

Republic Backhoe Service, LLC

47 E. Dickens

Lovington, NM 88260

(575) 631-0131

January 14, 2019

District II

811 S. First St.

Artesia, NM 88210

Subject: Soil Remediation Work Plan for the Saragossa 10 State #2, Eddy County, New Mexico.

To Maria Pruett,

On behalf of Read & Stevens, Inc. Republic Backhoe Service LLC (RBS) has prepared this Work Plan which describes the assessment, delineation and proposed remediation for a release associated with the Saragossa 10 State #2. The site is located in Unit B, Section 10, Township 23 South, and Range 26 East, NMPM, Eddy County, New Mexico, on NM State land. Attachment #1 and #2 illustrates the vicinity and location of the site. Piedmont alluvial deposits from the Holocene to the Pleistocene age make up the subsurface of the area (mrddata.usgs.gov, Attachment #3). The surface is comprised of Regan Upton soils which consist of loamy deposits of quaternary age that are moderately dark colored and loamy. Hard caliche is encountered at 3-4 feet below the loamy surface (Soil Survey Eddy Area, NM 1971). The soil is generally dry except in times of rain. The site is not within a 100-year floodplain (FEMA Fimetter Map Attachment #9). The vegetation consists of black grama, blue grama, tobosa, side-outs, bush muhly, tarbush, creosote bush, vine mesquite, and yucca. The state of New Mexico owns the surface and is overseen by the State Land Office and leased out for grazing.

Table 1. below, summarizes information regarding the release. (See Attachments #10, #12, #13)

Release Details			
Type of Release:	Oil/PW	Volume of Release:	17.24-Oil 140.67-Produced Water
		Volume Recovered:	2-Oil
Source of Release:	Well Head	Date of Discovery:	10/27/2018
Was Immediate Notice Given?	No	If, YES, to Whom?	
Was a Watercourse Reached?	No	If YES, Volume Impacting the Watercourse:	NA
Surface Owner:	State	Mineral Owner:	State

Describe Cause of Problem and Remedial Action Taken:

The release was attributed to a 1" connection at the well head. The connection has since been replaced. A backhoe was called out on the day of the discovery which piled saturated soil on the pad.

Regulatory Guidelines

New Mexico Oil Conversation Division (NMOCD) regulates surface impacts from unauthorized releases of crude oil, gases, produced water, condensate or other oil field waste in accordance with 19.15.29 of the New Mexico Administrative Code (NMAC). In accordance to NMAC 19.15.29 the Saragossa 10 State #2 is assessed by the following guidelines:

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>246</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	
<p>The release occurred within the following areas and will treat the release as if it occurred less than 50 feet to ground water.</p>	

A search of a groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) was conducted to determine the average depth to groundwater within 2000 meters and identify registered water wells within 2500 meters of the release site. (Attachments #4, 5). Furthermore, a new NMOSE groundwater search was conducted once the north extent of the spill was found (Attachment #6, 7) and concluded that the horizontal extents of the spill fell within 500 feet of a private domestic fresh water well, and within 1000' of any other fresh water wells. The site will be remediated to the following guidelines:

<p align="center">Table I Closure Criteria for Soils Impacted by a Release</p>			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
≤ 50 feet	Chloride***	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

Site Assessment/Delineation

On November 15, 2018, RBS went to the location to delineate the site. According to the Spill Calculations (See Attachment 13) 89% of the release stayed on the well pad. The additional 11% of the release travelled along a compacted cattle path for approximately 825 feet to the north of the location (See Attachment 10). The release poses no threat to ground water as laboratory results conclude that no contamination was found at or below 2' (bgs). Furthermore, soil samples collected and analyzed at 5' (bgs) show constituents level significantly lower than NMOCD permissible levels. A backhoe was used to dig a total of 16 trenches at the site (See Attachment #8). Samples were collected from the surface, 2 feet (bgs), and 5 feet (bgs). The following table summarizes the laboratory analytical results from the soil samples collected during the site assessment:

Name	Date	Depth	Chlorides	Benezene	BTEX	TPH(DRO,GRO,EXT)	Lithology	Soil Class	Pad/Pasture	Within 1000' FW
Pad1-S	11/15/18	Surface	1180	<0.500	6.73	24,969(309,20600,4060)	Sandy	ML	Pad	No
Pad1-2	11/15/18	2	32		<0.300	<10.0	Loam	CL		
Pad1-5	11/15/18	5	144		<0.300	<10.0	Caliche			
Pad2-S	11/15/18	Surface	1710	<0.500	1.17	13,537(107,11200,2230)	Sandy	ML	Pad	No
Pad2-2	11/15/18	2	16		<0.300	<10.0	Loam	CL		
Pad2-5	11/15/18	5	16		<0.300	12.4(0,12.4,0)	Caliche			
Pad3-S	11/15/18	Surface	30,800	<0.500	3.89	6,680(130,5370,1180)	Sandy	ML	Pad	No
Pad3-2	11/15/18	2	208		<0.300	18.8(0,0,18.8)	Loam	CL		
Pad3-5	11/15/18	5	48.0		<0.300	<10.0	Caliche			
Pad4-S	11/15/18	Surface	4560		<0.300	73.2(0,62.2,11.0)	Sandy	ML	Pad	No
Pad4-2	11/15/18	2	96		<0.300	<10.0	Loam	CL		
Pad4-5	11/15/18	5	64		<0.300	53.3(0,38.4,14.9)	Caliche			
TA1-S	11/15/18	Surface	3200	<0.500	6.09	25,257(227,20900,4230)	Sandy	ML	Pasture	No
TA1-2	11/15/18	2	64		<0.300	<10.0	Loam	CL		
TA1-5	11/15/18	5	80		<0.300	<10.0	Caliche			
TA2-S	11/15/18	Surface	6960	<0.500	2.64	32,924(274,27600,5050)	Sandy	ML	Pasture	Yes
TA2-2	11/15/18	2	48		<0.300	<10.0	Loam	CL		
TA2-5	11/15/18	5	48		<0.300	12.8	Caliche			
TA3-S	11/15/18	Surface	288	<1.00	15.2	34,302(642,28600,5060)	Sandy	ML	Pasture	Yes
TA3-2	11/15/18	2	48		<0.300	<10.0	Loam	CL		
TA3-5	11/15/18	5	32		<0.300	<10.0	Caliche			
TA4-S	11/15/18	Surface	256	<0.500	16.6	32,508(1000,45600,8250)	Sandy	ML	Pasture	Yes
TA4-2	11/15/18	2	48		<0.300	<10.00	Loam	CL		
TA4-5	11/15/18	5	336		<0.300	11.6	Caliche			
TA5-S	11/15/18	Surface	64		16.0	54,850	Sandy	ML	Pasture	Yes
TA5-2	11/15/18	2	32		<0.300	<10.0	Loam	CL		
TA5-5	11/15/18	5	16		<0.300	<10.0	Caliche			
TA6-S	11/15/18	Surface	32	<0.500	25.9	48,360(1290,40100,6970)	Sandy	ML	Pasture	Yes
TA6-2	11/15/18	2	48		<0.300	<10.0	Loam	CL		
TA6-5	11/15/18	5	80.0		<0.300	<10.00	Caliche			
TA7-S	11/15/18	Surface	16	<0.500	<0.300	4,476(32.3810.634)	Sandy	ML	Pasture	Yes
TA7-2	11/15/18	2	96		<0.300	<10.0	Loam	CL		
TA7-5	11/15/18	5'	80		<0.300	12.3	Caliche			
TA8-S	11/15/18	Surface	48		<0.300	14.8	Sandy	ML	Pasture	Yes
TA8-2	11/15/18	2	32		<0.300	72.1	Loam	CL		
TA8-5	11/15/18	5	16		<0.300	48.7	Caliche			
TA9-S	11/15/18	Surface	32		<0.300	110.5	Sandy	ML	Pasture	Yes
TA9-2	11/15/18	2	64		<0.300	<10.0	Loam	CL		
TA9-5	11/15/18	5	96		<0.300	<10.0	Caliche			
TA10-S	11/15/18	Surface	32		<0.300	79.2	Sandy	ML	Pasture	Yes
TA10-2	11/18/18	2	32		<0.300	<10.0	Loam	CL		
TA10-5	11/18/18	5	16		<0.300	<10.0	Caliche			
TB1-S	11/15/18	Surface	160	<0.500	4.51	35,601(491,29800,5310)	Sandy	ML	Pasture	No
TB1-2	11/15/18	2	64		<0.300	<10.0	Loam	CL		
TB1-5	11/15/18	5	48		<0.300	<10.0	Caliche			
TB2-S	11/15/18	Surface	48	<0.500	1.71	43,778(398,36300,7080)	Sandy	ML	Pasture	no
TB2-2	11/15/18	2	64		<0.300	<10.0	Loam	CL		
TB2-5	11/15/18	5	32		<0.300	<10.0	Caliche			

Chlorides-mg/kg, SM4500Cl-B

BTEX-mg/kg, 8021B

TPH-mg/kg, 8015M

Remediation Plan

Pad Area Polygon #1: (See Attachment 10)

The site delineation concluded that the vertical extent of the spill was less than 2' (bgs). A sample at 5' (bgs) further confirms this result. The Polygon #1 area is 3,755 square feet. We propose that this area be excavated to a depth of 6". An estimated 70 cubic yards will be excavated from this area. The contaminated soil will be hauled to an NMOCD approved disposal site. NMOCD will be contacted to schedule a time to witness bottom hole sampling. Once, bottom hole samples are within NMOCD permissible limits then the area will be backfilled.

Pad Area Polygon #2:

The site delineation concluded that the vertical extent of the spill was less than 2' (bgs). A sample at 5' (bgs) further confirms this result. The Polygon #2 area is 3,644 square feet. We propose that this area be excavated to a depth of 10". An estimated 113 cubic yards will be excavated from this area. The contaminated soil will be hauled to an NMOCD approved disposal site. NMOCD will be contacted to schedule a time to witness bottom hole sampling. Once, bottom hole samples are within NMOCD permissible limits then the area will be backfilled.

Polygon #3:

The site delineation concluded that the vertical extent of the spill was less than 2' (bgs). A sample at 5' (bgs) further confirms this result. The Polygon #3 area is 644 square feet. We propose that this area be excavated to a depth of 4". An estimated 24 cubic yards will be excavated from this area. The contaminated soil will be hauled to an NMOCD approved disposal site. NMOCD will be contacted to schedule a time to witness bottom hole sampling. Once, bottom hole samples are within NMOCD permissible limits then the area will be backfilled.

Polygon #4

The site delineation concluded that no action will be required.

Revegetation and Noxious Weed Management Plans

Seed Mixture: Warm Season SSR Grass Seed Mix 350 (See Attachment 11)

Seed Rate: Acre: 50 lbs. /acre

Timing of Dispersal: May 2018

Method of Dispersal: First, the area will be disc. Second, the seed will be mechanically broadcasted. Third, will run the disc over the area to cover the seed. Finally, to ensure seed germination success the area will be watered after seeding. Photos will be taken of the seed mixture bags, and of all seeding activities.

Follow up Monitoring Plan: We intend to monitor the area in late summer (before the fall season). We will evaluate the growth of the area to determine if reseeding will be necessary the following spring. We will also monitor the area for noxious weeds. The area is small enough to rid the weeds mechanically.

Noxious Weeds Control

Republic Backhoe Service, LLC takes noxious weed control very serious. All equipment and trucks are inspected before entering the pasture areas. The area will be monitored for the following noxious weeds (but not limited to):

Jointed Goat Grass, Hoary Grass, Cheat Grass, African Rue, Yellow Starthistle, Malta, Starthistle, Purple Starthistle, Common Teasel, Camelthorn, and Russian Knapweed.

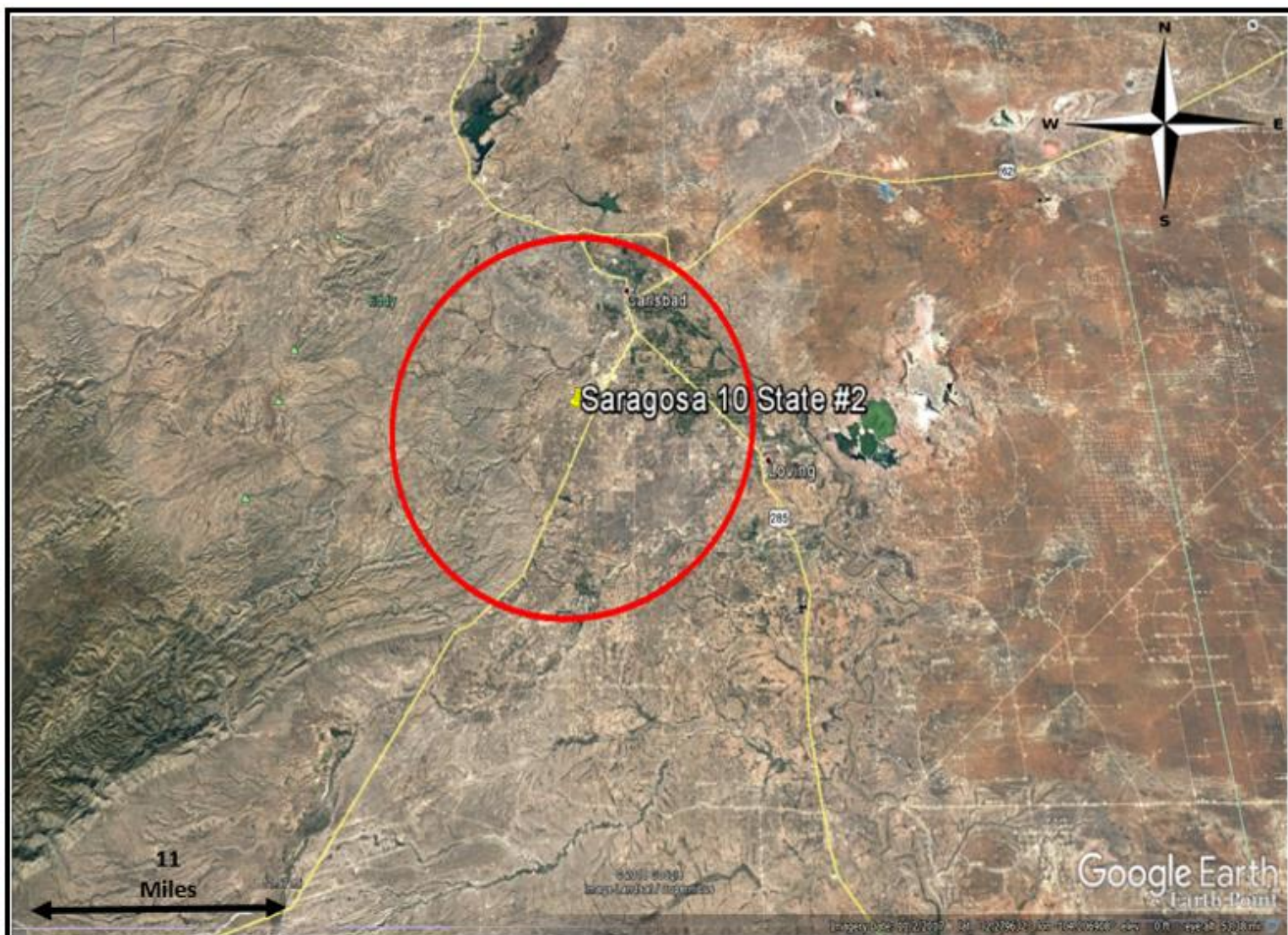
IF you have any questions please email me or call me at (575) 631-0131.

Thank you

A handwritten signature in black ink, appearing to read "Eric Garcia", is centered within a light gray rectangular box.

Eric Garcia
Republic Backhoe Service, LLC

Attachment 1
Vicinity Area Map



Read & Stevens Inc.

Saragossa 10 State #2

B-10-23S-26E (330FNL & 2310FEL)

GPS Lat: 32.325566 Lon:-104.279915

**Republic Backhoe
Service, LLC**

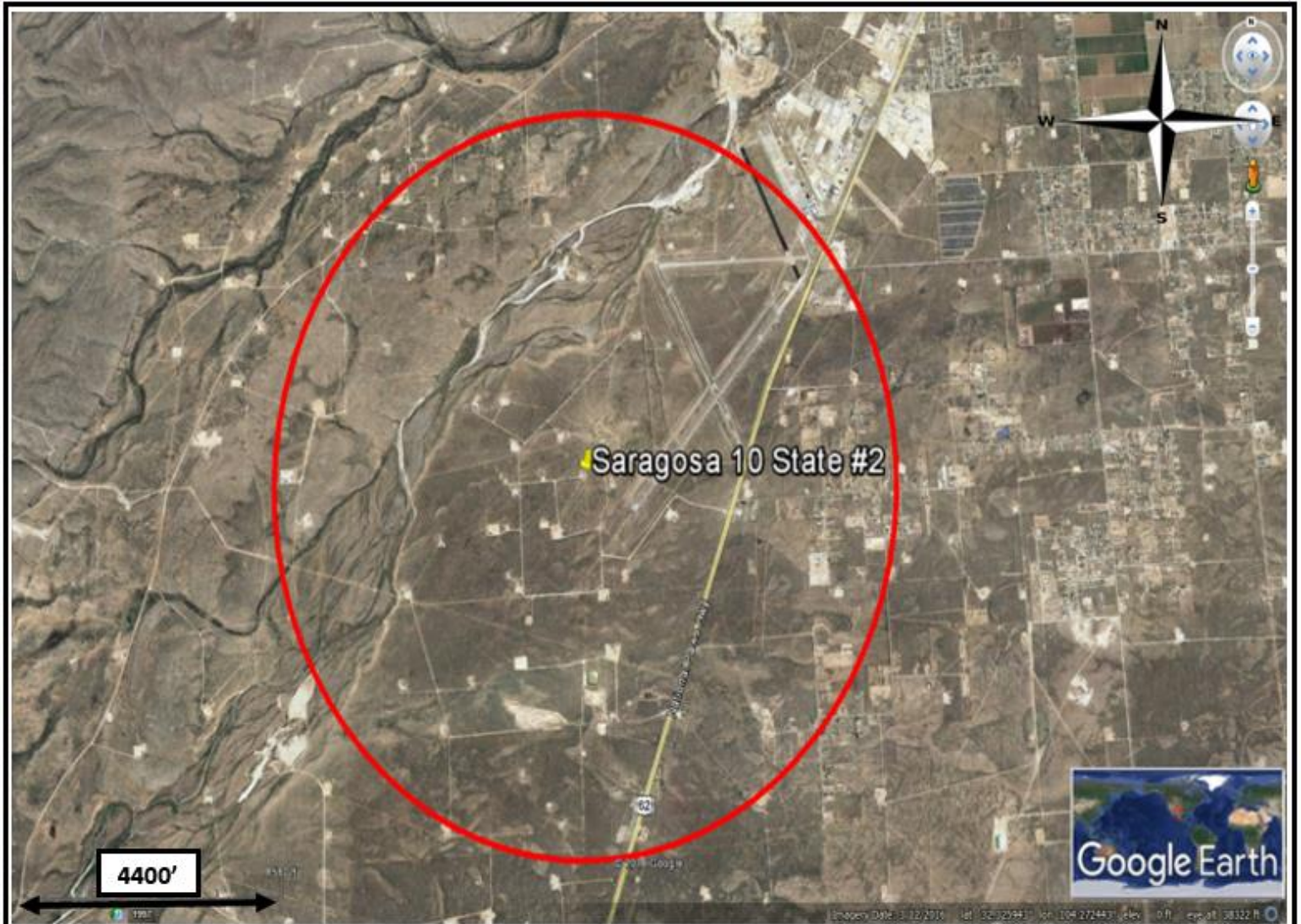
47 E. Dickens Rd.

Lovington, NM 88260

Aerial Map #1

10 Mile Radius

Attachment #2
Vicinity Area Map



Read & Stevens Inc.

Saragossa 10 State #2

B-10-23S-26E (330FNL & 2310FEL)

GPS Lat: 32.325566 Lon:-104.279915

**Republic Backhoe
Service, LLC**

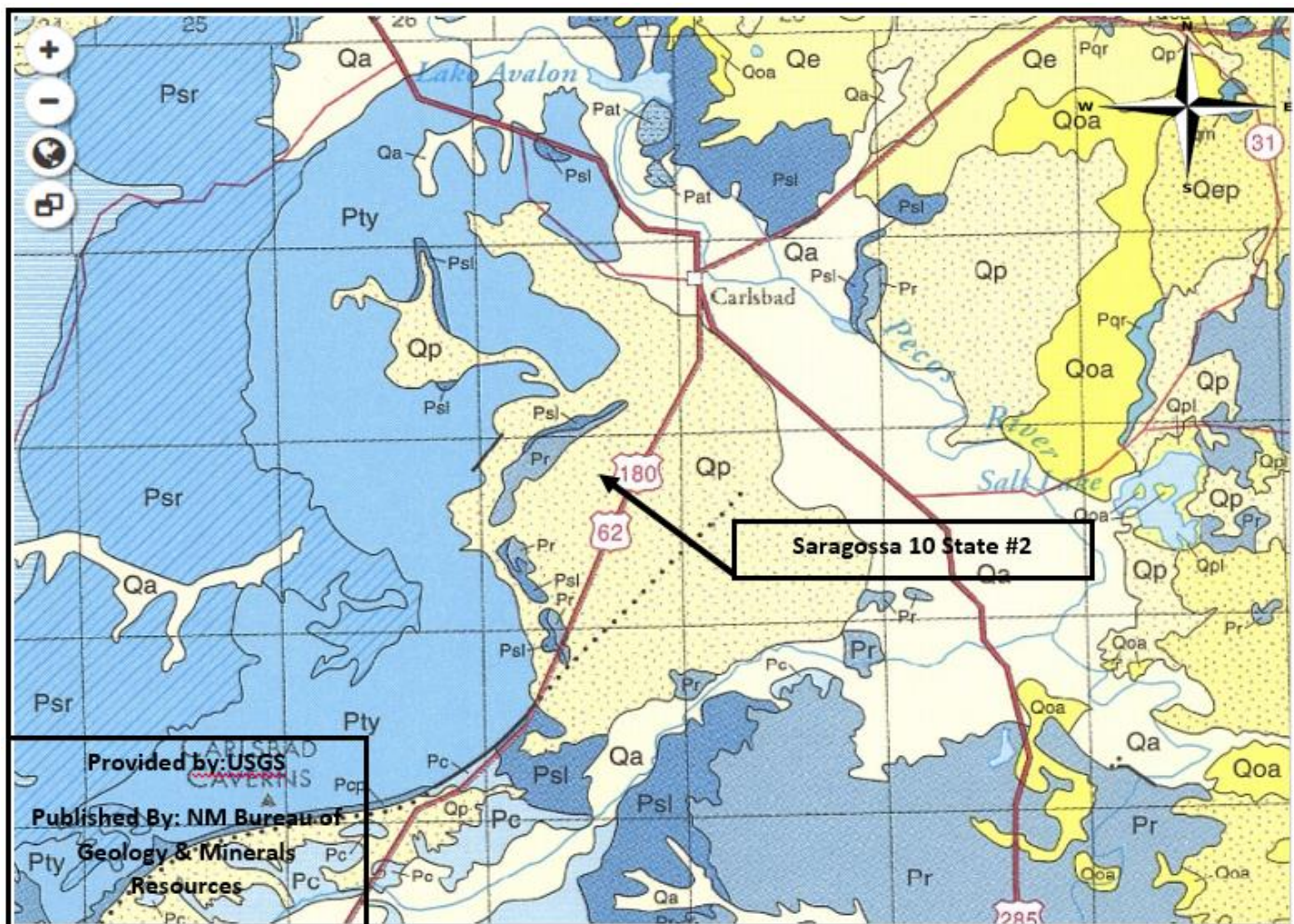
47 E. Dickens Rd.

Lovington, NM 88260

Aerial Map #2

2 Mile Radius

Attachment #3
Geological Map



Provided by: USGS

Published By: NM Bureau of
Geology & Minerals
Resources

Read & Stevens Inc.

Saragossa 10 State #2

B-10-23S-26E (330FNL & 2310FEL)

GPS Lat: 32.325566 Lon:-104.279915

Republic Backhoe
Service, LLC

47 E. Dickens Rd.

Lovington, NM 88260



Geological Map
Piedmont alluvial deposits

Alluvium

Rustler Formation

Salado Formation

Attachment #4

NMOSE Average Depth to Water



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the
POD suffix indicates the
POD has been replaced
& no longer serves a
water right file.)

(R=POD has been
replaced,
O=orphaned,
C=the file is
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub- basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C 02264		CUB	ED	4	03	23S	26E			568065	3577254*	579	260		
C 02382		C	ED	4	03	23S	26E			568065	3577254*	579	288	248	40
C 02393		C	ED	4	03	23S	26E			568065	3577254*	579	290	245	45
C 01310		C	ED	1	3	2	11	23S	26E	569409	3576366*	1675	250	220	30
C 01548		C	ED	3	2	11	23S	26E		569510	3576267*	1798	250		
C 01635		C	ED	3	2	11	23S	26E		569510	3576267*	1798	255	205	50
C 01708		C	ED	3	2	11	23S	26E		569510	3576267*	1798	275	236	39
C 01843		C	ED	3	2	11	23S	26E		569510	3576267*	1798	252	217	35

Average Depth to Water: 228 feet

Minimum Depth: 205 feet

Maximum Depth: 248 feet

Record Count: 8

UTMNAD83 Radius Search (in meters):

Easting (X): 567777.68

Northing (Y): 3576750.38

Radius: 2000

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

1/9/19 10:46 AM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

Read & Stevens Inc.

Saragossa 10 State #2

B-10-23S-26E (330FNL & 2310FEL)

GPS Lat: 32.325566 Lon:-104.279915

Republic Backhoe
Service, LLC

47 E. Dickens Rd.

Lovington, NM 88260

NMOSE

Water Column/Average Depth to Water

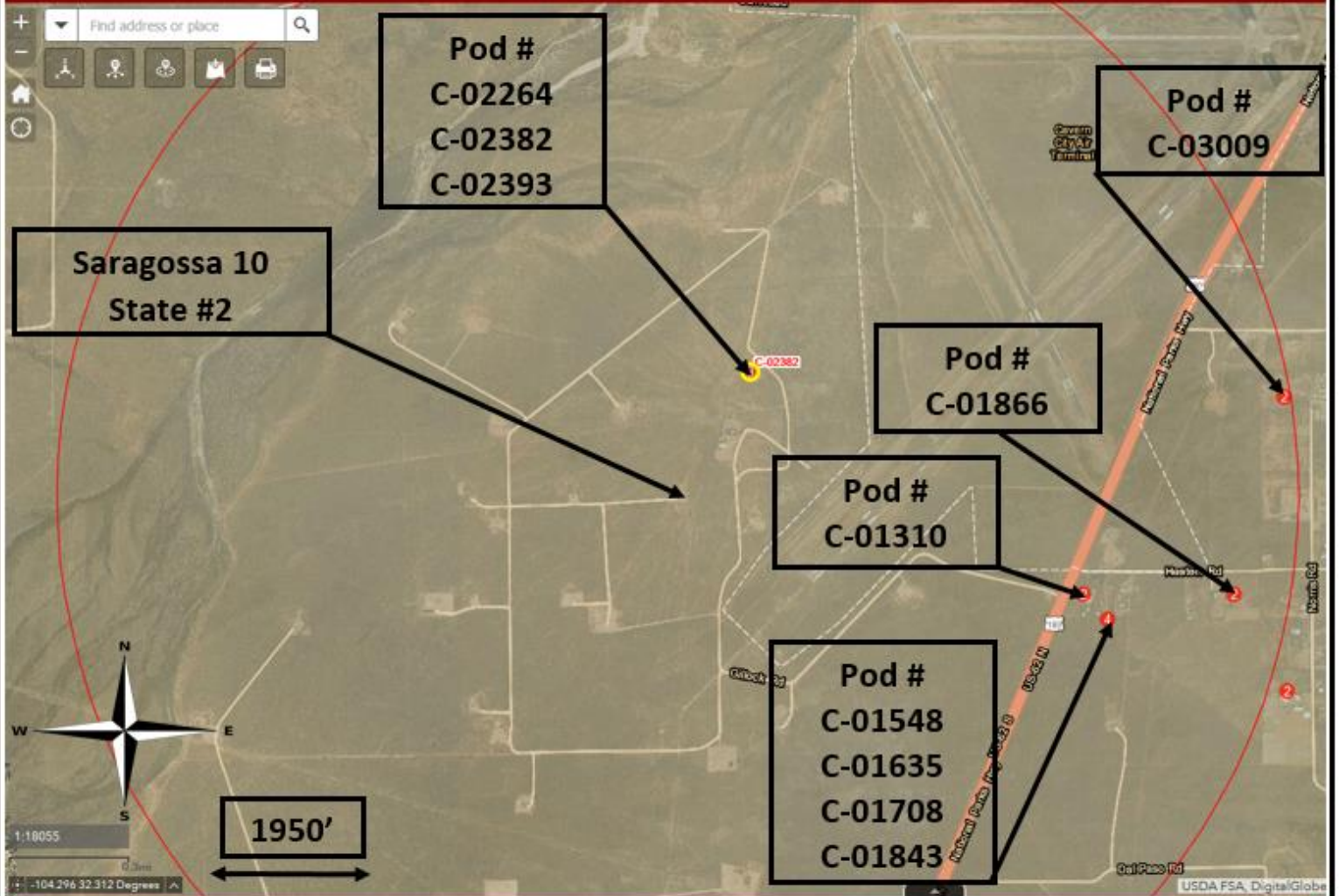
2000 Meter Radius

Attachment #5

Pod Locations

OSE POD Locations

Points of Diversion visible at 1:19,000 with 1,000 features per view



Read & Stevens Inc.

Saragossa 10 State #2

B-10-23S-26E (330FNL & 2310FEL)

GPS Lat: 32.325566 Lon:-104.279915

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Service, LLC**

47 E. Dickens Rd.

Lovington, NM 88260

NMOSE

Nearest Pod Locations

2500 Meter Radius

Attachment #6

Horizontal Extent of the Spill NMOSE Average Depth to Water



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the
POD suffix indicates the
POD has been replaced
& no longer serves a
water right file.)

(R=POD has been
replaced,
O=orphaned,
C=the file is
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q	Q	Q	Sec	Tws	Rng	X	Y	Distance	Depth	Well	Depth	Water
C_02264		CUB	ED	4	03	23S	26E			568065	3577254*	372	260			
C_02382		C	ED	4	03	23S	26E			568065	3577254*	372	288		248	40
C_02393		C	ED	4	03	23S	26E			568065	3577254*	372	290		245	45

Correction* C-02382 distance from Lateral Extent is 157.88 Meters.
C-2393 distance from Lateral Extent is 179.22 Meters.
Revised POD locations after talking with Rancher.

Average Depth to Water: 246 feet
Minimum Depth: 245 feet
Maximum Depth: 248 feet

Record Count: 3

UTM NAD83 Radius Search (in meters):

Easting (X): 567864.77

Northing (Y): 3576940.34

Radius: 1000

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

1/10/19 9:03 AM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

Read & Stevens Inc.

Saragossa 10 State #2

B-10-23S-26E (330FNL & 2310FEL)

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Lovington, NM 88260

NMOSE Water Well Search
At North Extent of Spill
Sample Point TA7
1,000 Meter Radius

C-02382-518'

C-02393-588'

Attachment #7

Pod Locations



Read & Stevens Inc.

Saragossa 10 State #2

B-10-23S-26E (330FNL & 2310FEL)

GPS Lat: 32.325566 Lon:-104.279915

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Service, LLC**

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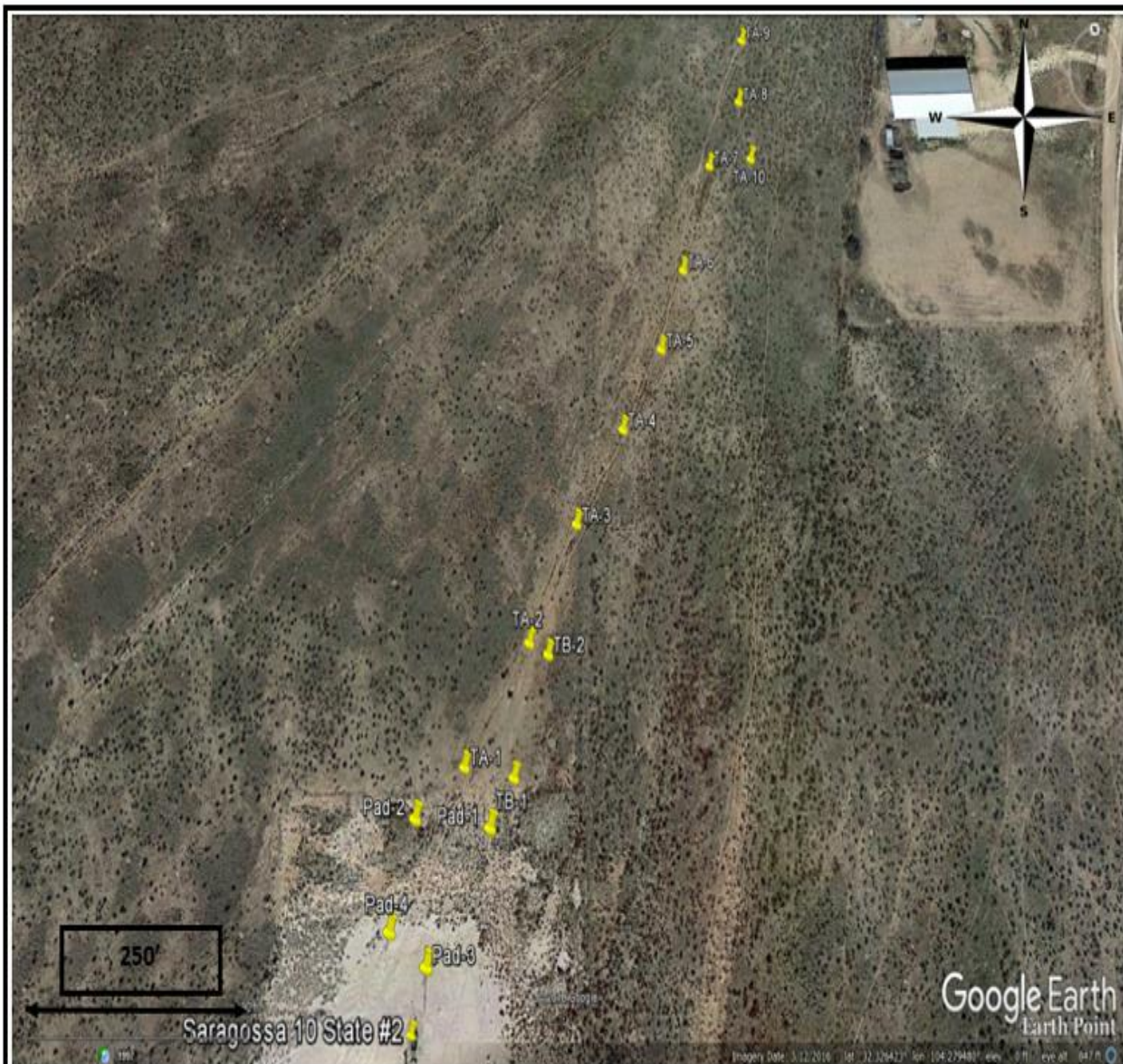
**NMOSE Water Well Search
At North Extent of Spill
Sample Point TA7**

C-02382-518'

C-02393-588'

Permanent Residence-482'

Attachment #8
Sampling Locations



Read & Stevens Inc.

Saragossa 10 State #2

B-10-23S-26E (330FNL & 2310FEL)

GPS Lat: 32.325566 Lon:-104.279915

**Republic Backhoe
Service, LLC**

47 E. Dickens Rd.

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Sampling Locations

Attachment #9
Floodplain Map

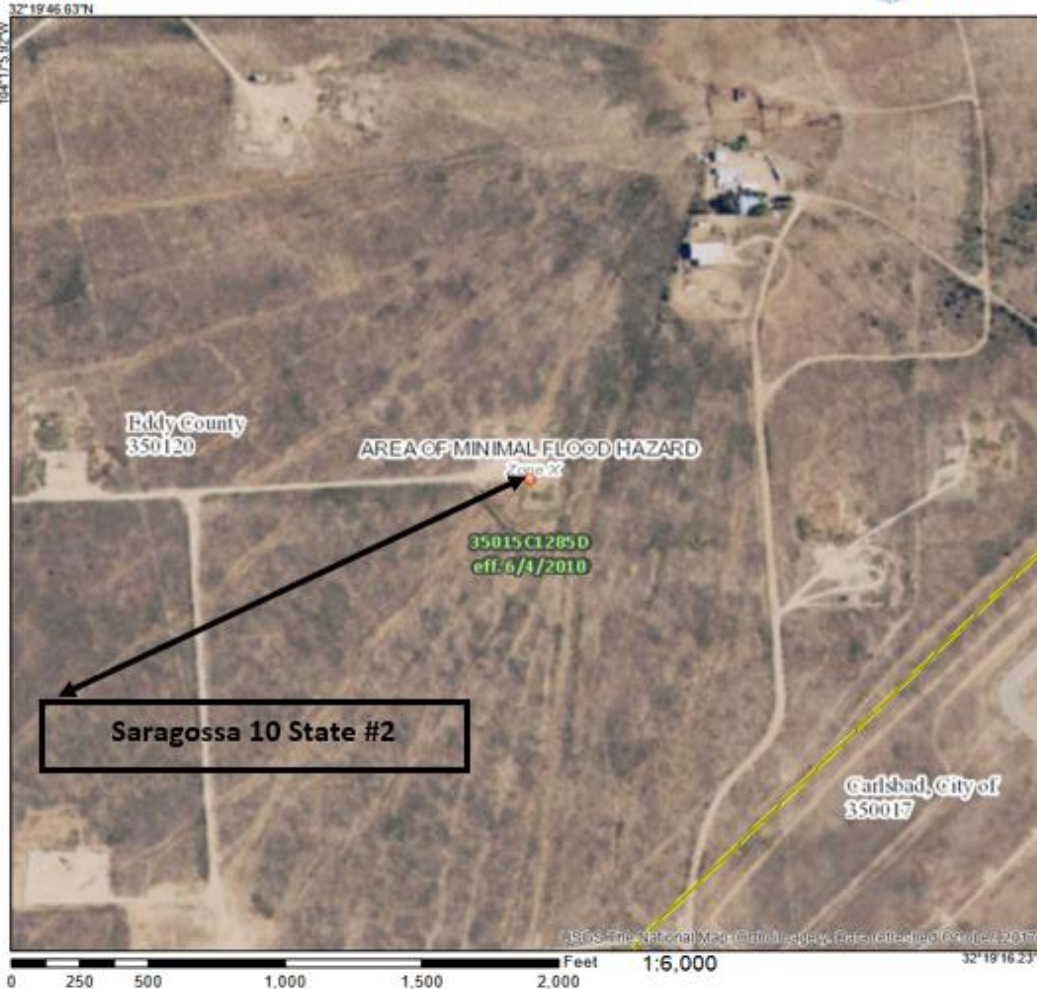
National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, AE
	With BFE or Depth Zone AE, AC, AH, VE, AR Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee. See Notes, Zone X
	Area with Flood Risk due to Levee Zone D
OTHER AREAS	Area of Minimal Flood Hazard Zone X
	Effective LOMRS
	Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
OTHER FEATURES	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transect
	Base Flood Elevation Line (BFE)
	Limit of Study
MAP PANELS	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
OTHER FEATURES	Hydrographic Feature
	Digital Data Available
	No Digital Data Available
MAP PANELS	Unmapped
	The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



Read & Stevens Inc.

Saragossa 10 State #2

B-10-23S-26E (330FNL & 2310FEL)

GPS Lat: 32.325566 Lon:-104.279915

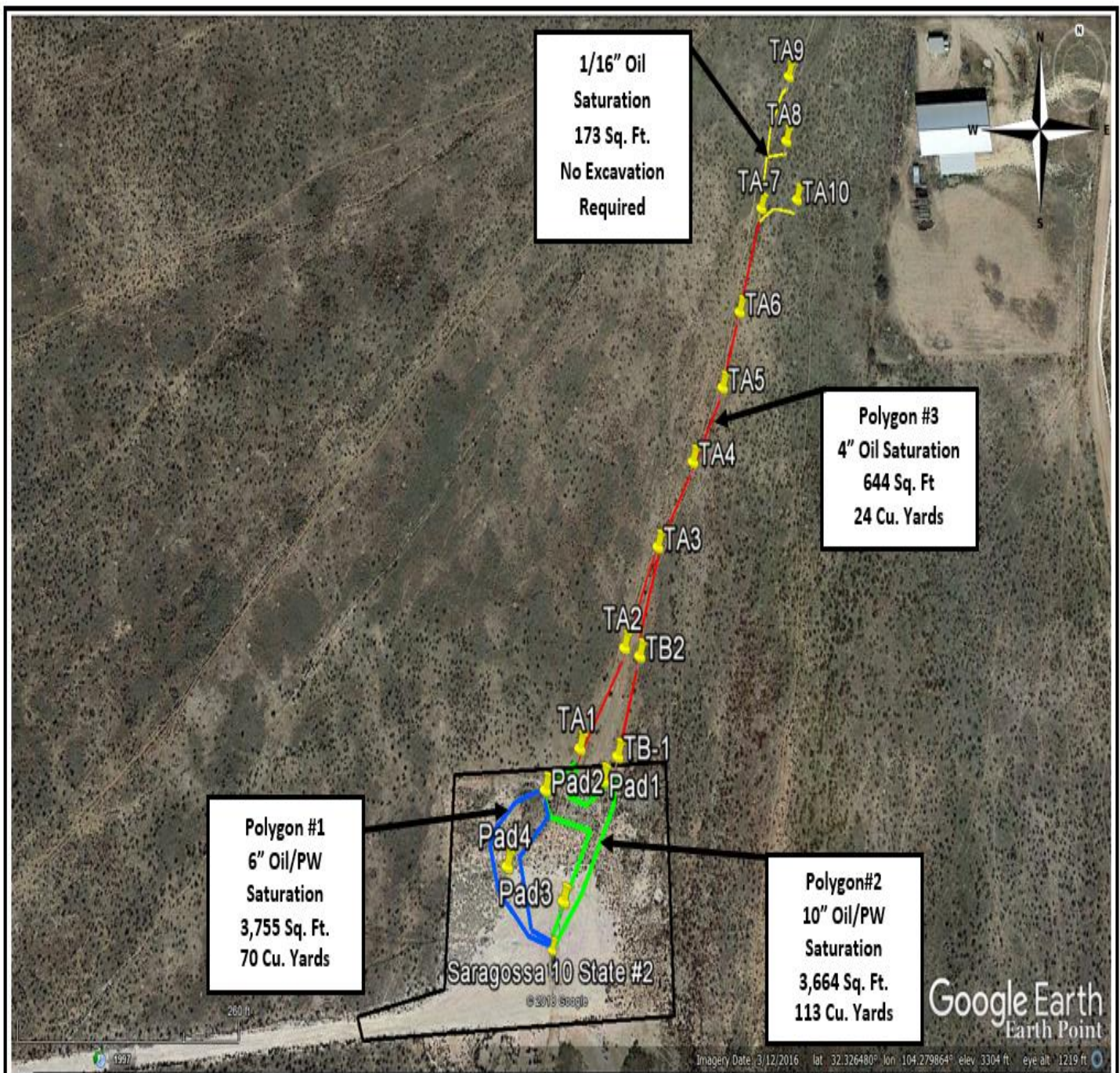
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Service, LLC**

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FEMA Flood Hazard Map

Attachment #10
Spill and Excavation Map



Read & Stevens Inc.

Saragossa 10 State #2

B-10-23S-26E (330FNL & 2310FEL)

GPS Lat: 32.325566 Lon: -104.279915

Republic Backhoe Service, LLC

47 E. Dickens Rd.

Lovington, NM 88260

**Oil and PW Release
And Excavation Depths**

An Estimated 207 Cu. Yards will be excavated and hauled to an NMOCD approved site.

Attachment #11

Seed Label

Bamert Seed Company Inc.

1897 CR 1018 Muleshoe, TX 79347

(800) 262-9892

Permit # TX00905

Sales # SO-65264

Warm Season SSR Grass Mix

Description	Pure Seed	Germ	Dormant	Hard Seed	Origin
Bluestem, Little "Cimarron" (<i>Schizachyrium scoparium</i>)	4.21%	97.00%	0.00%	0.00%	TX
Bluestem, Yellow "VW Spar" (<i>Andropogon ischaemum</i>)	6.69%	98.00%	0.00%	0.00%	?
Buffalograss, "Texoka" Primed KNO3 (<i>Bouteloua dactyloides</i>)	5.88%	98.00%	0.00%	0.00%	TX
Dropseed, Sand (<i>Sporobolus cryptandrus</i>)	5.88%	62.00%	35.00%	0.00%	TX
Fescue, Tall "KY 31" (<i>Festuca arundinacea</i> Schreb.)	1.99%	96.00%	0.00%	0.00%	OR
Grama, Blue (<i>Bouteloua gracilis</i>)	24.47%	92.00%	0.00%	0.00%	TX
Grama, Sideoats "El Reno" (<i>Bouteloua curtipendula</i>)	26.13%	85.00%	0.00%	0.00%	TX
Kleingrass, "Selection 75" (<i>Panicum coloratum</i>)	6.89%	87.00%	0.00%	0.00%	TX
Switchgrass, "Blackwell" (<i>Panicum virgatum</i>)	7.75%	81.00%	14.00%	0.00%	TX
Purity: 90.00%	Inert Matter: 9.72%	Other Crop Seed: 0.06%	Weed Seed: 0.21%	Net Wt: 25 lbs	
Noxious Weeds: None	Test Date: 04/2018				

Attachment #12

Soil Description

Description	USCS	Porosity [-]			Reference
		min	max	Specific value	
Well graded gravel, sandy gravel, with little or no fines	GW	0.21	0.32		[1].
Poorly graded gravel, sandy gravel, with little or no fines	GP	0.21	0.32		[1].
Silty gravels, silty sandy gravels	GM	0.15	0.22		[1].
Gravel	(GW-GP)	0.23	0.38		[2].
Clayey gravels, clayey sandy gravels	GC	0.17	0.27		[1].
Glacial till, very mixed grained	(GC)	-	-	0.20	[4 cited in 5]
Well graded sands, gravelly sands, with little or no fines	SW	0.22	0.42		[1]. [2].
Coarse sand	(SW)	0.26	0.43		[2].
Fine sand	(SW)	0.29	0.46		[2].
Poorly graded sands, gravelly sands, with little or no fines	SP	0.23	0.43		[1]. [2].
Silty sands	SM	0.25	0.49		[1]. [2].
Clayey sands	SC	0.15	0.37		[1].
Inorganic silts, silty or clayey fine sands, with slight plasticity	ML	0.21	0.56		[1].
Uniform inorganic silt	(ML)	0.29	0.52		[3].
Inorganic clays, silty clays, sandy clays of low plasticity	CL	0.29	0.41		[1].
Organic silts and organic silty clays of low plasticity	OL	0.42	0.68		[1]. [3].
Silty or sandy clay	(CL-OL)	0.20	0.64		[3].
Inorganic silts of high plasticity	MH	0.53	0.68		[1].
Inorganic clays of high plasticity	CH	0.39	0.59		[1].
Soft glacial clay	-	-	-	0.55	[4 cited in 5]
Stiff glacial clay	-	-	-	0.38	[4 cited in 5]
Organic clays of high plasticity	OH	0.50	0.75		[1]. [3].
Soft slightly organic clay	(OH-OL)	-	-	0.66	[4 cited in 5]
Peat and other highly organic soils	Pt	-	-		[4 cited in 5]
soft very organic clay	(Pt)	-	-	0.75	[4 cited in 5]

REFERENCES

1. Swiss Standard SN 670 010b, Characteristic Coefficients of soils, Association of Swiss Road and Traffic Engineers
2. Das, B., Advanced Soil Mechanics. Taylor & Francis, London & New York, 2008.
3. Hough, B., Basic soil engineering. Ronald Press Company, New York, 1969.
4. Terzaghi, K., Peck, R., and Mesri, G., Soil Mechanics in Engineering Practice. Wiley, New York, 1996.
5. Obrzud R. & Truty, A. THE HARDENING SOIL MODEL - A PRACTICAL GUIDEBOOK Z Soil.PC 100701 report, revised 31.01.2012

Citation :
Geotechdata.info, Soil void ratio, <http://geotechdata.info/parameter/soil-void-ratio.html> (as of November 16, 2013).

Attachment #13
Spill Calculations

***** LIQUID SPILLS - VOLUME CALCULATIONS *****

Location of Spill: Sarasossa 10 State #2

Date of Spill: 10/26/2018

Site Soil Type: Sandy Loam & Caliche

Average Daily Production: 13 BBL Oil 128 BBL Water

Total Area Calculations						
Total Surface Area	Width	Length	Wet Soil Depth	Oil (%)	Soil Class.	Porosity%
Polygon #1	3,755		6"	5	GM	0.15
Polygon #2	3,664		10"	5	GM/ML	0.18
Polygon #3	644		4"	99	ML/CL	0.25
Polygon #4	173		1/16"	99	ML	0.21
Saturated Soil Volume calculations:			H2O		OIL	
Polygon #1	1,877.50		47.60		2.50	
Polygon #2	3,053		92.98		4.89	
Polygon #3	215		0.09		9.45	
Polygon #4	11		0.00		0.40	
Total Solid/ Liquid Volume:						
Estimated Volumes Spilled			H2O		OIL	
			140.67		17.24	
Liquid Recovered:			0		2	
Total Spill Liquid:			155.91			

Please view Attachment 12 for the references in obtaining the Porosity values.

The soil classification was gathered from Soil Survey Eddy Area, New Mexico March 1971.

Polygon #1 is from the caliche pad with Soil Class GM.

Polygon #2 is located on the caliche pad with 6" of caliche (GM) and 4" of top soil (ML). Porosity % is the average of both.

Polygon #3 is located on the pasture where fluids ran down cattle path. Includes ML and CL soil. Porosity % is average of both.

Polygon #4 is located on the northern end of the spill. This was mostly a misty that was carried by the wind. Soil samples did not show any contamination in this area.

Attachment #14

Laboratory Analysis



PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

November 27, 2018

ERIC GARCIA

REPUBLIC BACKHOE SERVICES

47 E. DICKENS RD

LOVINGTON, NM 88260

RE: SARAGOSSA 10 ST. #2

Enclosed are the results of analyses for samples received by the laboratory on 11/19/18 15:37.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 7-5 (H803384-01)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/24/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/24/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/24/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/24/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/24/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	12.3	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 83.1 % 41-142

Surrogate: 1-Chlorooctadecane 86.8 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 4-5 (H803384-02)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/24/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/24/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/24/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/24/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 95.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	11/24/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	11.6	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 91.8 % 41-142

Surrogate: 1-Chlorooctadecane 94.6 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: PAD 2-5 (H803384-03)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/24/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/24/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/24/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/24/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/24/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRD C6-C10*	<10.0	10.0	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	12.4	10.0	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 81.5 % 41-142

Surrogate: 1-Chlorooctadecane 85.3 % 37.6-147

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 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 6-5 (H803384-04)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/24/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/24/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/24/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/24/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/24/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 86.5 % 41-142

Surrogate: 1-Chlorooctadecane 89.3 % 37.6-147

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Analytical Results For:

REPUBLIC BACKHOE SERVICES
ERIC GARCIA
47 E. DICKENS RD
LOVINGTON NM, 88260
Fax To: NONE

Received: 11/19/2018
Reported: 11/27/2018
Project Name: SARAGOSSA 10 ST. #2
Project Number: NONE GIVEN
Project Location: READ & STEVENS

Sampling Date: 11/15/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PAD 3-5 (H803384-05)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/24/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/24/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/24/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/24/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 97.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/24/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 84.6 % 41-142

Surrogate: 1-Chlorooctadecane 84.1 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: PAD 1-5 (H803384-06)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/24/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/24/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/24/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/24/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	11/24/2018	ND	432	108	400	0.00	QR-03

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 84.7 % 41-142

Surrogate: 1-Chlorooctadecane 82.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

REPUBLIC BACKHOE SERVICES
ERIC GARCIA
47 E. DICKENS RD
LOVINGTON NM, 88260
Fax To: NONE

Received: 11/19/2018
Reported: 11/27/2018
Project Name: SARAGOSSA 10 ST. #2
Project Number: NONE GIVEN
Project Location: READ & STEVENS

Sampling Date: 11/15/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PAD 3-2 (H803384-07)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/24/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/24/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/24/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/24/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	18.8	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 89.2 % 41-142

Surrogate: 1-Chlorooctadecane 91.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

REPUBLIC BACKHOE SERVICES
ERIC GARCIA
47 E. DICKENS RD
LOVINGTON NM, 88260
Fax To: NONE

Received: 11/19/2018
Reported: 11/27/2018
Project Name: SARAGOSSA 10 ST. #2
Project Number: NONE GIVEN
Project Location: READ & STEVENS

Sampling Date: 11/15/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: TA 3 - SURFACE (H803384-08)

BTX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	11/24/2018	ND	2.15	108	2.00	2.25	
Toluene*	<1.00	1.00	11/24/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	2.24	1.00	11/24/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	12.9	3.00	11/24/2018	ND	5.90	98.4	6.00	1.89	
Total BTX	15.2	6.00	11/24/2018	ND					

Surrogate: 4-Bromofluorobenzene (PII) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	11/24/2018	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	642	100	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	28600	100	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	5060	100	11/21/2018	ND					

Surrogate: 1-Chlorooctane 190 % 41-142

Surrogate: 1-Chlorooctadecane 954 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 7-2 (H803384-09)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/24/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/24/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/24/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/24/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 97.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 84.4 % 41-142

Surrogate: 1-Chlorooctadecane 83.9 % 37.6-147

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Analytical Results For:

REPUBLIC BACKHOE SERVICES
ERIC GARCIA
47 E. DICKENS RD
LOVINGTON NM, 88260
Fax To: NONE

Received: 11/19/2018
Reported: 11/27/2018
Project Name: SARAGOSSA 10 ST. #2
Project Number: NONE GIVEN
Project Location: READ & STEVENS

Sampling Date: 11/15/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PAD 4-2 (H803384-10)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/24/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/24/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/24/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/24/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 97.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 85.5 % 41-142

Surrogate: 1-Chlorooctadecane 84.9 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 2 - SURFACE (H803384-11)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	11/24/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.500	0.500	11/24/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.500	0.500	11/24/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	2.64	1.50	11/24/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<3.00	3.00	11/24/2018	ND					

Surrogate: 4-Bromofluorobenzene (PII) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6960	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M	mg/kg		Analyzed By: MS					5-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	274	100	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	27600	100	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	5050	100	11/21/2018	ND					

Surrogate: 1-Chlorooctane 147 % 41-142

Surrogate: 1-Chlorooctadecane 593 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 10 - SURFACE (H803384-12)

BTX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2018	ND	187	93.5	200	3.29	
DRO >C10-C28*	56.3	10.0	11/21/2018	ND	204	102	200	0.672	
EXT DRO >C28-C36	24.9	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 82.8 % 41-142

Surrogate: 1-Chlorooctadecane 84.2 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 4-2 (H803384-13)

BTEX 80218		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25		
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874		
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42		
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89		
Total BTEX	<0.300	0.300	11/25/2018	ND						
Surrogate: 4-Bromofluorobenzene (PII)	98.4 %	73.3-129								
Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/24/2018	ND	432	108	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55		
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	209	104	200	4.42		
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND						
Surrogate: 1-Chlorooctane	89.2 %	41-142								
Surrogate: 1-Chlorooctadecane	99.5 %	37.6-147								

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TB 1 - SURFACE (H803384-14)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.500	0.500	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.500	0.500	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	4.51	1.50	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	4.51	3.00	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PII) 109 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/24/2018	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
				5-06					

Surrogate: 1-Chlorooctane 123 % 41-142

Surrogate: 1-Chlorooctadecane 883 % 37.6-147

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Caley D. Keene, Lab Director/Quality Manager

Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: PAD 1 - SURFACE (H803384-15)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.500	0.500	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	1.02	0.500	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	5.71	1.50	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	6.73	3.00	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1180	16.0	11/24/2018	ND	432	108	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						S-06

Surrogate: 1-Chlorooctane 132 % 41-142

Surrogate: 1-Chlorooctadecane 668 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TB 2 - SURFACE (H803384-16)

BTX 80218		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	1.71	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTX	1.71	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 153 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	398	100	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	36300	100	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	7080	100	11/22/2018	ND					

Surrogate: 1-Chlorooctane 126 % 41-142

Surrogate: 1-Chlorooctadecane 1120 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: PAD 2 - SURFACE (H803384-17)

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	1.17	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTX	1.17	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 133 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1710	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	107	50.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	11200	50.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	2230	50.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 406 % 37.6-147

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Caley D. Keene, Lab Director/Quality Manager

Analytical Results For:

REPUBLIC BACKHOE SERVICES
ERIC GARCIA
47 E. DICKENS RD
LOVINGTON NM, 88260
Fax To: NONE

Received: 11/19/2018
Reported: 11/27/2018
Project Name: SARAGOSSA 10 ST. #2
Project Number: NONE GIVEN
Project Location: READ & STEVENS

Sampling Date: 11/15/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: TA 9 - SURFACE (H803384-18)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	72.9	10.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	37.6	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 70.6 % 41-142

Surrogate: 1-Chlorooctadecane 81.1 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 5-2 (H803384-19)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/25/2018	ND					
Surrogate: 4-Bromofluorobenzene (PIL)		96.8 %	73.3-129						
Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/24/2018	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					
Surrogate: 1-Chlorooctane		89.7 %	41-142						
Surrogate: 1-Chlorooctadecane		98.1 %	37.6-147						

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Analytical Results For:

REPUBLIC BACKHOE SERVICES
ERIC GARCIA
47 E. DICKENS RD
LOVINGTON NM, 88260
Fax To: NONE

Received: 11/19/2018
Reported: 11/27/2018
Project Name: SARAGOSSA 10 ST. #2
Project Number: NONE GIVEN
Project Location: READ & STEVENS

Sampling Date: 11/15/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PAD 2-2 (H803384-20)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 95.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 79.4 % 41-142

Surrogate: 1-Chlorooctadecane 85.7 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 1-2 (H803384-21)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 87.4 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 5 - SURFACE (H803384-22)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.500	0.500	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	2.42	0.500	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	13.6	1.50	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTX	16.0	3.00	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 115 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	1000	100	11/22/2018	ND	193	96.7	200	3.55		
DRO >C10-C28*	45600	100	11/22/2018	ND	209	104	200	4.42		
EXT DRO >C28-C36	8250	100	11/22/2018	ND						

Surrogate: 1-Chlorooctane 144 % 41-142

Surrogate: 1-Chlorooctadecane 1330 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

REPUBLIC BACKHOE SERVICES
ERIC GARCIA
47 E. DICKENS RD
LOVINGTON NM, 88260
Fax To: NONE

Received: 11/19/2018
Reported: 11/27/2018
Project Name: SARAGOSSA 10 ST. #2
Project Number: NONE GIVEN
Project Location: READ & STEVENS

Sampling Date: 11/15/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PAD 3- SURFACE (H803384-23)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.500	0.500	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.500	0.500	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	3.89	1.50	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	3.89	3.00	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	30800	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	130	50.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	5370	50.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	1180	50.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 272 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 2-5 (H803384-24)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 97.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRD C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	12.8	10.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 77.9 % 41-142

Surrogate: 1-Chlorooctadecane 86.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST, #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 4 - SURFACE (H803384-25)

BTEX 80218		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.500	0.500	11/25/2018	ND	2.19	109	2.00	1.08		
Toluene*	1.14	0.500	11/25/2018	ND	2.19	109	2.00	0.189		
Ethylbenzene*	2.46	0.500	11/25/2018	ND	2.11	106	2.00	0.0513		
Total Xylenes*	13.0	1.50	11/25/2018	ND	6.34	106	6.00	0.516		
Total BTEX	16.6	3.00	11/25/2018	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 116 % 73.3-129

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	256	16.0	11/24/2018	ND	432	108	400	0.00			

TPH 8015M		mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	608	100	11/22/2018	ND	193	96.7	200	3.55		
DRO >C10-C28*	27000	100	11/22/2018	ND	209	104	200	4.42		
EXT DRO >C28-C36	4900	100	11/22/2018	ND						

Surrogate: 1-Chlorooctane 125 % 41-142

Surrogate: 1-Chlorooctadecane 808 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 6 - SURFACE (H803384-26)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	0.615	0.500	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	3.77	0.500	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	21.5	1.50	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	25.9	3.00	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 124 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1290	100	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	40100	100	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	6970	100	11/22/2018	ND					

Surrogate: 1-Chlorooctane 160 % 41-142

Surrogate: 1-Chlorooctadecane 1110 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 8-2 (H803384-27)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 97.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	49.8	10.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	22.3	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 92.7 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST, #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 2-2 (H803384-28)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 97.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 92.2 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 5-5 (H803384-29)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08		
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189		
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513		
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516		
Total BTEX	<0.300	0.300	11/25/2018	ND						
Surrogate: 4-Bromofluorobenzene (PIL)		96.2 %	73.3-129							
Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/24/2018	ND	432	108	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55		
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	209	104	200	4.42		
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND						
Surrogate: 1-Chlorooctane		94.8 %	41-142							
Surrogate: 1-Chlorooctadecane		104 %	37.6-147							

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TB 1-2 (H803384-30)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorotetradecane 98.1 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 3-2 (H803384-31)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 97.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 90.3 % 41-142

Surrogate: 1-Chlorooctadecane 99.2 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 1-5 (H803384-32)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PII) 97.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	193	96.7	200	3.55	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	209	104	200	4.42	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 87.5 % 41-142

Surrogate: 1-Chlorooctadecane 94.5 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: PAD 1-2 (H803384-33)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 97.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 83.3 % 41-142

Surrogate: 1-Chlorooctadecane 91.5 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 9-5 (H803384-34)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 97.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 6-2 (H803384-35)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 76.1 % 41-142

Surrogate: 1-Chlorooctadecane 82.8 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 1 - SURFACE (H803384-36)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.500	0.500	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	0.933	0.500	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	5.16	1.50	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	6.09	3.00	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3200	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	227	100	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	20900	100	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	4130	100	11/22/2018	ND					

Surrogate: 1-Chlorooctane 128 % 41-142

Surrogate: 1-Chlorooctadecane 676 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: PAD 4-5 (H803384-37)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 97.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	38.4	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	14.9	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 78.4 % 41-142

Surrogate: 1-Chlorooctadecane 87.0 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 10-2 (H803384-38)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 94.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 92.5 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Analytical Results For:

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 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 3-5 (H803384-39)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	1.08	
Toluene*	<0.050	0.050	11/25/2018	ND	2.19	109	2.00	0.189	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.11	106	2.00	0.0513	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	6.34	106	6.00	0.516	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 91.0 % 41-142

Surrogate: 1-Chlorooctadecane 99.8 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TB 2-2 (H803384-40)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 95.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 77.4 % 41-142

Surrogate: 1-Chlorooctadecane 85.3 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST, #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TB 2-5 (H803384-41)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 95.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRD C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 83.4 % 41-142

Surrogate: 1-Chlorooctadecane 92.1 % 37.6-147

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Analytical Results For:

REPUBLIC BACKHOE SERVICES
ERIC GARCIA
47 E. DICKENS RD
LOVINGTON NM, 88260
Fax To: NONE

Received: 11/19/2018
Reported: 11/27/2018
Project Name: SARAGOSSA 10 ST. #2
Project Number: NONE GIVEN
Project Location: READ & STEVENS

Sampling Date: 11/15/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: TA 9-2 (H803384-42)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 81.1 % 41-142

Surrogate: 1-Chlorooctadecane 89.9 % 37.6-147

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Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: PAD 4 - SURFACE (H803384-43)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4560	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	62.2	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	11.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 82.5 % 41-142

Surrogate: 1-Chlorooctadecane 94.1 % 37.6-147

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

REPUBLIC BACKHOE SERVICES
ERIC GARCIA
47 E. DICKENS RD
LOVINGTON NM, 88260
Fax To: NONE

Received: 11/19/2018
Reported: 11/27/2018
Project Name: SARAGOSSA 10 ST. #2
Project Number: NONE GIVEN
Project Location: READ & STEVENS

Sampling Date: 11/15/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: TA 8 - SURFACE (H803384-44)

BTX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PII) 96.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	14.8	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 84.9 % 41-142

Surrogate: 1-Chlorooctadecane 93.2 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TB 1-5 (H803384-45)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 97.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/24/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 87.9 % 41-142

Surrogate: 1-Chlorooctadecane 94.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 10-5 (H803384-46)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PII) 96.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/24/2018	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	<10.0	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	<10.0	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 94.3 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

REPUBLIC BACKHOE SERVICES
ERIC GARCIA
47 E. DICKENS RD
LOVINGTON NM, 88260
Fax To: NONE

Received: 11/19/2018
Reported: 11/27/2018
Project Name: SARAGOSSA 10 ST. #2
Project Number: NONE GIVEN
Project Location: READ & STEVENS

Sampling Date: 11/15/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: TA 7 - SURFACE (H803384-47)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	0.173	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 111 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/24/2018	ND	400	100	400	3.92	

TPH 8015M	mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	31.9	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	3810	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	634	10.0	11/22/2018	ND					


Surrogate: 1-Chlorooctane 96.0 % 41-142

Surrogate: 1-Chlorooctadecane 195 % 37.6-147

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Caley D. Keene, Lab Director/Quality Manager

Analytical Results For:

 REPUBLIC BACKHOE SERVICES
 ERIC GARCIA
 47 E. DICKENS RD
 LOVINGTON NM, 88260
 Fax To: NONE

 Received: 11/19/2018
 Reported: 11/27/2018
 Project Name: SARAGOSSA 10 ST. #2
 Project Number: NONE GIVEN
 Project Location: READ & STEVENS

 Sampling Date: 11/15/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: TA 8-5 (H803384-48)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2018	ND	2.15	108	2.00	2.25	
Toluene*	<0.050	0.050	11/25/2018	ND	2.07	103	2.00	0.874	
Ethylbenzene*	<0.050	0.050	11/25/2018	ND	2.01	100	2.00	1.42	
Total Xylenes*	<0.150	0.150	11/25/2018	ND	5.90	98.4	6.00	1.89	
Total BTEX	<0.300	0.300	11/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/24/2018	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: M5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2018	ND	188	94.0	200	3.25	
DRO >C10-C28*	35.6	10.0	11/22/2018	ND	202	101	200	5.04	
EXT DRO >C28-C36	13.1	10.0	11/22/2018	ND					

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500C-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Mobile Bunkers Source LLC Project Manager: Eric Gercia Address: 47 E. Nelson Ave City: Las Alamos State: NM Zip: 87806 Phone #: 505-631-0181 Fax #: Project #: Project Name: San goss 10 st. #2 Project Location: San goss 10 st. #2 Sample Name: Eric Gercia		P.O. #: Company: Paul Stevens Address: 100 E. 1st St. City: Las Alamos State: NM Zip: 87806 Phone #: 505-380-2175 Fax #: 	
Lab I.D. H803384 Sample I.D. TA 7-5 TA 4-5 TA 3-5 TA 3-2 TA 3-1 TA 3-0 TA 2-0 TA 1-0 TA 0-0		MATRIX (S)RAB OR (C)OMP. <input checked="" type="checkbox"/> # CONTAINERS 6 GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SOIL <input type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER: <input type="checkbox"/> ACID/BASE: <input type="checkbox"/> ICE / COOL: <input type="checkbox"/> OTHER: <input type="checkbox"/>	
DATE 11/14/18 TIME 2:30 DATE 11/14/18 TIME 1:25 DATE 11/14/18 TIME 9:25 DATE 11/14/18 TIME 8:25 DATE 11/14/18 TIME 9:35 DATE 11/14/18 TIME 6:40 DATE 11/14/18 TIME 9:45 DATE 11/14/18 TIME 12:35 DATE 11/14/18 TIME 2:40 DATE 11/14/18 TIME 10:15		ANALYSIS REQUEST TPH <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> Chlordane <input checked="" type="checkbox"/>	
Relinquished By: Charm Ben Date: 11/14/18 Time: 3:37 Received By: Steve Henderson Date: 11/14/18 Time: 3:37		Sample Condition Cool <input checked="" type="checkbox"/> Ambient <input type="checkbox"/> Sealed <input checked="" type="checkbox"/> Open <input type="checkbox"/> Checked By: PH	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 0.32 / #97		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #: REMARKS: Final: Eric Gercia 630-230-2175 with regul/Hs.	

* Certified amount cannot be used for analysis. Please fax within 48 hours to (505) 393-2476.

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Cardinal point around north pole Please for written response to 1575 2019 2020
page 2 of 5

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

+ Cardinal named secret vocal channel. Blaise Pav. written channel to 1575 808/938
Date 2 Dec 1575

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

Company Name: Republic Banknote Service LLC Project Manager: Eric Goveas Address: 47 E. Dickens Ave City: Las Alamos State: NM Zip: 87126 Phone #: 575-631-0131 Fax #: Project #: Project Name: Sanagosa 10 St. #2 Project Location: Sanagosa 10 St. #2 Sample Name: Eric Goveas		P.O. #: Company: Paul Stevens Attn: Tan Taw Address: P.O. Box 1518 City: Las Alamos State: NM Zip: 87126 Phone #: 575-380-2705 Fax #: 	
Lab I.D. H803384 Sample I.D. TA 3-a 31 TA 3-a 32 TA 1-3 33 PHD 1-3 34 TA 9-5 35 TA 6-8 36 TA 1 Surface 37 PHD 4-5 38 TA 0-3 39 TA 3-5 40 TA 3-8		MATRIX (G)RAB OR (C)OMP. 1 # CONTAINERS 1 GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL: OTHER: 	PRESERV. SAMPLING DATE 11-15-18 TIME 10:45 TPH BTEX Chloroform
Relinquished By: Quinn E Date: 11/19/18 Time: 3:37 Received By: Paul Stevens Date: 11/19/18 Time: 3:37		Sample Condition Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Checked By: Paul Stevens	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 0:30 / #97		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #: REMARKS: For: Eric Goveas / Paul Stevens LA. Reg. #11	

101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Mobile Brake Service LLC Project Manager: Eric Gorman Address: 57 E. Victor's Lane City: Carlsbad State: NM Zip: 88260 Phone #: 575-631-0181 Fax #: Project #: Project Name: San Jose 10 St. #2 Project Location: San Jose 10 St. #2 Sample Name: Eric Gorman		P.O. #: Company: Paul Sperry Inc Attn: Tom Taylor Address: P.O. Box 1518 City: Laswell State: NM Zip: 88202 Phone #: 575-350-2105 Fax #: 	
Lab I.D. H803984 Sample I.D. 41 TB 8-5 42 TB 9-8 43 PAD 4-Surface 44 TB 8-Surface 45 TB 1-5 46 TB 10-5 47 TB 7-Surface 48 TB 8-5		(G)RAB OR (C)OMP. 9 # CONTAINERS 1 MATRIX: <input type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SOIL <input type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER: ACID/BASE: ICE / COOL OTHER: PRESERV: SAMPLING 	
Date: 11/14/18 Time: 3:37 Delivered By: Jamie Bar Requisitioned By: Jamie Bar Received By: John Henderson Sample Condition: <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Hot <input type="checkbox"/> Yes <input type="checkbox"/> No Checked By: John Henderson		Date: 11-15-18 Time: 12:30 11-15-18 3:35 11-15-18 10:00 11-15-18 8:55 11-15-18 12:05 11-15-18 4:10 11-15-18 2:30 11-15-18 3:00 11-15-18	
REMARKS: TPH MTX Chloride		ANALYSIS REQUEST	

Attachment #15

Photos



Sample Location TA1-Looking South towards the source of release.



Sample Location TA2-Looking South towards the source of release.



Sample Location TA3-Looking South towards the source of release.



Sample Location TA4-Looking South towards the source of release.



Sample Location TA5-Looking South towards the source of release.



Sample Location TA6-Looking South towards the source of release.



Sample Location TA7-Looking South towards the source of release.



Sample Location TA8-Looking South towards the source of release.



Sample Location TA9-Looking South towards the source of release.



Sample Location TB1-Looking South towards the source of release.



Sample Location TB2-Looking South towards the source of release.



Sample ID Pad1



Sample ID Pad2



Sample ID Pad3



Sample ID Pad4



SAMPLE ID
RAD3-Surface.

SAMPLED BY
E.G.

DATE
11-15-18

TIME
9:30

PRESERVATIVE
Ice.

LOCATION
Sungassan St. 2

CLIENT
RtS.

ANALYSIS
TPH, CL, BTEX

Lot#

(800) 233-8425 www.essvial.com

SAMPLE ID
RAD3-2

SAMPLED BY
E.G.

DATE
11-15-18

TIME
7:45

PRESERVATIVE
Ice.

LOCATION
Sungassan St. 2

CLIENT
RtS.

ANALYSIS
TPH, BTEX, Cl

Lot#

(800) 233-8425 www.essvial.com

SAMPLE ID
RAD3-5

SAMPLED BY
E.G.

DATE
11-15-18

TIME
7:45

PRESERVATIVE
Ice.

LOCATION
Sungassan St. 2

CLIENT
RtS.

ANALYSIS
TPH, BTEX, Cl

Lot#

(800) 233-8425 www.essvial.com











11:15:18

TA-4
S.
2.
5.
7.





Attachment #16

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Read and Stevens, Inc.	OGRID 18917
Contact Name Joe Tovar	Contact Telephone (575) 390-2425
Contact email Jtovar@read-stevens.com	Incident # <i>(assigned by OCD)</i>
Contact mailing address P.O Box 1518 Roswell, NM 88202	

Location of Release Source

Latitude 32.325566 Longitude -104.279915
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Saragossa 10 State #2	Site Type Oil Well
Date Release Discovered 10/27/2018	API# <i>(if applicable)</i> 30-015-33586

Unit Letter	Section	Township	Range	County
B	10	23 South	26 East	Eddy

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 17.24	Volume Recovered (bbls) 2
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 140.67	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The cause of the release was a broken 1" connection at the well head. The connection has been replaced. Vacuum truck recovered 2 barrels of oil from the release. A backhoe was called out to pile the saturated material that was on the location and in the pasture.

State of New Mexico
Oil Conservation Division

Incident ID

District RP

Facility ID

Application ID

Was this a major
release as defined by
19.15.29.7(A) NMAC?☒ Yes ☐ No

If YES, for what reason(s) does the responsible party consider this a major release?

Spill calculation determined the spill volume to be 157.91 (See Attachment 1)

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

No

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Joe TouvarTitle: Manager, Production OperationsSignature: Joe TouvarDate: 1-17-19email: jtouvar@rend-stevens.comTelephone: 575-390-2425

OCD Only

Received by: _____

Date: _____

Site Assessment/Characterization*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	246 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submissions in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: Each of the following items must be included in the report.

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters. Application ID

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Jorge TovarTitle: Manager, Production & OperationsSignature: [Signature]Date: 1-17-19 email:JTOVAR@REACT-STEVENSON.COMTelephone: 575-392-2425**OCD Only**

Received by: _____

Date: _____