	0.1	%			06/12/18 15:05	1

Client Sample ID: SB6 0-1'
Date Collected: 06/05/18 11:30
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-3
Matrix: Solid
Percent Solids: 73.3

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	4.3	U	8.6	4.3	mg/Kg	☼	06/12/18 09:38	06/16/18 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*91*		*50 - 150*	*06/12/18 09:38*	*06/16/18 11:51*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**9.8**		6.7	3.4	mg/Kg	☼	06/16/18 14:50	06/18/18 13:37	1
C24-C40	**28**		6.7	3.4	mg/Kg	☼	06/16/18 14:50	06/18/18 13:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*89*		*50 - 150*	*06/16/18 14:50*	*06/18/18 13:37*	*1*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12**	**J**	14	9.5	mg/Kg	☼		06/14/18 09:08	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**26.7**		0.1	0.1	%			06/12/18 15:05	1
Percent Solids	**73.3**		0.1	0.1	%			06/12/18 15:05	1

Client Sample ID: SB7 0-1'
Date Collected: 06/05/18 11:40
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-4
Matrix: Solid
Percent Solids: 76.0

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	4.0	U	8.0	4.0	mg/Kg	☼	06/12/18 09:38	06/16/18 12:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*88*		*50 - 150*	*06/12/18 09:38*	*06/16/18 12:21*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**4.0**	**J**	6.5	3.3	mg/Kg	☼	06/16/18 14:50	06/18/18 13:56	1
C24-C40	**13**		6.5	3.3	mg/Kg	☼	06/16/18 14:50	06/18/18 13:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*103*		*50 - 150*	*06/16/18 14:50*	*06/18/18 13:56*	*1*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17**		13	9.1	mg/Kg	☼		06/14/18 09:23	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**24.0**		0.1	0.1	%			06/12/18 15:05	1
Percent Solids	**76.0**		0.1	0.1	%			06/12/18 15:05	1

Client Sample ID: SB8 0-1'
Date Collected: 06/05/18 11:48
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-5
Matrix: Solid
Percent Solids: 87.0

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	3.2	U	6.5	3.2	mg/Kg	☼	06/12/18 09:38	06/16/18 12:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*93*		*50 - 150*	*06/12/18 09:38*	*06/16/18 12:51*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**3.8**	**J**	5.7	2.9	mg/Kg	☼	06/16/18 14:50	06/18/18 14:14	1
C24-C40	**10**		5.7	2.9	mg/Kg	☼	06/16/18 14:50	06/18/18 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*98*		*50 - 150*	*06/16/18 14:50*	*06/18/18 14:14*	*1*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20**		11	7.9	mg/Kg	☼		06/14/18 09:38	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**13.0**		0.1	0.1	%			06/12/18 15:05	1
Percent Solids	**87.0**		0.1	0.1	%			06/12/18 15:05	1

Client Sample ID: SB9 0-1'
Date Collected: 06/05/18 12:00
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-6
Matrix: Solid
Percent Solids: 79.5

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	4.2	J	7.5	3.8	mg/Kg	☼	06/12/18 09:38	06/16/18 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*93*		*50 - 150*	*06/12/18 09:38*	*06/16/18 13:21*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	28		6.2	3.1	mg/Kg	☼	06/16/18 14:50	06/18/18 14:32	1
C24-C40	51		6.2	3.1	mg/Kg	☼	06/16/18 14:50	06/18/18 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*93*		*50 - 150*	*06/16/18 14:50*	*06/18/18 14:32*	*1*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	890		63	44	mg/Kg	☼		06/14/18 15:49	5

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20.5		0.1	0.1	%			06/12/18 15:05	1
Percent Solids	79.5		0.1	0.1	%			06/12/18 15:05	1

Client Sample ID: SB2A 4-5'
Date Collected: 06/05/18 11:55
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-7
Matrix: Solid
Percent Solids: 70.2

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	5.7	J	9.2	4.6	mg/Kg	☼	06/12/18 09:38	06/16/18 13:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*93*		*50 - 150*	*06/12/18 09:38*	*06/16/18 13:51*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	3.5	U	7.1	3.5	mg/Kg	☼	06/16/18 14:50	06/18/18 14:49	1
C24-C40	3.5	U	7.1	3.5	mg/Kg	☼	06/16/18 14:50	06/18/18 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*90*		*50 - 150*	*06/16/18 14:50*	*06/18/18 14:49*	*1*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	830		70	49	mg/Kg	☼		06/14/18 16:03	5

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	29.8		0.1	0.1	%			06/12/18 15:05	1
Percent Solids	70.2		0.1	0.1	%			06/12/18 15:05	1

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-1

Client Sample ID: SB2A 9-10'
Date Collected: 06/05/18 12:00
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-8
Matrix: Solid
Percent Solids: 79.0

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	3.7	U	7.5	3.7	mg/Kg	☼	06/12/18 09:38	06/16/18 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*91*		*50 - 150*	*06/12/18 09:38*	*06/16/18 14:21*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	3.1	U	6.2	3.1	mg/Kg	☼	06/16/18 14:50	06/18/18 15:08	1
C24-C40	**3.2**	**J**	6.2	3.1	mg/Kg	☼	06/16/18 14:50	06/18/18 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*99*		*50 - 150*	*06/16/18 14:50*	*06/18/18 15:08*	*1*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1600**		130	89	mg/Kg	☼		06/14/18 16:18	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**21.0**		0.1	0.1	%			06/12/18 15:05	1
Percent Solids	**79.0**		0.1	0.1	%			06/12/18 15:05	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 490-521113/1-A
Matrix: Solid
Analysis Batch: 522151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521113

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	2.5	U	5.0	2.5	mg/Kg		06/12/18 09:38	06/16/18 10:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*92*		*50 - 150*	*06/12/18 09:38*	*06/16/18 10:22*	*1*

Lab Sample ID: LCS 490-521113/2-A
Matrix: Solid
Analysis Batch: 522151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521113

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10			500	508		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*84*		*50 - 150*

Lab Sample ID: LCSD 490-521113/3-A
Matrix: Solid
Analysis Batch: 522151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 521113

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10			500	500		mg/Kg		100	70 - 130	2	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*84*		*50 - 150*

Lab Sample ID: 490-153484-1 MS
Matrix: Solid
Analysis Batch: 522151

Client Sample ID: SB4 0-1'
Prep Type: Total/NA
Prep Batch: 521113

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10	3.6	U	726	712		mg/Kg	☼	98	56 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*82*		*50 - 150*

Lab Sample ID: 490-153484-1 MSD
Matrix: Solid
Analysis Batch: 522151

Client Sample ID: SB4 0-1'
Prep Type: Total/NA
Prep Batch: 521113

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	3.6	U	726	694		mg/Kg	☼	96	56 - 130	3	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*84*		*50 - 150*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 490-522413/1-A
Matrix: Solid
Analysis Batch: 522599

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522413

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	2.5	U	5.0	2.5	mg/Kg		06/16/18 14:50	06/18/18 12:08	1
C24-C40	2.5	U	5.0	2.5	mg/Kg		06/16/18 14:50	06/18/18 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*104*		*50 - 150*	*06/16/18 14:50*	*06/18/18 12:08*	*1*

Lab Sample ID: LCS 490-522413/2-A
Matrix: Solid
Analysis Batch: 522599

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522413

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28			40.0	44.3		mg/Kg		111	54 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*116*		*50 - 150*

Lab Sample ID: LCSD 490-522413/3-A
Matrix: Solid
Analysis Batch: 522599

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 522413

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28			40.0	43.0		mg/Kg		108	54 - 130	3	47

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl (Surr)	*112*		*50 - 150*

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 490-521724/3
Matrix: Solid
Analysis Batch: 521724

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.70	U	1.0	0.70	mg/Kg			06/14/18 12:07	1

Lab Sample ID: LCS 490-521724/4
Matrix: Solid
Analysis Batch: 521724

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			10.0	9.84		mg/Kg		98	80 - 120		

Method: 9056 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 490-521724/5
Matrix: Solid
Analysis Batch: 521724

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.92		mg/Kg		99	80 - 120	1	20

Lab Sample ID: MB 490-521443/1-A
Matrix: Solid
Analysis Batch: 521653

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.0	U	10	7.0	mg/Kg			06/14/18 04:56	1

Lab Sample ID: LCS 490-521443/2-A
Matrix: Solid
Analysis Batch: 521653

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	99.1	98.9		mg/Kg		100	80 - 120

Lab Sample ID: LCSD 490-521443/3-A
Matrix: Solid
Analysis Batch: 521653

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	99.8	99.6		mg/Kg		100	80 - 120	1	20

Method: Moisture - Percent Moisture

Lab Sample ID: 490-153484-4 DU
Matrix: Solid
Analysis Batch: 521284

Client Sample ID: SB7 0-1'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	24.0		25.7		%		7	20
Percent Solids	76.0		74.3		%		2	20

GC VOA

Prep Batch: 521113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-1	SB4 0-1'	Total/NA	Solid	5030B	
490-153484-2	SB5 0-1'	Total/NA	Solid	5030B	
490-153484-3	SB6 0-1'	Total/NA	Solid	5030B	
490-153484-4	SB7 0-1'	Total/NA	Solid	5030B	
490-153484-5	SB8 0-1'	Total/NA	Solid	5030B	
490-153484-6	SB9 0-1'	Total/NA	Solid	5030B	
490-153484-7	SB2A 4-5'	Total/NA	Solid	5030B	
490-153484-8	SB2A 9-10'	Total/NA	Solid	5030B	
MB 490-521113/1-A	Method Blank	Total/NA	Solid	5030B	
LCS 490-521113/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 490-521113/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
490-153484-1 MS	SB4 0-1'	Total/NA	Solid	5030B	
490-153484-1 MSD	SB4 0-1'	Total/NA	Solid	5030B	

Analysis Batch: 522151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-1	SB4 0-1'	Total/NA	Solid	8015C	521113
490-153484-2	SB5 0-1'	Total/NA	Solid	8015C	521113
490-153484-3	SB6 0-1'	Total/NA	Solid	8015C	521113
490-153484-4	SB7 0-1'	Total/NA	Solid	8015C	521113
490-153484-5	SB8 0-1'	Total/NA	Solid	8015C	521113
490-153484-6	SB9 0-1'	Total/NA	Solid	8015C	521113
490-153484-7	SB2A 4-5'	Total/NA	Solid	8015C	521113
490-153484-8	SB2A 9-10'	Total/NA	Solid	8015C	521113
MB 490-521113/1-A	Method Blank	Total/NA	Solid	8015C	521113
LCS 490-521113/2-A	Lab Control Sample	Total/NA	Solid	8015C	521113
LCSD 490-521113/3-A	Lab Control Sample Dup	Total/NA	Solid	8015C	521113
490-153484-1 MS	SB4 0-1'	Total/NA	Solid	8015C	521113
490-153484-1 MSD	SB4 0-1'	Total/NA	Solid	8015C	521113

GC Semi VOA

Prep Batch: 522413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-1	SB4 0-1'	Total/NA	Solid	3550C	
490-153484-2	SB5 0-1'	Total/NA	Solid	3550C	
490-153484-3	SB6 0-1'	Total/NA	Solid	3550C	
490-153484-4	SB7 0-1'	Total/NA	Solid	3550C	
490-153484-5	SB8 0-1'	Total/NA	Solid	3550C	
490-153484-6	SB9 0-1'	Total/NA	Solid	3550C	
490-153484-7	SB2A 4-5'	Total/NA	Solid	3550C	
490-153484-8	SB2A 9-10'	Total/NA	Solid	3550C	
MB 490-522413/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 490-522413/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 490-522413/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	

Analysis Batch: 522599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-1	SB4 0-1'	Total/NA	Solid	8015C	522413
490-153484-2	SB5 0-1'	Total/NA	Solid	8015C	522413

GC Semi VOA (Continued)

Analysis Batch: 522599 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-3	SB6 0-1'	Total/NA	Solid	8015C	522413
490-153484-4	SB7 0-1'	Total/NA	Solid	8015C	522413
490-153484-5	SB8 0-1'	Total/NA	Solid	8015C	522413
490-153484-6	SB9 0-1'	Total/NA	Solid	8015C	522413
490-153484-7	SB2A 4-5'	Total/NA	Solid	8015C	522413
490-153484-8	SB2A 9-10'	Total/NA	Solid	8015C	522413
MB 490-522413/1-A	Method Blank	Total/NA	Solid	8015C	522413
LCS 490-522413/2-A	Lab Control Sample	Total/NA	Solid	8015C	522413
LCSD 490-522413/3-A	Lab Control Sample Dup	Total/NA	Solid	8015C	522413

HPLC/IC

Leach Batch: 521443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-1	SB4 0-1'	Soluble	Solid	DI Leach	
490-153484-2	SB5 0-1'	Soluble	Solid	DI Leach	
490-153484-3	SB6 0-1'	Soluble	Solid	DI Leach	
490-153484-4	SB7 0-1'	Soluble	Solid	DI Leach	
490-153484-5	SB8 0-1'	Soluble	Solid	DI Leach	
490-153484-6	SB9 0-1'	Soluble	Solid	DI Leach	
490-153484-7	SB2A 4-5'	Soluble	Solid	DI Leach	
490-153484-8	SB2A 9-10'	Soluble	Solid	DI Leach	
MB 490-521443/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 490-521443/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 490-521443/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 521653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-1	SB4 0-1'	Soluble	Solid	9056	521443
490-153484-2	SB5 0-1'	Soluble	Solid	9056	521443
490-153484-3	SB6 0-1'	Soluble	Solid	9056	521443
490-153484-4	SB7 0-1'	Soluble	Solid	9056	521443
490-153484-5	SB8 0-1'	Soluble	Solid	9056	521443
MB 490-521443/1-A	Method Blank	Soluble	Solid	9056	521443
LCS 490-521443/2-A	Lab Control Sample	Soluble	Solid	9056	521443
LCSD 490-521443/3-A	Lab Control Sample Dup	Soluble	Solid	9056	521443

Analysis Batch: 521724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-6	SB9 0-1'	Soluble	Solid	9056	521443
490-153484-7	SB2A 4-5'	Soluble	Solid	9056	521443
490-153484-8	SB2A 9-10'	Soluble	Solid	9056	521443
MB 490-521724/3	Method Blank	Total/NA	Solid	9056	
LCS 490-521724/4	Lab Control Sample	Total/NA	Solid	9056	
LCSD 490-521724/5	Lab Control Sample Dup	Total/NA	Solid	9056	

QC Association Summary

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-1

General Chemistry

Analysis Batch: 521284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-1	SB4 0-1'	Total/NA	Solid	Moisture	
490-153484-2	SB5 0-1'	Total/NA	Solid	Moisture	
490-153484-3	SB6 0-1'	Total/NA	Solid	Moisture	
490-153484-4	SB7 0-1'	Total/NA	Solid	Moisture	
490-153484-5	SB8 0-1'	Total/NA	Solid	Moisture	
490-153484-6	SB9 0-1'	Total/NA	Solid	Moisture	
490-153484-7	SB2A 4-5'	Total/NA	Solid	Moisture	
490-153484-8	SB2A 9-10'	Total/NA	Solid	Moisture	
490-153484-4 DU	SB7 0-1'	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-1

Client Sample ID: SB4 0-1'
Date Collected: 06/05/18 12:05
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521284	06/12/18 15:05	BAA	TAL NSH

Client Sample ID: SB4 0-1'
Date Collected: 06/05/18 12:05
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-1
Matrix: Solid
Percent Solids: 80.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.15 g	5.0 mL	521113	06/12/18 09:38	DHC	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522151	06/16/18 10:52	FKG	TAL NSH
Total/NA	Prep	3550C			25.31 g	1.00 mL	522413	06/16/18 14:50	AMD	TAL NSH
Total/NA	Analysis	8015C		1			522599	06/18/18 13:02	GMH	TAL NSH
Soluble	Leach	DI Leach			3.01 g	30 mL	521443	06/13/18 10:20	LDC	TAL NSH
Soluble	Analysis	9056		1			521653	06/14/18 08:09	SW1	TAL NSH

Client Sample ID: SB5 0-1'
Date Collected: 06/05/18 12:15
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521284	06/12/18 15:05	BAA	TAL NSH

Client Sample ID: SB5 0-1'
Date Collected: 06/05/18 12:15
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-2
Matrix: Solid
Percent Solids: 84.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.11 g	5.0 mL	521113	06/12/18 09:38	DHC	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522151	06/16/18 11:21	FKG	TAL NSH
Total/NA	Prep	3550C			25.21 g	1.00 mL	522413	06/16/18 14:50	AMD	TAL NSH
Total/NA	Analysis	8015C		1			522599	06/18/18 13:20	GMH	TAL NSH
Soluble	Leach	DI Leach			2.95 g	30 mL	521443	06/13/18 10:20	LDC	TAL NSH
Soluble	Analysis	9056		1			521653	06/14/18 08:24	SW1	TAL NSH

Client Sample ID: SB6 0-1'
Date Collected: 06/05/18 11:30
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521284	06/12/18 15:05	BAA	TAL NSH

Lab Chronicle

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-1

Client Sample ID: SB6 0-1'

Date Collected: 06/05/18 11:30
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-3
Matrix: Solid
Percent Solids: 73.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.04 g	5.0 mL	521113	06/12/18 09:38	DHC	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522151	06/16/18 11:51	FKG	TAL NSH
Total/NA	Prep	3550C			25.31 g	1.00 mL	522413	06/16/18 14:50	AMD	TAL NSH
Total/NA	Analysis	8015C		1			522599	06/18/18 13:37	GMH	TAL NSH
Soluble	Leach	DI Leach			3.03 g	30 mL	521443	06/13/18 10:20	LDC	TAL NSH
Soluble	Analysis	9056		1			521653	06/14/18 09:08	SW1	TAL NSH

Client Sample ID: SB7 0-1'

Date Collected: 06/05/18 11:40
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521284	06/12/18 15:05	BAA	TAL NSH

Client Sample ID: SB7 0-1'

Date Collected: 06/05/18 11:40
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-4
Matrix: Solid
Percent Solids: 76.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.13 g	5.0 mL	521113	06/12/18 09:38	DHC	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522151	06/16/18 12:21	FKG	TAL NSH
Total/NA	Prep	3550C			25.13 g	1.00 mL	522413	06/16/18 14:50	AMD	TAL NSH
Total/NA	Analysis	8015C		1			522599	06/18/18 13:56	GMH	TAL NSH
Soluble	Leach	DI Leach			3.05 g	30 mL	521443	06/13/18 10:20	LDC	TAL NSH
Soluble	Analysis	9056		1			521653	06/14/18 09:23	SW1	TAL NSH

Client Sample ID: SB8 0-1'

Date Collected: 06/05/18 11:48
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521284	06/12/18 15:05	BAA	TAL NSH

Client Sample ID: SB8 0-1'

Date Collected: 06/05/18 11:48
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-5
Matrix: Solid
Percent Solids: 87.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5.0 mL	521113	06/12/18 09:38	DHC	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522151	06/16/18 12:51	FKG	TAL NSH
Total/NA	Prep	3550C			25.08 g	1.00 mL	522413	06/16/18 14:50	AMD	TAL NSH
Total/NA	Analysis	8015C		1			522599	06/18/18 14:14	GMH	TAL NSH
Soluble	Leach	DI Leach			3.05 g	30 mL	521443	06/13/18 10:20	LDC	TAL NSH

Client Sample ID: SB8 0-1'

Lab Sample ID: 490-153484-5
Date Collected: 06/05/18 11:48
Matrix: Solid
Date Received: 06/08/18 09:20
Percent Solids: 87.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Analysis	9056		1			521653	06/14/18 09:38	SW1	TAL NSH

Client Sample ID: SB9 0-1'

Lab Sample ID: 490-153484-6
Date Collected: 06/05/18 12:00
Matrix: Solid
Date Received: 06/08/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521284	06/12/18 15:05	BAA	TAL NSH

Client Sample ID: SB9 0-1'

Lab Sample ID: 490-153484-6
Date Collected: 06/05/18 12:00
Matrix: Solid
Date Received: 06/08/18 09:20
Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5.0 mL	521113	06/12/18 09:38	DHC	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522151	06/16/18 13:21	FKG	TAL NSH
Total/NA	Prep	3550C			25.52 g	1.00 mL	522413	06/16/18 14:50	AMD	TAL NSH
Total/NA	Analysis	8015C		1			522599	06/18/18 14:32	GMH	TAL NSH
Soluble	Leach	DI Leach			2.98 g	30 mL	521443	06/13/18 10:20	LDC	TAL NSH
Soluble	Analysis	9056		5			521724	06/14/18 15:49	SW1	TAL NSH

Client Sample ID: SB2A 4-5'

Lab Sample ID: 490-153484-7
Date Collected: 06/05/18 11:55
Matrix: Solid
Date Received: 06/08/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521284	06/12/18 15:05	BAA	TAL NSH

Client Sample ID: SB2A 4-5'

Lab Sample ID: 490-153484-7
Date Collected: 06/05/18 11:55
Matrix: Solid
Date Received: 06/08/18 09:20
Percent Solids: 70.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.05 g	5.0 mL	521113	06/12/18 09:38	DHC	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522151	06/16/18 13:51	FKG	TAL NSH
Total/NA	Prep	3550C			25.17 g	1.00 mL	522413	06/16/18 14:50	AMD	TAL NSH
Total/NA	Analysis	8015C		1			522599	06/18/18 14:49	GMH	TAL NSH
Soluble	Leach	DI Leach			3.05 g	30 mL	521443	06/13/18 10:20	LDC	TAL NSH
Soluble	Analysis	9056		5			521724	06/14/18 16:03	SW1	TAL NSH

Lab Chronicle

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-1

Client Sample ID: SB2A 9-10'

Lab Sample ID: 490-153484-8

Date Collected: 06/05/18 12:00
Matrix: Solid
Date Received: 06/08/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			521284	06/12/18 15:05	BAA	TAL NSH

Client Sample ID: SB2A 9-10'

Lab Sample ID: 490-153484-8

Date Collected: 06/05/18 12:00
Matrix: Solid
Date Received: 06/08/18 09:20
Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.14 g	5.0 mL	521113	06/12/18 09:38	DHC	TAL NSH
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	522151	06/16/18 14:21	FKG	TAL NSH
Total/NA	Prep	3550C			25.44 g	1.00 mL	522413	06/16/18 14:50	AMD	TAL NSH
Total/NA	Analysis	8015C		1			522599	06/18/18 15:08	GMH	TAL NSH
Soluble	Leach	DI Leach			3.00 g	30 mL	521443	06/13/18 10:21	LDC	TAL NSH
Soluble	Analysis	9056		10			521724	06/14/18 16:18	SW1	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-1

Method	Method Description	Protocol	Laboratory
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL NSH
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL NSH
9056	Anions, Ion Chromatography	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL NSH
3550C	Ultrasonic Extraction	SW846	TAL NSH
5030B	Purge and Trap	SW846	TAL NSH
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL NSH

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Accreditation/Certification Summary

Client: Timberwolf Environmental LLC
TestAmerica Job ID: 490-153484-1
Project/Site: Timberwolf - New Mexico Star OG 170052

Laboratory: TestAmerica Nashville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	A2LA		NA: NELAP & A2LA	12-31-19
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	06-30-18
Arizona	State Program	9	AZ0473	05-05-19
Arkansas DEQ	State Program	6	88-0737	04-25-19
California	State Program	9	2938	10-31-18
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-18
Georgia	State Program	4	E87358(FL)/453.07(A2LA)	06-30-18
Illinois	NELAP	5	200010	12-09-18
Iowa	State Program	7	131	04-01-18 *
Kansas	NELAP	7	E-10229	10-31-18
Kentucky (UST)	State Program	4	19	06-30-18
Kentucky (WW)	State Program	4	90038	12-31-18
Louisiana	NELAP	6	30613	06-30-18
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-19
Massachusetts	State Program	1	M-TN032	06-30-18
Minnesota	NELAP	5	047-999-345	12-31-18
Mississippi	State Program	4	N/A	06-30-18
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-18
New Hampshire	NELAP	1	2963	10-09-18
New Jersey	NELAP	2	TN965	06-30-18
New York	NELAP	2	11342	03-31-19
North Carolina (WW/SW)	State Program	4	387	12-31-18
North Dakota	State Program	8	R-146	06-30-18
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-18
Oregon	NELAP	10	TN200001	04-26-19
Pennsylvania	NELAP	3	68-00585	06-30-18
Rhode Island	State Program	1	LAO00268	12-30-18
South Carolina	State Program	4	84009 (001)	02-28-18 *
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-18
USDA	Federal		P330-13-00306	12-01-19
Utah	NELAP	8	TN00032	07-31-18
Virginia	NELAP	3	460152	06-14-18 *
Washington	State Program	10	C789	07-19-18
West Virginia DEP	State Program	3	219	02-28-19
Wisconsin	State Program	5	998020430	08-31-18
Wyoming (UST)	A2LA	8	453.07	12-31-19

Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Timberwolf Environmental LLC
TestAmerica Job ID: 490-153484-1
Project/Site: Timberwolf - New Mexico Star OG 170052

Laboratory: TestAmerica Houston (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Texas	NELAP	6	T104704223-17-22	10-31-18
USDA	Federal		P330-18-00130	04-30-21

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-153484 Chain of Custody

450

Cooler Received/Opened On 6/8/2018 @ 0920

Time Samples Removed From Cooler 19:16 Time Samples Placed In Storage 19:25 (2 Hour Window)

1. Tracking # 7066 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17610176 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 2.7 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

If yes, how many and where: 1 (Front)

5. Were the seals intact, signed, and dated correctly? YES NO NA

6. Were custody papers inside cooler? YES NO NA

I certify that I opened the cooler and answered questions 1-6 (intial) JA

7. Were custody seals on containers: YES NO and Intact YES NO NA

Were these signed and dated correctly? YES NO NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES NO NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES NO NA

12. Did all container labels and tags agree with custody papers? YES NO NA

13a. Were VOA vials received? YES NO NA

b. Was there any observable headspace present in any VOA vial? YES NO NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES NO NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (intial) KA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES NO NA

b. Did the bottle labels indicate that the correct preservatives were used YES NO NA

16. Was residual chlorine present? YES NO NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) KA

17. Were custody papers properly filled out (ink, signed, etc)? YES NO NA

18. Did you sign the custody papers in the appropriate place? YES NO NA

19. Were correct containers used for the analysis requested? YES NO NA

20. Was sufficient amount of sample sent in each container? YES NO NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) KA

I certify that I attached a label with the unique LIMS number to each container (intial) KA

21. Were there Non-Conformance issues at login? YES NO Was a NCM generated? YES NO #_____

BIS = Broken in shipment
Cooler Receipt Form.doc

End of Form

Revised 8 23 17 6/19/2018

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040-5862

Phone: 713.690.4444 Fax: 713.690.5646

Chain of Custody Record

177262

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Dean Joiner	Site Contact:	Date: 6/7/18	COC No:
Company Name: Timberwolf	Tel/Fax:	Lab Contact:	Carrier:	1 of 1 COCs
Address: 1970 W. Villa Maria	Analysis Turnaround Time			Sampler:
City/State/Zip: Bryan TX 77807	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below _____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: State OG 170052	☑ 1 week			Job / SDG No.:
Site:	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	TPH 8015 Extended	Chloride	1010	Sample Specific Notes:
1 SB4 0-1'	6/5/18	1205	G	Soil	1	N		✓	✓		
2 SB5 0-1'		1215						✓	✓		
3 SB6 0-1'		1130						✓	✓		
4 SB7 0-1'		1140						✓	✓		
5 SB8 0-1'		1148						✓	✓		
6 SB9 0-1'		1200						✓	✓		Loc: 490 153484
7 SB2A 4-5'		1155						✓	✓		
8 SB2A 9-10'		1200						✓	✓		
9 SB2A 14-15'		1205								✓	
10 SB2A 19-20'		1215								✓	
11 SB2A 24-25'		1220								✓	

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 2.7 Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Kendall Green	Timberwolf	6/7/18 1110			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
			Keith Faught	TAHAS	06-08-2018 09:20

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6/19/2018

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-153484-2
Client Project/Site: Timberwolf - New Mexico Star OG 170052

For:
Timberwolf Environmental LLC
1920 W. Vill Maria
Suite 305-2 Box 205
Bryan, Texas 77807

Attn: Mr. James Foster

Dean A. Joiner

Authorized for release by:
7/6/2018 2:26:26 PM

Dean Joiner, Project Manager II
(713)690-4444
dean.joiner@testamericainc.com

Table of Contents

Sample Summary

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-153484-9	SB2A 14-15'	Solid	06/05/18 12:05	06/08/18 09:20
490-153484-10	SB2A 19-20'	Solid	06/05/18 12:15	06/08/18 09:20
490-153484-11	SB2A 24-25'	Solid	06/05/18 12:20	06/08/18 09:20

Case Narrative

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

Job ID: 490-153484-2

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-153484-2

Comments
No additional comments.

Receipt
The samples were received on 6/8/2018 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7º C.

HPLC/IC
Method(s) 9056: Samples were prepared before hold time expired.

SB2A 14-15' (490-153484-9), SB2A 19-20' (490-153484-10) and SB2A 24-25' (490-153484-11)

Method(s) 9056: The following sample was diluted due to the nature of the sample matrix: SB2A 14-15' (490-153484-9). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

Client Sample ID: SB2A 14-15'
Date Collected: 06/05/18 12:05
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-9
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22.4		0.1	0.1	%			06/26/18 13:48	1
Percent Solids	77.6		0.1	0.1	%			06/26/18 13:48	1

Client Sample Results

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

Client Sample ID: SB2A 14-15'
Date Collected: 06/05/18 12:05
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-9
Matrix: Solid
Percent Solids: 77.6

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1000	H	130	90	mg/Kg	☼		07/05/18 16:03	10

Client Sample Results

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

Client Sample ID: SB2A 19-20'
Date Collected: 06/05/18 12:15
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-10
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16.6		0.1	0.1	%			06/26/18 13:48	1
Percent Solids	83.4		0.1	0.1	%			06/26/18 13:48	1

Client Sample Results

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

Client Sample ID: SB2A 19-20'
Date Collected: 06/05/18 12:15
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-10
Matrix: Solid
Percent Solids: 83.4

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	400	H	12	8.5	mg/Kg	☼		07/04/18 06:17	1

Client Sample Results

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

Client Sample ID: SB2A 24-25'
Date Collected: 06/05/18 12:20
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-11
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22.6		0.1	0.1	%			06/26/18 13:48	1
Percent Solids	77.4		0.1	0.1	%			06/26/18 13:48	1

Client Sample Results

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

Client Sample ID: SB2A 24-25'
Date Collected: 06/05/18 12:20
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-11
Matrix: Solid
Percent Solids: 77.4

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140	H	13	9.0	mg/Kg	☼		07/04/18 06:32	1

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 490-524488/1-A
Matrix: Solid
Analysis Batch: 526874

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.0	U	10	7.0	mg/Kg			07/04/18 04:49	1

Lab Sample ID: LCS 490-524488/2-A
Matrix: Solid
Analysis Batch: 526874

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	96.3		mg/Kg		96	80 - 120		

Lab Sample ID: LCSD 490-524488/3-A
Matrix: Solid
Analysis Batch: 526874

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	96.5		mg/Kg		96	80 - 120	0	20

Lab Sample ID: 490-153484-9 MS
Matrix: Solid
Analysis Batch: 526874

Client Sample ID: SB2A 14-15'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	1100	H E	130	1280	E 4	mg/Kg	☼	116	80 - 120		

Lab Sample ID: 490-153484-9 MSD
Matrix: Solid
Analysis Batch: 526874

Client Sample ID: SB2A 14-15'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1100	H E	129	1280	E 4	mg/Kg	☼	117	80 - 120	0	20

Method: Moisture - Percent Moisture

Lab Sample ID: 490-153484-9 DU
Matrix: Solid
Analysis Batch: 524858

Client Sample ID: SB2A 14-15'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	22.4			23.9		%				6	20
Percent Solids	77.6			76.1		%				2	20

QC Association Summary

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

HPLC/IC

Leach Batch: 524488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-9	SB2A 14-15'	Soluble	Solid	DI Leach	
490-153484-10	SB2A 19-20'	Soluble	Solid	DI Leach	
490-153484-11	SB2A 24-25'	Soluble	Solid	DI Leach	
MB 490-524488/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 490-524488/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 490-524488/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
490-153484-9 MS	SB2A 14-15'	Soluble	Solid	DI Leach	
490-153484-9 MSD	SB2A 14-15'	Soluble	Solid	DI Leach	

Analysis Batch: 526515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-9	SB2A 14-15'	Soluble	Solid	9056	524488

Analysis Batch: 526874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-10	SB2A 19-20'	Soluble	Solid	9056	524488
490-153484-11	SB2A 24-25'	Soluble	Solid	9056	524488
MB 490-524488/1-A	Method Blank	Soluble	Solid	9056	524488
LCS 490-524488/2-A	Lab Control Sample	Soluble	Solid	9056	524488
LCSD 490-524488/3-A	Lab Control Sample Dup	Soluble	Solid	9056	524488
490-153484-9 MS	SB2A 14-15'	Soluble	Solid	9056	524488
490-153484-9 MSD	SB2A 14-15'	Soluble	Solid	9056	524488

General Chemistry

Analysis Batch: 524858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153484-9	SB2A 14-15'	Total/NA	Solid	Moisture	
490-153484-10	SB2A 19-20'	Total/NA	Solid	Moisture	
490-153484-11	SB2A 24-25'	Total/NA	Solid	Moisture	
490-153484-9 DU	SB2A 14-15'	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

Client Sample ID: SB2A 14-15'
Date Collected: 06/05/18 12:05
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			524858	06/26/18 13:48	BAA	TAL NSH

Client Sample ID: SB2A 14-15'
Date Collected: 06/05/18 12:05
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-9
Matrix: Solid
Percent Solids: 77.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			3.01 g	30 mL	524488	07/03/18 18:00	LDC	TAL NSH
Soluble	Analysis	9056		10	10 mL	1.0 mL	526515	07/05/18 16:03	LDC	TAL NSH

Client Sample ID: SB2A 19-20'
Date Collected: 06/05/18 12:15
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			524858	06/26/18 13:48	BAA	TAL NSH

Client Sample ID: SB2A 19-20'
Date Collected: 06/05/18 12:15
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-10
Matrix: Solid
Percent Solids: 83.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2.98 g	30 mL	524488	07/03/18 18:00	LDC	TAL NSH
Soluble	Analysis	9056		1			526874	07/04/18 06:17	LDC	TAL NSH

Client Sample ID: SB2A 24-25'
Date Collected: 06/05/18 12:20
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			524858	06/26/18 13:48	BAA	TAL NSH

Client Sample ID: SB2A 24-25'
Date Collected: 06/05/18 12:20
Date Received: 06/08/18 09:20

Lab Sample ID: 490-153484-11
Matrix: Solid
Percent Solids: 77.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			3.01 g	30 mL	524488	07/03/18 18:00	LDC	TAL NSH
Soluble	Analysis	9056		1			526874	07/04/18 06:32	LDC	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Timberwolf Environmental LLC
Project/Site: Timberwolf - New Mexico Star OG 170052

TestAmerica Job ID: 490-153484-2

Method	Method Description	Protocol	Laboratory
9056	Anions, Ion Chromatography	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL NSH
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL NSH

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Accreditation/Certification Summary

Client: Timberwolf Environmental LLC
TestAmerica Job ID: 490-153484-2
Project/Site: Timberwolf - New Mexico Star OG 170052

Laboratory: TestAmerica Nashville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	06-30-18 *
Arizona	State Program	9	AZ0473	05-05-19
Arkansas DEQ	State Program	6	88-0737	04-25-19
California	State Program	9	2938	10-31-18
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-18 *
Georgia	State Program	4	NA: NELAP & A2LA	12-31-19
Illinois	NELAP	5	200010	12-09-18
Iowa	State Program	7	131	04-01-18 *
Kansas	NELAP	7	E-10229	10-31-18
Kentucky (UST)	State Program	4	19	06-30-18 *
Kentucky (WW)	State Program	4	90038	12-31-18
Louisiana	NELAP	6	30613	06-30-18 *
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-19
Massachusetts	State Program	1	M-TN032	06-30-18 *
Minnesota	NELAP	5	047-999-345	12-31-18
Mississippi	State Program	4	N/A	06-30-19
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-18
New Hampshire	NELAP	1	2963	10-09-18
New Jersey	NELAP	2	TN965	06-30-18 *
New York	NELAP	2	11342	03-31-19
North Carolina (WW/SW)	State Program	4	387	12-31-18
North Dakota	State Program	8	R-146	06-30-18 *
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-18
Oregon	NELAP	10	TN200001	04-26-19
Pennsylvania	NELAP	3	68-00585	06-30-18 *
Rhode Island	State Program	1	LAO00268	12-30-18
South Carolina	State Program	4	84009 (001)	02-28-18 *
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-18
USDA	Federal		P330-13-00306	12-01-19
Utah	NELAP	8	TN00032	07-31-18
Virginia	NELAP	3	460152	06-14-19
Washington	State Program	10	C789	07-19-18
West Virginia DEP	State Program	3	219	02-28-19
Wisconsin	State Program	5	998020430	08-31-18
Wyoming (UST)	A2LA	8	453.07	12-31-19

Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-19
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-22	10-31-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Timberwolf Environmental LLC
TestAmerica Job ID: 490-153484-2
Project/Site: Timberwolf - New Mexico Star OG 170052

Laboratory: TestAmerica Houston (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
USDA	Federal		P330-18-00130	04-30-21

Joiner, Dean

From: Russell Greer <russell@teamtimberwolf.com>
Sent: Wednesday, June 20, 2018 10:05 AM
To: Joiner, Dean; Bailey Moore; Clay Morris; Jim Foster; Kaitlyn Jacisin; Kevin Cole; Morgan Vizi; Preston Kocian; Ryan Mersmann
Subject: RE: TestAmerica report files from 490-153484-1 Timberwolf - New Mexico Star OG 170052

-External Email-

Dean,

We need to run the following samples for chloride:

- SB2A 14-15'
- SB2A 19-20'
- SB2A 24-25'

Please let me know if you have any questions. Thanks,

Russell Greer

TIMBERWOLF ENVIRONMENTAL

1920 W. Villa Maria, Suite 205 (Box 205)
Bryan, Texas 77807
(979) 450-1509

From: Joiner, Dean [mailto:dean.joiner@testamericainc.com]
Sent: Tuesday, June 19, 2018 6:40 PM
To: Bailey Moore <bailey@teamtimberwolf.com>; Clay Morris <clay@teamtimberwolf.com>; Jim Foster <jim@teamtimberwolf.com>; Kaitlyn Jacisin <kaitlyn@teamtimberwolf.com>; Kevin Cole <kevin@teamtimberwolf.com>; Morgan Vizi <morgan@teamtimberwolf.com>; Preston Kocian <preston@teamtimberwolf.com>; Russell Greer <russell@teamtimberwolf.com>; Ryan Mersmann <ryan@teamtimberwolf.com>
Subject: TestAmerica report files from 490-153484-1 Timberwolf - New Mexico Star OG 170052

Hello,

Attached please find the report files for job 490-153484-1; Timberwolf - New Mexico Star OG 170052

Please feel free to contact me if you have any questions.

Thank you.

Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: Project Feedback

DEAN A JOINER
Project Manager

TestAmerica Houston
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 713.690.4444
www.testamericainc.com

Reference: [430566]
Attachments: 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TEST NG
Nashville, TN

COOLER RECEIPT FORM

490-153484 Chain of Custody

450

Cooler Received/Opened On 6/8/2018 @ 0920

Time Samples Removed From Cooler 19:16 Time Samples Placed In Storage 19:25 (2 Hour Window)

1. Tracking # 7066 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17610176 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 2.7 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

If yes, how many and where: 1 (Front)

5. Were the seals intact, signed, and dated correctly? YES NO NA

6. Were custody papers inside cooler? YES NO NA

I certify that I opened the cooler and answered questions 1-6 (intial) JA

7. Were custody seals on containers: YES NO and Intact YES NO NA

Were these signed and dated correctly? YES NO NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES NO NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES NO NA

12. Did all container labels and tags agree with custody papers? YES NO NA

13a. Were VOA vials received? YES NO NA

b. Was there any observable headspace present in any VOA vial? YES NO NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES NO NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (intial) KA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES NO NA

b. Did the bottle labels indicate that the correct preservatives were used YES NO NA

16. Was residual chlorine present? YES NO NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) KA

17. Were custody papers properly filled out (ink, signed, etc)? YES NO NA

18. Did you sign the custody papers in the appropriate place? YES NO NA

19. Were correct containers used for the analysis requested? YES NO NA

20. Was sufficient amount of sample sent in each container? YES NO NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) KA

I certify that I attached a label with the unique LIMS number to each container (intial) KA

21. Were there Non-Conformance issues at login? YES NO Was a NCM generated? YES NO #_____

BIS = Broken in shipment
Cooler Receipt Form.doc

End of Form

Revised 8 23 17 7/6/2018

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040-5862
Phone: 713.690.4444 Fax: 713.690.5646

Chain of Custody Record

177262

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Dean Joiner	Site Contact:	Date: 6/7/18	COC No:
Company Name: TimberWolf	Tel/Fax:	Lab Contact:	Carrier:	1 of 1 COCs
Address: 1970 W. Villa Maria	Analysis Turnaround Time			Sampler:
City/State/Zip: Bryan TX 77807	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below _____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: State OG 170052	☑ 1 week			Job / SDG No.:
Site:	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TPH 8015 Extended	Chloride	1010	Sample Specific Notes:
1 SB4 0-1'	6/5/18	1205	G	Soil	1	N		✓	✓		
2 SB5 0-1'		1215						✓	✓		
3 SB6 0-1'		1130						✓	✓		
4 SB7 0-1'		1140						✓	✓		
5 SB8 0-1'		1148						✓	✓		
6 SB9 0-1'		1200						✓	✓		Loc: 490 153484
7 SB2A 4-5'		1155						✓	✓		
8 SB2A 9-10'		1200						✓	✓		
9 SB2A 14-15'		1205								✓	
10 SB2A 19-20'		1215								✓	
11 SB2A 24-25'		1220								✓	

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 2.7 Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Timberwolf	6/7/18 1110			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
			[signature]	TAL-HOU	06-08-2018 09:20

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7/6/2018