VERTEX

January 25, 2021 Vertex Project #: 20E-00239-006

Spill Closure Report: Tony La Russa State Com 201H/202H
Unit C, Section 3, Township 24 South, Range 27 East
County: Eddy
NM OCD Incident Tracking Number: NRM2008758101

Prepared For: Matador Production Company
5400 LBJ Freeway
Suite 1500
Dallas, Texas 75240

New Mexico Oil Conservation Division – District 2 – Artesia
811 South First Street
Artesia, New Mexico 88210

Matador Production Company (Matador) retained Vertex Resource Services Inc. (Vertex) to conduct a spill assessment and remediation for a produced water release that occurred at Tony La Russa State Com 201H/202H (hereafter referred to as "Tony La Russa"). Matador provided notification of the spill to New Mexico Oil Conservation Division (NM OCD) District 2 and the New Mexico State Land Office (SLO), who owns the land, via submission of an initial C-141 Release Notification on March 27, 2020 (Attachment 1). The NM OCD tracking number assigned to this incident is NRM2008758101.

This letter provides a description of the spill assessment and remediation activities, and demonstrates that closure criteria established in 19.15.29.12 *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) have been met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain approval from the NM OCD for closure of this release.

Incident Description

On March 18, 2020, a release occurred at Matador's Tony La Russa site when a seal on the produced water pump flowline failed. This incident resulted in the release of approximately 16.60 barrels (bbls) of produced water onto the engineered pad and into adjacent pasture. Upon discovery of the release, a hydrovac truck was dispatched to site to recover free fluids; approximately 12 bbls of produced water were recovered. The spill impacted an area off-lease that had experienced previous disturbance. No produced water was released into undisturbed or sensitive areas, or waterways.

Site Characterization

The release at Tony La Russa occurred on state-owned land, N 32.253397, W 104.181271, approximately 5 miles southwest of Loving, New Mexico. The legal description for the site is Unit C, Section 3, Township 24 South, Range 27 East, Eddy County, New Mexico. This location is within the Permian Basin in southeast New Mexico and has historically been used for oil and gas exploration and production, and farmland. An aerial photograph and site schematics are included in Attachment 2.

The Tony La Russa complex consists of production and storage equipment, a tank battery, and nearby oil and gas exploration and production wellpads, and is typical of oil and gas-related sites in the western portion of the Permian Basin. The following sections specifically describe the release area in the northern portion of the tank battery containment and the adjacent pasture area east of the engineered pad.

The surrounding landscape is associated with alluvial fans typical of elevations between 1,100 and 4,400 feet above sea level. The climate is semi-arid, with average annual precipitation ranging between 7 and 14 inches. Historically, the plant communities in this area have had a grassland aspect, and the dominant species are black grama, tobosa and blue grama, with a variety of perennial forbs and sparse, evenly distributed shrubs. Grass cover is generally uniformly distributed with few large bare areas (United States Department of Agriculture, Natural Resources Conservation Service, 2020). Limited to no vegetation is allowed to grow on the engineered pad. There is little evidence of vegetation growing in the area of the off-lease portion of the release due to the presence of a lease road along the east side of the site and indications the pasture area is commonly used as a vehicle turnaround.

The Geological Map of New Mexico indicates the surface geology at is comprised of Qp – Piedmont alluvial deposits (New Mexico Bureau of Geology and Mineral Resources, 2020). The Natural Resources Conservation Service *Web Soil Survey* characterizes the soil at Tony La Russa as Reagan loam, with a soil profile consisting of deep layers of loam. This soil tends to be well drained with low runoff and moderate available water storage in the soil profile (United States Department of Agriculture, Natural Resources Conservation Service, 2020). There is low to medium potential for karst geology to be present near Tony La Russa (United States Department of the Interior, Bureau of Land Management, 2020).

There is no surface water located on-site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is Black River, located approximately 0.85 miles south of the site (United States Fish and Wildlife Service, 2020). At Tony La Russa, there are no continuously flowing watercourses, lakebeds, sinkholes, playa lakes, or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

The nearest recent well to the site is a New Mexico Office of the State Engineer-identified well, located approximately 0.8 miles northeast of Tony La Russa, with a depth to groundwater of 67 feet below ground surface (bgs; New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System, 2020). Documentation pertaining to site characterization and depth to groundwater determination is included in Attachment 3.

Closure Criteria Determination

Using site characterization information, a closure criteria determination worksheet (Attachment 3) was completed to determine if the release was subject to any of the special case scenarios outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

Based on data included in the closure criteria determination worksheet, the release at Tony La Russa is not subject to the requirements of Paragraph (4) of Subsection C of 19.15.29.12 NMAC. As Tony La Russa is located in an area with medium potential for karst, and the nearest groundwater well is farther than 0.5-miles from the release site, the closure criteria for the site are determined to be associated with the following constituent concentration limits.

Table 1. Closure Criteria for Soils Impacted by a Release		
Depth to Groundwater	**Constituent**	**Limit**
< 50 feet	Chloride	600 mg/kg
	TPH[1] (GRO + DRO + MRO)	100 mg/kg
	BTEX[2]	50 mg/kg
	Benzene	10 mg/kg

[1]Total petroleum hydrocarbons (TPH) = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)
[2]Benzene, toluene, ethylbenzene and xylenes (BTEX)

Remedial Actions

Initial spill inspection and site characterization activities at Tony La Russa were completed by Vertex on March 19, 2020. The Daily Field Report (DFR) associated with the site visit is included in Attachment 4. A selection of characterization soil samples was submitted for laboratory analysis to confirm the field screening data. Using initial field screening and soil sample laboratory data, as presented in Table 2 (Attachment 5), the release was delineated horizontally and vertically as presented on Figure 1 (Attachment 2), and a remediation plan was developed. On April 16, 2020, Vertex provided 48-hour notification of confirmation sampling to the NM OCD (Attachment 6), as required by Subparagraph (a) of Paragraph (1) of Subsection D 19.15.29.12 NMAC.

Excavation of impacted soils was conducted between April 20 and 21, 2020, with a Vertex representative on-site to conduct field screening to guide the excavation and determine final horizontal and vertical extents of the excavation area as presented on Figure 2 (Attachment 2). Waste manifests are included in Attachment 4. As remediation activities were completed, Vertex collected a total of 18 five-point composite confirmatory samples from the base and side walls of the excavation, at depths ranging between ground surface and 0.5 feet bgs on-lease and ground surface to 2 feet bgs in the pasture (off-lease). Each composite sample was representative of no more than 200 square feet per the alternate sampling method outlined in Subparagraph (c) of Paragraph (1) of Subsection D 19.15.29.12 NMAC, which does not require prior NM OCD approval. The composite samples were placed into laboratory-provided containers, preserved on ice, and submitted to a National Environmental Laboratory Accreditation Program-approved laboratory for chemical analysis.

Laboratory analyses included Method 300.0 for chlorides, Method 8021B for volatile organics, including BTEX, and EPA Method 8015 for TPH, including MRO, DRO and GRO. Confirmatory sample analytical data are summarized in Table 3 (Attachment 5). Laboratory data reports and chain of custody forms are included in Attachment 7.

A GeoExplorer 7000 Series Trimble global positioning system (GPS) unit, or equivalent, was used to map the approximate center of each of the five-point composite samples. The confirmatory sample locations are presented on Figure 2 (Attachment 2). Relevant equipment and prominent features/reference points at the site are mapped as well.

Closure Request Denial and Additional Activities

On July 27, 2020, Matador requested closure for the release at Tony La Russa, at Vertex's recommendation. On November 20, 2020, the NM OCD denied closure for this incident based on the following:

- The release occurred in a High Karst area and will need to be remediated to the strictest closure criteria of <50' depth to groundwater from Table 1 of the spill rule.
- When nearby wells are used to determine depth to groundwater, the wells should be no further than ½-mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to groundwater within a ½-mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for groundwater at a depth of 50 feet or less.

On November 27, 2020, Vertex provided 48-hour notification of additional remediation and confirmation sampling to NM OCD, as required by Subparagraph (a) of Paragraph (1) of Subsection D 19.15.29.12 NMAC (Attachment 5). On December 2, 2020, Vertex was onsite to oversee additional remediation of the failed confirmatory sampling locations, using field screening methods to guide excavation and verify that the release was remediated to the extent required.

Following the completion of additional remediation activities, Vertex re-collected 2 five-point composite confirmatory samples from the base and sidewall of the release area. Each composite sample was representative of no more than 200 square feet per the alternate sampling method outlined in Subparagraph (c) of Paragraph (1) of Subsection D 19.15.29.12 NMAC, which does not require prior NM OCD approval. The composite samples were placed into laboratory-provided containers, preserved on ice, and submitted to a NELAP-approved laboratory for chemical analysis.

Laboratory analysis included Method 300.0 for chlorides, Method 8021B for volatile organics, including BTEX, and EPA Method 8015 for TPH, including MRO, DRO and GRO. The new confirmatory sampling analytical data are summarized alongside the original confirmatory sampling data in Table 3 (Attachment 6). Laboratory data reports and chain of custody forms are included in Attachment 7.

The re-collected confirmatory sample locations remained as presented on the original Figure 2 (Attachment 2).

Closure Request

Vertex recommends no additional action to address the release at Tony La Russa. Laboratory analyses of confirmatory samples, including the two re-collected confirmatory samples, show constituent of concern concentration levels below the most-strict NM OCD closure criteria as presented in Table 1. There are no anticipated risks to human, ecological or hydrological receptors associated with the release site.

Initial remediation efforts for the portion of the release that occurred off-lease included excavation of contaminated materials to levels meeting NM OCD restoration and reclamation requirements as outlined in 19.15.29.13 NMAC. The excavation was backfilled with non-waste-containing, uncontaminated, earther material, sourced locally, and placed to meet the site's existing grade to prevent ponding of water and erosion, and aid in the establishment of vegetation.

Vertex requests that this incident (NRM2008758101) be closed as the original closure request denial (Attachment 8) reasons have been addressed and all closure requirements set forth in Subsection E of 19.15.29.12 NMAC have been met. Matador certifies that all information in this report and the attachments is correct, and that they have complied with all applicable closure requirements and conditions specified in Division rules and directives to meet NM OCD requirements to obtain closure on the March 18, 2020, release at Tony La Russa.

Should you have any questions or concerns, please do not hesitate to contact the undersigned at 505.506.0040 or ngordon@vertex.ca.

Sincerely,

Natalie Gordon
PROJECT MANAGER

Attachments

Attachment 1. NM OCD C-141 Report
Attachment 2. Figures
Attachment 3. Closure Criteria for Soils Impacted by a Release Research Determination Documentation
Attachment 4. Daily Field Report(s) with Photographs and Waste Manifests
Attachment 5. Tables
Attachment 6. Required 48-hr Notification of Confirmation Sampling to Regulatory Agencies
Attachment 7. Laboratory Data Reports/Chain of Custody Forms
Attachment 8. NM OCD Original Closure Denial

References

New Mexico Bureau of Geology and Mineral Resources. (2020). *Interactive Geologic Map.* Retrieved from http://geoinfo.nmt.edu

New Mexico Oil Conservation Division. (2018). *New Mexico Administrative Code – Natural Resources and Wildlife Oil and Gas Releases*. Santa Fe, New Mexico.

New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System. (2020). *Water Column/Average Depth to Water Report.* Retrieved from http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.html.

United States Department of Agriculture, Natural Resources Conservation Service. (2020). *Web Soil Survey*. Retrieved from https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

United States Department of the Interior, Bureau of Land Management. (2020). *New Mexico Cave/Karsts*. Retrieved from https://www.blm.gov/programs/recreation/recreation-programs/caves/new-mexico

United States Fish and Wildlife. (2020). *National Wetlands Inventory*. Retrieved from https://www.fws.gov /wetlands/Data/Mapper.html

Limitations

This report has been prepared for the sole benefit of Matador Production Company (Matador). This document may not be used by any other person or entity, with the exception of the New Mexico Oil Conservation Division, without the express written consent of Vertex Resource Services Inc. (Vertex) and Matador. Any use of this report by a third party, or any reliance on decisions made based on it, or damages suffered as a result of the use of this report are the sole responsibility of the user.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

ATTACHMENT 1

ATTACHMENT 2

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	NRM2008758101
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Matador Production Company	OGRID: 228937
Contact Name: John Hurt	Contact Telephone: 972-371-5200
Contact email: JHurt@matadorresources.com	Incident # *(assigned by OCD)*
Contact mailing address: 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	

Location of Release Source

Latitude 32.253397 Longitude -104.181271
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Tony La Russa State Com 201H/202H	Site Type: Oil Well-Tank Battery
Date Release Discovered: 01/24/2020	API# *(if applicable)* 30-015-45964

Unit Letter	Section	Township	Range	County
C	3	24S	27E	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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 16.60 bbls	Volume Recovered (bbls) 12 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:

Pump seal failure on flowline.

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State of New Mexico
Oil Conservation Division

Incident ID	NRM2008758101
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?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

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: John Hurt Title: RES Specialist

Signature: [signature] Date: 3/26/20

email: JHurt@matadorresources.com Telephone: 972- 371-5200

OCD Only

Received by: Ramona Marcus Date: 3/27/2020

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State of New Mexico
Oil Conservation Division

Incident ID	NRM2008758101
District RP	
Facility ID	
Application ID	

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?	< 50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

Attach a comprehensive report (electronic submittals 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 ½-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.

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State of New Mexico
Oil Conservation Division

Incident ID	NRM2008758101
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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: John Hurt Title: RES Specialist

Signature: Date: 1/26/21

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

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State of New Mexico
Oil Conservation Division

Incident ID	NRM2008758101
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

[x] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[x] Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

[x] Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

[x] Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: John Hurt Title: RES Specialist

Signature: [signature] Date: 1/26/21

email: JHurt@matadorresources.com Telephone: 972-371-5200

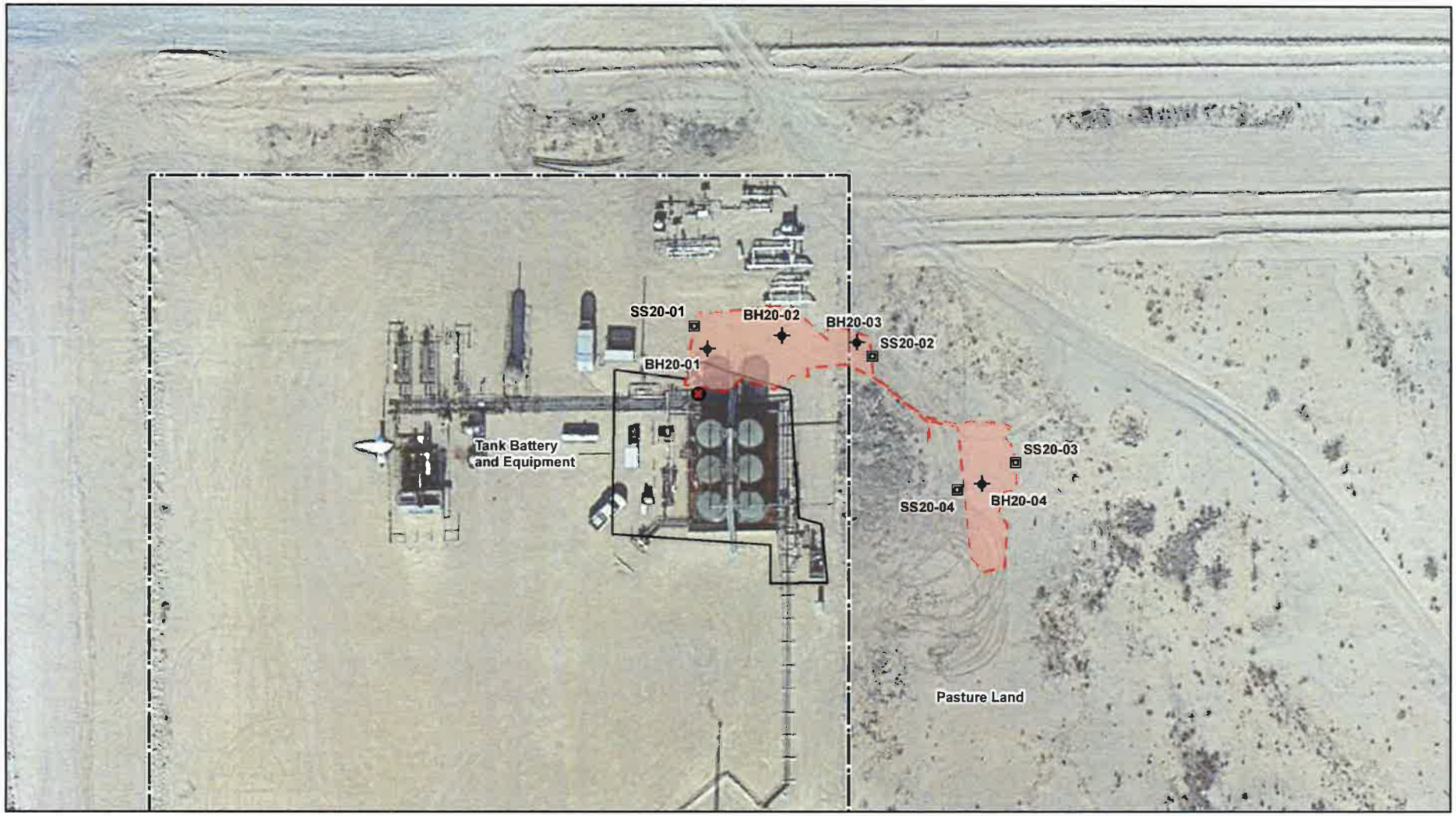
OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



Borehole
Point of Release
Soil Sample
Approximate Spill Extent (~ 3,411 sq. ft.)
Approximate Lease Boundary
Infrastructure (Existing)

VERTEX

0 25 50 Feet

Map Center:
Lat/Long: 32.253443, -104.181113

NAD 1983 UTM Zone 13N
Date: Jun 11/20

N

Site Schematic with Initial Characterization Sampling Locations
Tony La Russa State Com 201H/202H

FIGURE:
1

Document Path: G:\1-Projects_US PROJECTS\Matador Resources\20E-00238\005 - Tony La Russa State Com #201H\Figure 1 Tony La Russa State Com #201H.mxd

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Imagery from Google, 2019.

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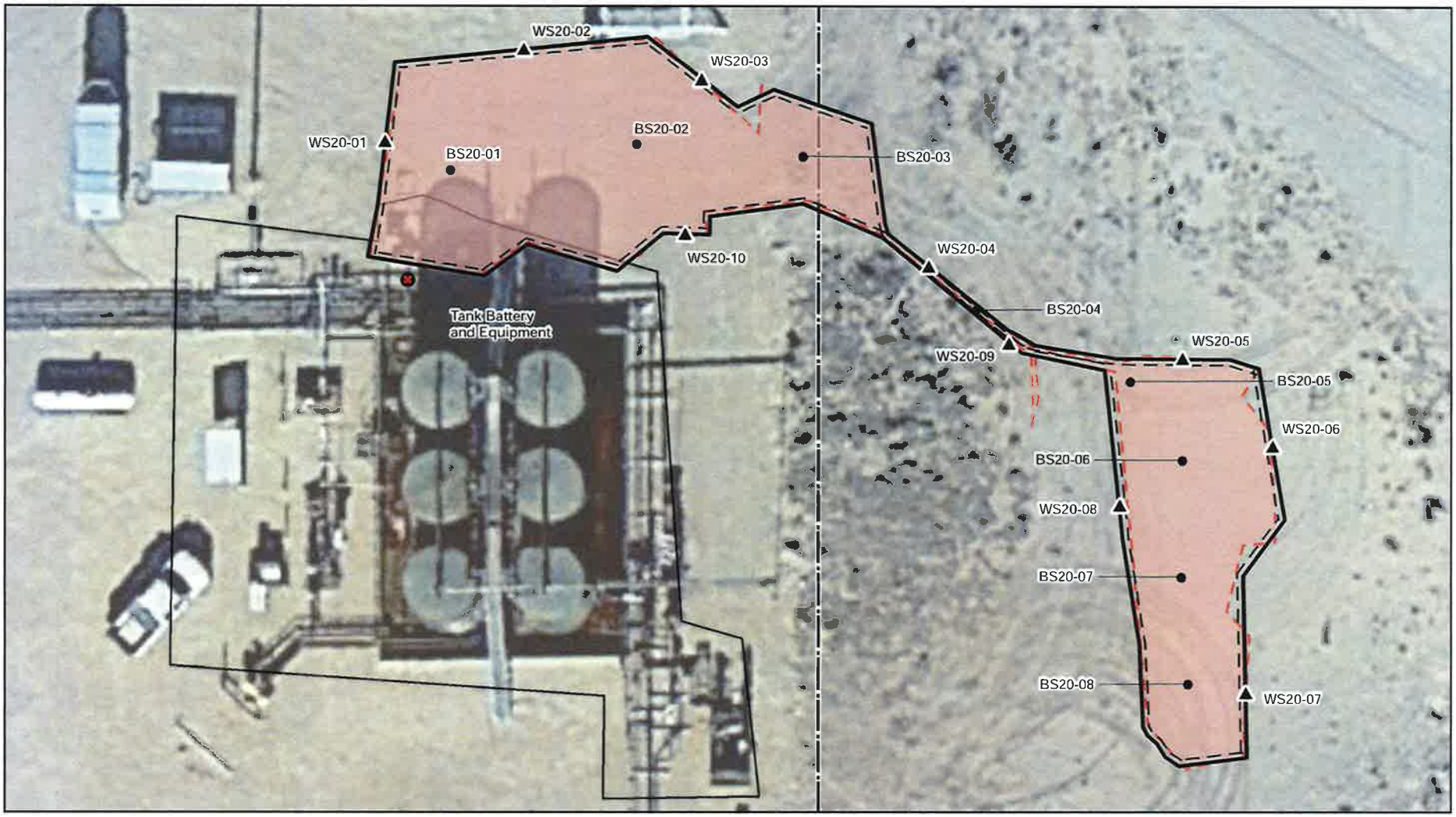

- Base Sample
- Point of Release
- Wall Sample
- Approximate Spill Extent (~ 3,411 sq. ft.)
- Approximate Lease Boundary
- Infrastructure (Existing)
- Excavation Extent (~ 3,614 sq.ft.)

VERTEX

0 10 20 ft

Map Center:
Lat/Long: 32.253404, -104.180990

NAD 1983 UTM Zone 13N
Date: Jun 11/20

N

Confirmatory Sampling Schematic
Tony La Russa State Com 201H/202H

FIGURE: 2

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Imagery from Google, 2019.

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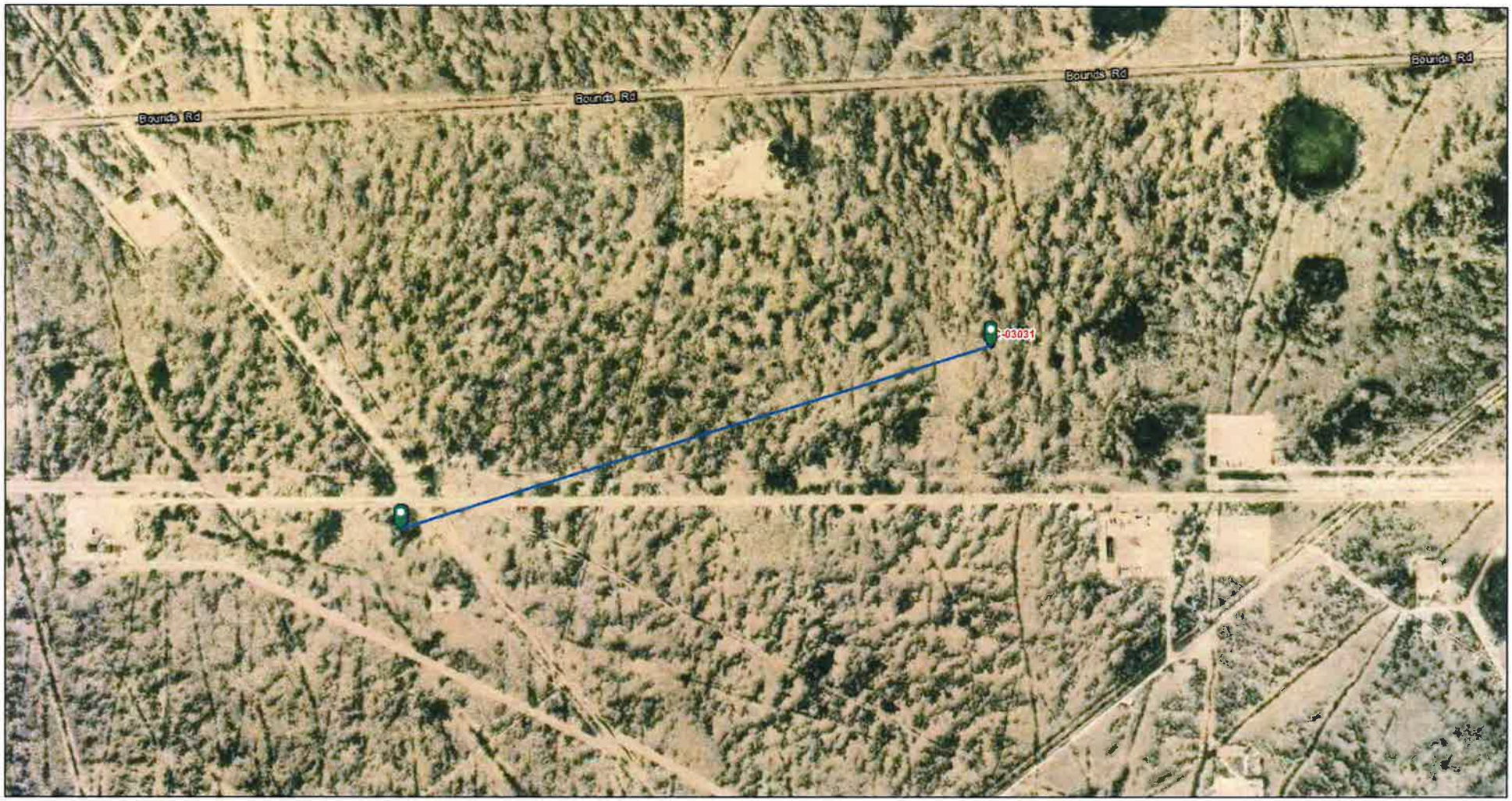
Document Path: G:\1-Projects_US PROJECTS\Matador Resources\20E-00239\00d - Tony La Russa State Com #201H\Figure 2 Confirmation Schematic Tony La Russa State Com #201H.mxd

ATTACHMENT 3

Closure Criteria Worksheet			
Site Name: Tony La Russa State Com #201H			
Spill Coordinates:		X: 32.253397	Y: -104.181271
Site Specific Conditions		Value	Unit
1	Depth to Groundwater	67	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	4,484	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	19,921	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	10,803	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**	10,803	feet
	ii) Within 1000 feet of any fresh water well or spring	10,803	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	20,074	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
10	Within a 100-year Floodplain	>100	year
11	Soil Type		
12	Ecological Classification		
13	Geology		
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	>100'	<50' 51-100' >100'

Tony La Russa distance to Well



5/7/2020, 12:45:27 PM

OSE District Boundary

GIS WATERS PODs

Active

1:9,028

0 0.07 0.15 0.3 mi

0 0.15 0.3 0.6 km

Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and

National Flood Hazard Layer FIRMette

FEMA

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, A99
- With BFE or Depth Zone AE, AO, 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
- NO SCREEN 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
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/6/2020 at 4:36:34 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Active Mines near Tony La Russa 201H

4/4/2020, 2:40:23 PM

1:72,224

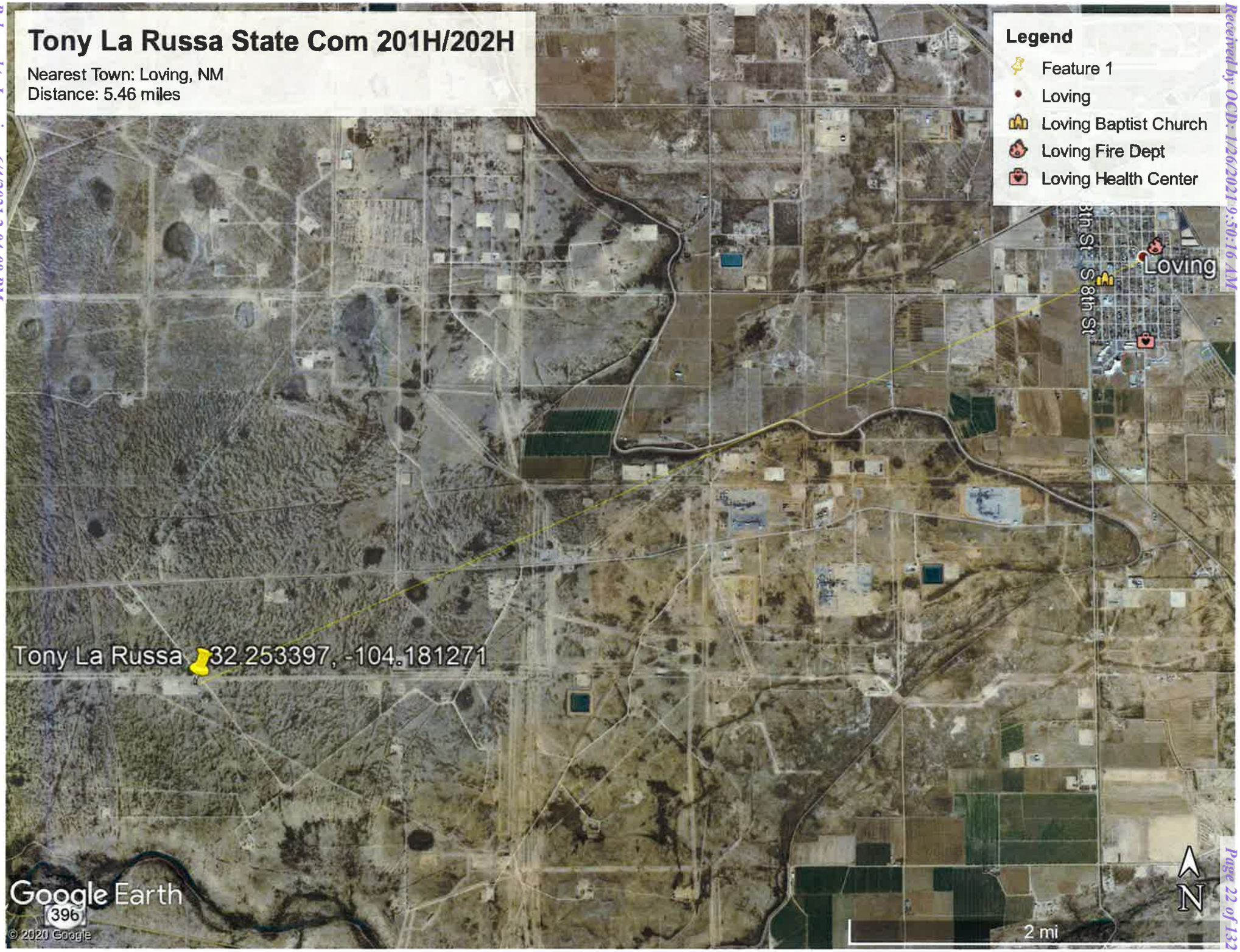
0 0.5 1 2 mi

0 0.75 1.5 3 km

U.S. Bureau of Land Management - New Mexico State Office, Sources: Esri, USGS, NOAA, Sources: Esri, Garmin, USGS, NPS

EMNRD MMD GIS Coordinator

NM Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=1b5e577974664d689b47790897ca2795)



Column1
Critical
High
Medium
Low

Column1
Yes
No

<50'
51-100'
>100'

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	C 03031	1	3	3	35	23S	27E	578315	3569206*

Driller License:	685	**Driller Company:**	BRAZEAL, JOHN		
Driller Name:	WAYNE BRAZEAL				
Drill Start Date:	06/10/2004	**Drill Finish Date:**	06/16/2004	**Plug Date:**	
Log File Date:	06/24/2004	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	50 GPM
Casing Size:	6.00	**Depth Well:**	150 feet	**Depth Water:**	67 feet

Water Bearing Stratifications:	Top	Bottom	Description
	139	150	Other/Unknown

Casing Perforations:	Top	Bottom
	90	150

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q q q 64 16 4	Sec	Twn	Rng	X	Y	Distance
C 03031	C	DOL	3	ROBBY WALTERSCHEID	ED	C 03031				Shallow	1 3 3	35	23S	27E	578315	3569206*	1381
RA 00873	RA	IRR	0	JEFFREY P SCHULTZ	CH	RA 00873					1 2 1	10	24S	27E	577104	3567159*	1658
C 00364	CUB	CLS	0	A.J. CRAWFORD	ED	C 00364		C			1 2	09	24S	27E	575997	3567043*	2030
SD 00431	CUB	IRR	840	POLLED ANGUS CATTLE COMPANY OF CARLSBAD	ED	SD 00431					2	10	24S	27E	577807	3566860*	2117
C 00821	C	PRO	0	UNION OIL CO. OF CALIFORNIA	ED	C 00821				Shallow	3 2	09	24S	27E	575996	3566635*	2394
C 00850	C	PRO	0	UNION OIL CO. OF CALIFORNIA	ED	C 00850				Shallow	2 3	09	24S	27E	575595	3566223*	2942
C 02453	C	DOL	3	DAVID M. SQUIRES	ED	C 02453				Shallow	4 4 2	29	23S	27E	574876	3571372*	3319
C 01767	C	DOM	0	WAYNE BRAZEAL	ED	C 01767					1 4	29	23S	27E	574375	3571062*	3448
C 04405	C	DOM	1	GABINO GAMINO JR	ED	C 04405 POD1	2236E				4 3 2	29	23S	27E	574384	3571316	3613
C 01366	CUB	EXP	0	HARLEY DAVIS	ED	C 01366				Shallow	4	08	24S	27E	574590	3566003*	3695
C 02377	C	DOM	3	LOUIS G FANNING	ED	C 02377				Shallow	2	29	23S	27E	574575	3571666*	3737
C 03416	CUB	EXP	0	JAMES S DAVIS	ED	C 03416 POD1					3 1 4	08	24S	27E	574271	3566180	3784
C 00518	CUB	IRR	199.5	OTIS MUTUAL DOMESTIC WTR CONSUMERS & SEWER WORKS ASSOC	ED	C 00518 POD2				Shallow	2 4 4	22	23S	27E	578105	3572431*	3785
C 00518 A	CUB	MDW	123.9	OTIS WATER USERS CO OP	ED	C 00518 POD2				Shallow	2 4 4	22	23S	27E	578105	3572431*	3785
C 03219	CUB	EXP	0	OTIS WATER CO-OP	ED	C 00518 POD2				Shallow	2 4 4	22	23S	27E	578105	3572431*	3785
C 01473	CUB	IRR	354	WILLIAM D. COLWELL	ED	C 01473				Shallow	1 1 3	25	23S	27E	579919	3571254*	3812
C 00516	CUB	EXP	72.4	BARBARA DAVIS	ED	C 00516 POD5					1 3 4	08	24S	27E	574286	3565921	3959

***UTM location was derived from PLSS - see Help**

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y	Distance
					ED	C 00516				Shallow	1 3	4	08	24S	27E	574288	3565901*	3972
					ED	C 00516 POD3					1 3	4	08	24S	27E	574288	3565901*	3972
					ED	C 00516 S				Shallow	1 3	4	08	24S	27E	574288	3565901	3972
C 03708	C	PRO	0	BARBARA DAVIS	ED	C 00516 S				Shallow	1 3	4	08	24S	27E	574288	3565901	3972
C 02567	C	DOM	3	JEROME SMITH	ED	C 02567				Shallow	2 1	2	26	23S	27E	579314	3572049*	3983
C 01606	C	DOL	0	JOHN BRAZEAL	ED	C 01606					1 2		29	23S	27E	574372	3571869*	4023
C 01719	C	DOL	0	JOHN BRAZEAL	ED	C 01719					1 2		29	23S	27E	574372	3571869*	4023
C 01775	C	DOL	0	JOHN BRAZEAL	ED	C 01719					1 2		29	23S	27E	574372	3571869*	4023
					ED	C 01775					1 2		29	23S	27E	574372	3571869*	4023
C 03489	CUB	EXP	0	JAMES S. DAVIS	ED	C 03489 POD1				Shallow	2 4	3	08	24S	27E	574153	3565939	4038
C 03092	C	DOM	3	JAMES S DAVIS	ED	C 03092				Shallow	4 3	1	08	24S	27E	573678	3566501*	4039
C 02112	C	STK	3	GEORGE MICHAELIS	ED	C 02112				Shallow	1 3	4	13	21S	24E	573830	3571337	4043
C 00631	C	SAN	3	GIRL SCOUTS OF AMERICA	ED	C 00631				Shallow	3 3	4	08	24S	27E	574288	3565701*	4121
C 01837	C	PRO	0	HEYCO	ED	C 01837							22	23S	27E	577395	3572916*	4122
C 03260	C	STK	3	CLARAMAI R HAYHURST	ED	C 03260 POD1				Shallow	3 3	3	12	24S	27E	579994	3565935	4160
C 03837	C	PRO	0	DEVON ENERGY CO	ED	C 03260 POD1				Shallow	3 3	3	12	24S	27E	579994	3565935	4160
C 03838	C	PRO	0	DEVON ENERGY CO	ED	C 03260 POD1				Shallow	3 3	3	12	24S	27E	579994	3565935	4160
C 03839	C	PRO	0	DEVON ENERGY CO	ED	C 03260 POD1				Shallow	3 3	3	12	24S	27E	579994	3565935	4160
C 00518	CUB	IRR	199.5	OTIS MUTUAL DOMESTIC WTR CONSUMERS & SEWER WORKS ASSOC	ED	C 00518				Shallow	1 1	3	23	23S	27E	578310	3572840*	4237
C 00518 A	CUB	MDW	123.9	OTIS WATER USERS CO OP	ED	C 00518				Shallow	1 1	3	23	23S	27E	578310	3572840*	4237
C 03147	C	MUL	3	GEORGE BRANTLEY	ED	C 03147					3 3	3	12	24S	27E	579884	3565715	4239

***UTM location was derived from PLSS - see Help**

(acre ft per annum)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code Grant	Source	q q q 6416 4	Sec	Tws	Rng	X	Y	Distance
C 03333	C	PRO	0	OGX RESOURCES LLC	ED	C 03147				3 3 3	12	24S	27E	579884	3565715	4239
C 03352	C	PRO	0	NOVA MUD	ED	C 03147				3 3 3	12	24S	27E	579884	3565715	4239
C 01261	CUB	EXP	0	OTIS WATERUSERS COOP.	ED	C 01261			Shallow		21	23S	27E	575780	3572889*	4251
C 00683	C	DOM	3	HARLEY DAVIS	ED	C 00683			Shallow	4 3	08	24S	27E	573986	3565796*	4257
C 01187	C	DOM	3	CAMP LAVELLE ZIA GIRL SCOUT C.	ED	C 01187			Shallow	4 3	08	24S	27E	573986	3565796*	4257
C 00516	CUB	EXP	72.4	JAMES S DAVIS	ED	C 00516 POD6			Shallow	1 4 3	08	24S	27E	573885	3565895*	4261
					ED	C 00516 POD10	NA		Shallow	3 4 3	08	24S	27E	573874	3565722	4388
C 02976	C	STK	3	GEORGE BRANTLEY	ED	C 02976			Shallow	4 2 3	12	24S	27E	580519	3566195*	4394
C 00228 A	CUB	MUN	1246.516	OTIS WATER USERS COOPERATIVE	ED	C 00228 AS2			Shallow	1 1 3	21	23S	27E	575074	3572788*	4412
C 03067	C	DOM	0	BOB RAINES	ED	C 03067				3 3 1	23	23S	27E	578311	3573044*	4431
C 03490	CUB	EXP	0	JAMES DAVIS	ED	C 03490 POD1			Shallow	3 4 3	08	24S	27E	573811	3565709	4442
C 03707	C	PRO	0	BARBARA DAVIS	ED	C 00516 POD9			Shallow	3 4 3	08	24S	27E	573809	3565705	4446
C 03488	C	DOM	1	RAUL AGUIRRE II ONSUREZ	ED	C 03488 POD1			Shallow	4 3 1	23	23S	27E	578430	3573023	4449
C 00054	CUB	IRR	0	ARTHUR LANCASTER	ED	C 00054				1 1 4	25	23S	27E	580727	3571263*	4468
C 02937	C	PRO	0	MEWBOURNE OIL COMPANY	ED	C 02937				3 4 3	12	24S	27E	580315	3565789*	4494
C 02941	C	PRO	0	PATTERSON DRILLING	ED	C 02941				3 4 3	12	24S	27E	580315	3565789*	4494
					ED	C 02941 POD1				3 4 3	12	24S	27E	580315	3565789*	4494
C 00347	CUB	EXP	0	BRANTLEY GEORGE	ED	C 00347			Shallow	1 1	13	24S	27E	580010	3565479*	4498
C 01836	CUB	IRR	0	GEORGE BRANTLEY	ED	C 01836				1 1	13	24S	27E	580010	3565479*	4498
C 00228 A	CUB	MUN	1246.516	OTIS WATER USERS COOPERATIVE	ED	C 00228 A			Shallow	2 2 4	20	23S	27E	574871	3572782*	4498
					ED	C 00228 AS			Shallow	2 2 4	20	23S	27E	574871	3572782*	4498
C 00005	CUB	IRR	0	W H SWEARINGEN	ED	C 00005				1 1 4	23	23S	27E	579113	3572856*	4565

***UTM location was derived from PLSS - see Help**

(acre ft per annum)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y	Distance
SP 01349	CUB	IRR	2967.41	NM INTERSTATE STREAM COMM	ED	SP 01349					1	4	12	24S	27E	580832	3566301*	4590
C 03869	C	STK	3	DRAPER BRANTLEY JR	ED	C 03869 POD1			NON		1	3 4	12	24S	27E	580677	3566039	4614
C 03032	C	DOL	3	GEORGE BRANTLEY	ED	C 03032					4	1 4	12	24S	27E	580931	3566200*	4728
C 03253	C	PRO	0	MEWBOURNE OIL	ED	C 03032					4	1 4	12	24S	27E	580931	3566200*	4728
C 01646	CUB	IRR	0	GEORGE BRANTLEY	ED	C 01646 X						1	13	24S	27E	580221	3565275*	4791
C 01943	C	STK	3	GARY THOMPSON	ED	C 01943						1	13	24S	27E	580221	3565275*	4791
C 01263	CUB	EXP	0	OT'S WATER USERS COOP.	ED	C 01263						1	23	23S	27E	578613	3573346*	4814
C 03196	C	DOL	3	DIANE WALTERS	ED	C 03196					3	1 3	24	23S	27E	579916	3572672*	4842
C 03055	C	DOL	0	GEORGE BRANTLEY	ED	C 03055					2	3 4	12	24S	27E	580930	3565995*	4844
C 00365	CUB	IRR	185.7	CARLETON JOE O	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
C 00464	CUB	IRR	314.245	HENRY E MCDONALD	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
C 00513	CUB	IRR	1422	PARDUE LIMITED COMPANY	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
C 00574	CUB	IRR	55.05	TOMMY JR. OR CARLA DUARTE	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
C 00738	CUB	IRR	343.5	W.J. BURKHAM	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
C 00750	CUB	IRR	74.7	BETH ANN BOTROS	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
C 00764	CUB	IRR	117.9	MIKE M. VASQUEZ	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
C 01082	CUB	IRR	240	DAMON U. BOND	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
SD 01886	CUB	IRR	100	DICK CALDERON	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
SP 01927	CUB	CLS	0	UNITED STATES OF AMERICA	ED	SP 01927		C				4	12	24S	27E	581032	3566097*	4869
SP 01927 1	CUB	IRR	2171.91	EDWARD F. JUDKINS	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
SP 01927 2	CUB	IRR	796.367	REYNOLDS JOHNSON	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
SP 01927 3	CUB	IRR	144.794	JULIAN SMITH	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869

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(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y	Distance
SP 01927 4	CUB	MDW	2800	UNITED STATES OF AMERICA	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
SP 01927 5	CUB	IRR	2413.209	D.R. HARKEY	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
SP 01927 6	CUB	IRR	108.596	DANIEL BEACH	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
SP 01927 7	CUB	IRR	5067.79	EDWARD F. JUDKIN	ED	SP 01927						4	12	24S	27E	581032	3566097*	4869
C 00231 A	CUB	MDW	201.6	MALAGA WATER USERS CO-OP	ED	C 00231 AS				Shallow	4 1 1	23		23S	27E	578512	3573447*	4877
C 00498	CUB	IRR	9	YGNACIO LOPEZ	ED	C 00498				Shallow	4 1 1	23		23S	27E	578512	3573447*	4877
C 00498 ENL	CUB	IRR	0	MALAGA WATER USERS ASSOCIATION	ED	C 00498				Shallow	4 1 1	23		23S	27E	578512	3573447*	4877
C 01353	CUB	EXP	0	MALAGA W.U.A.	ED	C 01353					2 2	30		23S	27E	573163	3571851*	4886
C 03197	C	DOL	3	TANA MUNOZ	ED	C 03197					4 4 3	24		23S	27E	580520	3572274*	4943
C 01283	C	DOM	3	YGNACIO LOPEZ	ED	C 01283					1 1	23		23S	27E	578413	3573548*	4943
C 03037	C	DOL	3	GEORGE BRANTLEY	ED	C 03037				Shallow	4 3 4	12		24S	27E	580930	3565795*	4963
C 02022	C	PRO	0	AMOCO PRODUCTION COMPANY	ED	C 02022				Shallow	1 4 3	31		23S	28E	581941	3569250*	4970
C 02955	C	PRO	0	MARBOB ENERGY	ED	C 02955					1 4 3	31		23S	28E	581941	3569250*	4970
C 03218	C	PRO	0	NADEL & GUSSMAN	ED	C 02022				Shallow	1 4 3	31		23S	28E	581941	3569250*	4970

Record Count: 96

UTMNAD83 Radius Search (in meters):

Easting (X): 576990.2 **Northing (Y):** 3568813.47 **Radius:** 5000

Sorted by: Distance

***UTM location was derived from PLSS - see Help**

U.S. Fish and Wildlife Service
National Wetlands Inventory

Tony La Russa: Pond 19,921 ft

April 4, 2020

Wetlands

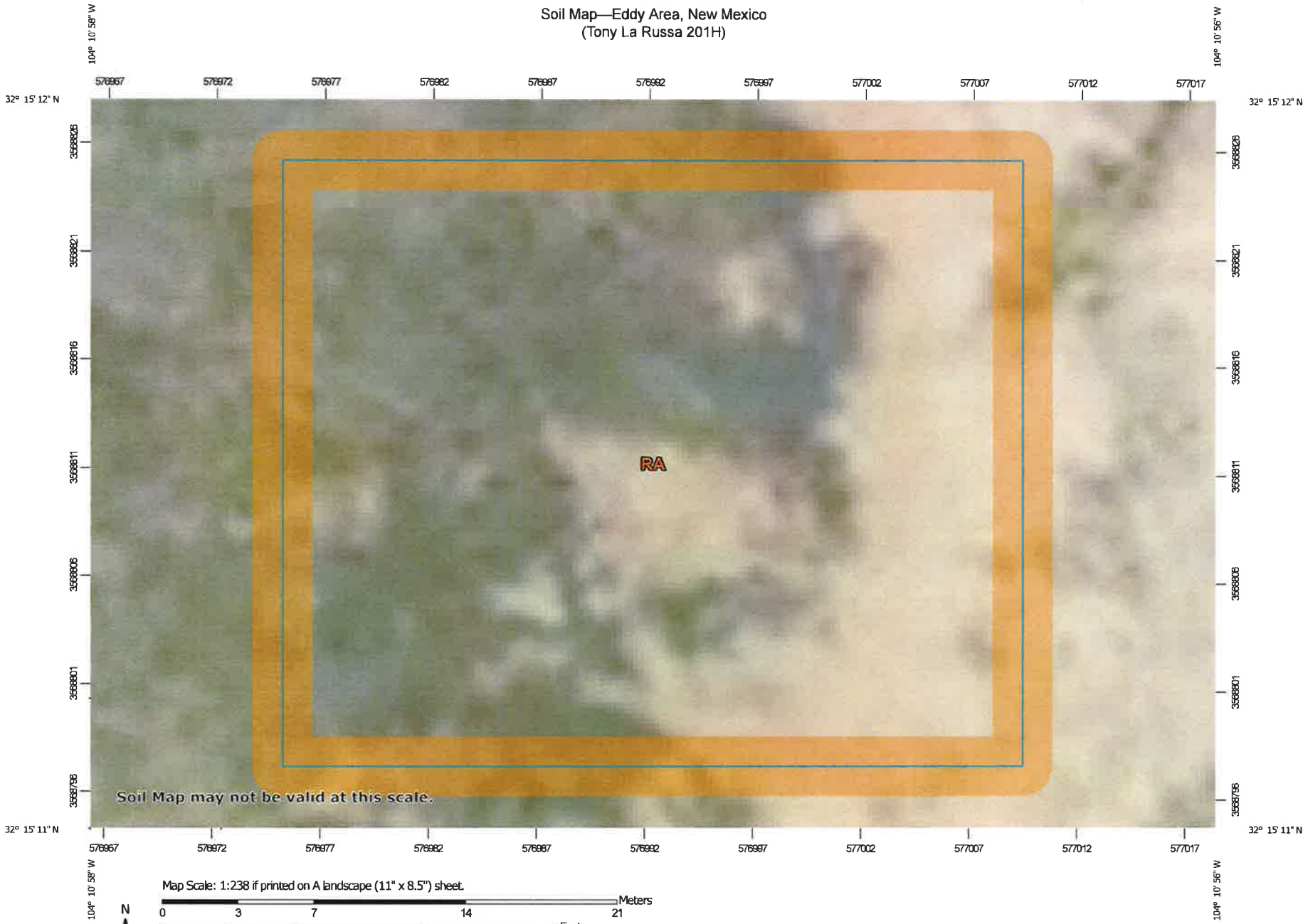
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper


Tony La Russa 201H
Nearest Residence: 10,803 ft
Legend
Cavern City Dragway
Feature 1
Residence
Tony La Russa 201H
N
1 km
Google Earth
© 2020 Google

Soil Map—Eddy Area, New Mexico
(Tony La Russa 201H)



Map Scale: 1:238 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 3 7 14 21

Feet: 0 10 20 40 60

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 15, Sep 15, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Jun 10, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
RA	Reagan loam, 0 to 3 percent slopes	0.2	100.0%
Totals for Area of Interest		**0.2**	**100.0%**

Eddy Area, New Mexico

RA—Reagan loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w5c
Elevation: 1,100 to 4,400 feet
Mean annual precipitation: 7 to 14 inches
Mean annual air temperature: 60 to 70 degrees F
Frost-free period: 200 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Reagan and similar soils: 98 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reagan

Setting

Landform: Alluvial fans, fan remnants
Landform position (three-dimensional): Rise
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: Alluvium and/or eolian deposits

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 60 inches: loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 40 percent
Salinity, maximum in profile: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: Loamy (R042XC007NM)

Hydric soil rating: No

Minor Components

Upton

Percent of map unit: 1 percent
Ecological site: Shallow (R042XC025NM)
Hydric soil rating: No

Atoka

Percent of map unit: 1 percent
Ecological site: Loamy (R042XC007NM)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 15, Sep 15, 2019

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	Depth Well	Depth Water	Water Column
C 03031		C	ED	1	3	3	35	23S	27E	578315	3569206*	1381	150	67	83
C 00364	C	CUB	ED		1	2	09	24S	27E	575997	3567043*	2030	2270		
C 00821		C	ED		3	2	09	24S	27E	575996	3566635*	2394	97	50	47
C 00850		C	ED		2	3	09	24S	27E	575595	3566223*	2942	108	35	73
C 02453		C	ED	4	4	2	29	23S	27E	574876	3571372*	3319	210	175	35
C 01366		CUB	ED			4	08	24S	27E	574590	3566003*	3695	60	35	25
C 02377		C	ED			2	29	23S	27E	574575	3571666*	3737	232	170	62
C 00518 POD2		CUB	ED	2	4	4	22	23S	27E	578105	3572431*	3785	220	98	122
C 00516		CUB	ED	1	3	4	08	24S	27E	574288	3565901*	3972	105	36	69
C 00516 CLW201016	O	CUB	ED	1	3	4	08	24S	27E	574288	3565901*	3972	62		
C 00516 CLW308590	O	CUB	ED	1	3	4	08	24S	27E	574288	3565901*	3972	105	36	69
C 00516 S		CUB	ED	1	3	4	08	24S	27E	574288	3565901	3972	50	17	33
C 02567		C	ED	2	1	2	26	23S	27E	579314	3572049*	3983	187	89	98
C 03489 POD1		CUB	ED	2	4	3	08	24S	27E	574153	3565939	4038	200		
C 03092		C	ED	4	3	1	08	24S	27E	573678	3566501*	4039	54	37	17
C 02112		C	ED	1	3	4	13	21S	24E	573831	3571337	4043	182	119	63
C 00631		C	ED	3	3	4	08	24S	27E	574288	3565701*	4121	50	24	26
C 03260 POD1		C	ED	3	3	3	12	24S	27E	579995	3565935	4160	80	56	24
C 03260 POD2	O	C	ED	1	3	3	12	24S	27E	580100	3565984	4204	80	56	24
C 00518		CUB	ED	1	1	3	23	23S	27E	578310	3572840*	4237	178		
C 03147		C	ED	3	3	3	12	24S	27E	579885	3565715	4239	140		
C 01261		CUB	ED				21	23S	27E	575780	3572889*	4251	250		
C 00683		C	ED		4	3	08	24S	27E	573986	3565796*	4257	50	17	33
C 01187		C	ED		4	3	08	24S	27E	573986	3565796*	4257	108	17	91
C 00516 POD6		CUB	ED	1	4	3	08	24S	27E	573885	3565895*	4261	78	17	61
C 00518 CLW197989	O	CUB	ED	2	1	3	23	23S	27E	578510	3572840*	4303	210		

***UTM location was derived from PLSS - see Help**

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

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(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number		POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 00516 POD10		CUB	ED	3	4	3	08	24S	27E	573875	3565722	4388	160	45	115
C 02976		C	ED	4	2	3	12	24S	27E	580519	3566195*	4394	57	27	30
C 03490 POD1		CUB	ED	3	4	3	08	24S	27E	573812	3565709	4442	140	23	117
C 03488 POD1		C	ED	4	3	1	23	23S	27E	578430	3573023	4449	217	122	95
C 00347		CUB	ED		1	1	13	24S	27E	580010	3565479*	4498	60	30	30
C 01943		C	ED			1	13	24S	27E	580221	3565275*	4791	30	25	5
C 00010 CLW191724	O	CUB	ED	2	3	2	25	23S	27E	580926	3571666*	4860	259		
C 00231 AS		CUB	ED	4	1	1	23	23S	27E	578512	3573447*	4877	230	100	130
C 00498		CUB	ED	4	1	1	23	23S	27E	578512	3573447*	4877	210	120	90
C 00498 CLW194833	O	CUB	ED	4	1	1	23	23S	27E	578512	3573447*	4877	165	80	85
C 03037		C	ED	4	3	4	12	24S	27E	580930	3565795*	4963	116	25	91

Average Depth to Water: **60 feet**
Minimum Depth: **17 feet**
Maximum Depth: **175 feet**

Record Count: 37

UTMNAD83 Radius Search (in meters):

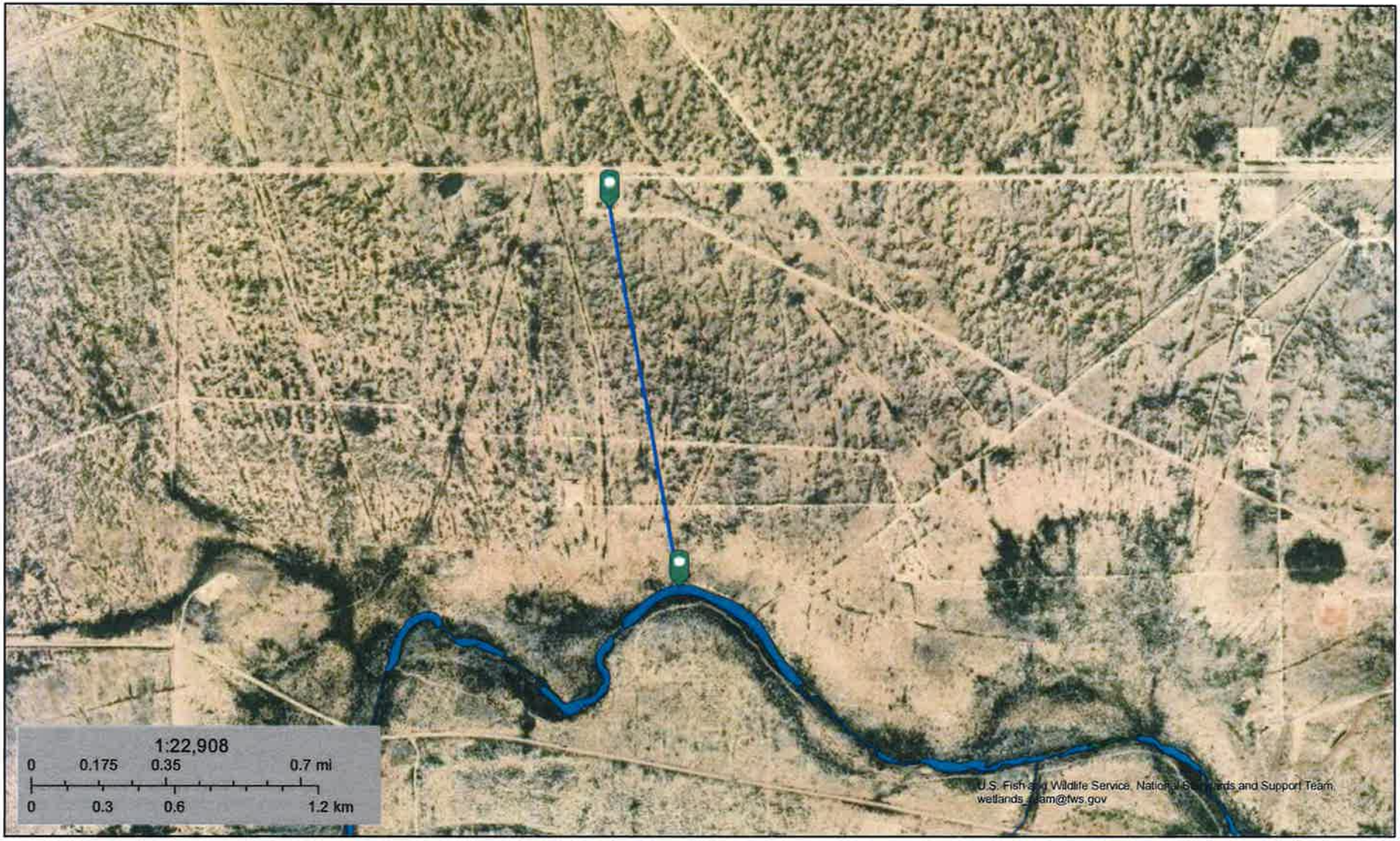
Easting (X): 576990.2 **Northing (Y):** 3568813.47 **Radius:** 5000

***UTM location was derived from PLSS - see Help**

U.S. Fish and Wildlife Service

National Wetlands Inventory

Tony La Russa: Watercourse 4,484 ft



April 4, 2020

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

New Mexico Office of the State Engineer
Wells with Well Log Information

(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	POD Code	Sub-basin	County	Source	q q q 6416	Sec	Twn	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
C 03031		C	ED	Shallow	1 3 3	35	23S	27E	578315	3569206*	1381	06/10/2004	06/16/2004	06/24/2004	150	67	WAYNE BRAZEAL	685
C 00364	C	CUB	ED		1 2	09	24S	27E	575997	3567043*	2030			07/01/1958	2270		TEXAS CO. W-W DRLG. CO.	
C 00821		C	ED	Shallow	3 2	09	24S	27E	575996	3566635*	2394	02/28/1958	03/01/1958	03/12/1958	97	50	M. ABBOTT	46
C 00850		C	ED	Shallow	2 3	09	24S	27E	575595	3566223*	2942	09/06/1958	09/09/1958	09/22/1958	108	35	C.H. DONOWHO	270
C 02453		C	ED	Shallow	4 4 2	29	23S	27E	574876	3571372*	3319	02/24/1996	02/24/1996	04/02/1996	210	175	FELKINS, MICHAEL	763
C 01366		CUB	ED	Shallow	4	08	24S	27E	574590	3566003*	3695	11/24/1966	11/26/1966	07/06/1967	60	35	EMMETT BARRON	30
C 02377		C	ED	Shallow	2	29	23S	27E	574575	3571666*	3737	05/24/1998	05/30/1998	08/24/1998	232	170		1348
C 00518 POD2		CUB	ED	Shallow	2 4 4	22	23S	27E	578105	3572431*	3785	03/15/2006	06/14/2006	08/31/2008	220	98	BRININSTOOL, M.D.	24
C 01473		CUB	ED	Shallow	1 1 3	25	23S	27E	579919	3571254*	3812			06/27/1972				
C 00516		CUB	ED	Shallow	1 3 4	08	24S	27E	574288	3565901*	3972	01/22/1955	01/27/1955	03/02/1955	105	36	BARRON, EMMETT	30
C 00516 CLW308590	O	CUB	ED	Shallow	1 3 4	08	24S	27E	574288	3565901*	3972	01/22/1955	01/27/1955	03/02/1955	105	36	BARRON, EMMETT	30
C 00516 S		CUB	ED	Shallow	1 3 4	08	24S	27E	574288	3565901	3972	03/10/1956	03/15/1956	04/18/1956	50	17	NM LICENSED DRILLER	30
C 02567		C	ED	Shallow	2 1 2	26	23S	27E	579314	3572049*	3983	04/01/1998	04/07/1998	05/05/1998	187	89		1348
C 03489 POD1		CUB	ED	Shallow	2 4 3	08	24S	27E	574153	3565939	4038	06/27/2011	06/28/2011	06/18/2012	200		JASON MALEY (LD)	1690
C 03092		C	ED	Shallow	4 3 1	08	24S	27E	573678	3566501*	4039	05/17/2004	05/18/2004	07/16/2004	54	37		1348
C 02112		C	ED	Shallow	1 3 4	13	21S	24E	573831	3571337	4043	07/06/1985	07/15/1985	11/15/1985	182	119	JAMES A. AMOS	1041

***UTM location was derived from PLSS - see Help**

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD Number	POD Code	Sub-basin	County	Source	q 6416	q 4	q	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
C 00631		C	ED	Shallow	3	3	4	08	24S	27E	574288	3565701*	4121	02/09/1955	02/11/1955	03/02/1955	50	24	EMMETT BARRON	30
C 03260 POD1		C	ED	Shallow	3	3	3	12	24S	27E	579995	3565935	4160	11/02/2008	11/02/2008	11/07/2008	80	56		1348
C 03260 POD2	O	C	ED	Shallow	1	3	3	12	24S	27E	580100	3565984	4204	11/02/2008	11/02/2008	11/07/2008	80	56		1348
C 00518		CUB	ED	Shallow	1	1	3	23	23S	27E	578310	3572840*	4237		07/31/1957	09/30/1958	178		NM LICENSED DRILLER	24
C 03147		C	ED		3	3	3	12	24S	27E	579885	3565715	4239	03/10/2005	03/11/2005	03/21/2005	140			1348
C 01261		CUB	ED	Shallow				21	23S	27E	575780	3572889*	4251	03/01/1964	03/11/1964	08/26/1965	250		BURGETT DRILLING	248
C 00683		C	ED	Shallow		4	3	08	24S	27E	573986	3565796*	4257	03/08/1956	03/10/1956	03/27/1956	50	17		30
C 01187		C	ED	Shallow		4	3	08	24S	27E	573986	3565796*	4257	05/24/1964	05/28/1964	06/01/1964	108	17	SPENCER, DAVID A.	138
C 00516 POD6		CUB	ED	Shallow	1	4	3	08	24S	27E	573885	3565895*	4261	05/08/2006	05/09/2006	07/31/2006	78	17	CLINT TAYLOR	1348
C 00516 POD10		CUB	ED	Shallow	3	4	3	08	24S	27E	573875	3565722	4388	08/21/2018	08/22/2018	09/24/2018	160	45	JASON MALEY	1690
C 02976		C	ED	Shallow	4	2	3	12	24S	27E	580519	3566195*	4394	09/26/2003	09/27/2003	09/29/2003	57	27	EXISTING WELL	1348
C 03490 POD1		CUB	ED	Shallow	3	4	3	08	24S	27E	573812	3565709	4442	06/29/2011	06/30/2011	06/18/2012	140	23	JASON MALEY (LD)	1690
C 03488 POD1		C	ED	Shallow	4	3	1	23	23S	27E	578430	3573023	4449	05/08/2011	05/10/2011	05/31/2011	217	122	TAYLOR, CLINTON E.	1348
C 00347		CUB	ED	Shallow		1	1	13	24S	27E	580010	3565479*	4498	07/02/1974	06/25/1976	07/01/1976	60	30	BRININSTOOL, M.D.	24
C 01943		C	ED				1	13	24S	27E	580221	3565275*	4791	09/15/1981	09/25/1981	06/11/1982	30	25	DON THOMPSON	961
C 00010 CLW191724	O	CUB	ED	Shallow	2	3	2	25	23S	27E	580926	3571666*	4860	08/06/1954	08/18/1954	01/31/1955	259		J.R.JOLLEY.	
C 00498		CUB	ED	Shallow	4	1	1	23	23S	27E	578512	3573447*	4877	01/27/1954	01/31/1954	03/30/1955	210	120	SAM S. SMITH	108
C 00498 CLW194833	O	CUB	ED	Shallow	4	1	1	23	23S	27E	578512	3573447*	4877	01/27/1954	12/31/1908	03/30/1955	165	80	UNKNOWN	108
C 03037		C	ED	Shallow	4	3	4	12	24S	27E	580930	3565795*	4963	07/30/2004	07/31/2004	09/13/2004	116	25		1348

***UTM location was derived from PLSS - see Help**

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(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD Number	POD Sub-basin Code	County	Source	q q q 6416 4	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number

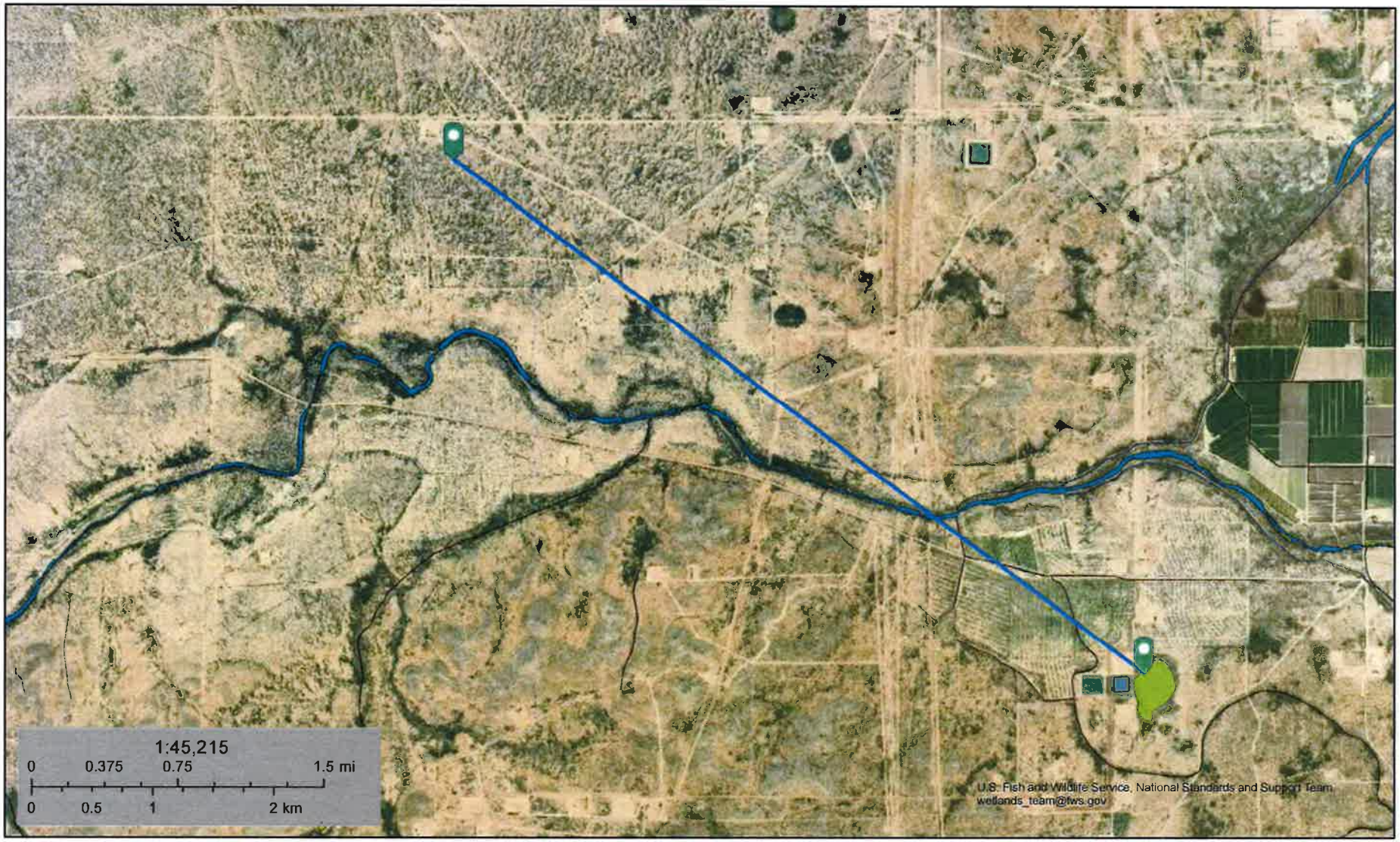
Record Count: 35

UTMNAD83 Radius Search (in meters):

Easting (X): 576990.2 Northing (Y): 3568813.47 Radius: 5000

U.S. Fish and Wildlife Service
National Wetlands Inventory

Tony La Russa: Wetland 20,074 ft



April 4, 2020

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

ATTACHMENT 4

VERTEX

Spill Response and Sampling

Client:	Matador
Date:	12/2/20
Site Name:	Tony La Russa
Site Location:	
Project Owner:	
Project Manager:	Recollection
Project #:	

Initial Spill Information - Record on First Visit	
Spill Date:	
Spill Volume:	
Spill Cause:	
Spill Product:	
Recovered Spill Volume:	
Recovery Method:	

Sampling

		Field Screening			Data Collection (Check for Yes)			
Sample ID	Depth (ft)	VOC (PID)	PetroFlag TPH (ppm)	Quantab (High/Low) + or -	Lab Analysis	Picture	Trimble Coordinates	Marked on Site Sketch
SS/TP/BH - Year - Number Ex. BH18-01	Ex. '2ft	Ex. 400 ppm	200 ppm	Ex. 'High +	Ex. Hydrocarbon Chloride			
BS2	0.5			0.07/17.6	8:10			
WS10	0-0.5			0.10/16.8	8:20			

Daily Site Visit Report

VERTEX

Client:	Matador Resources	Inspection Date:	3/19/2020
Site Location Name:	Tony La Russa State Com 201H/202H	Report Run Date:	3/19/2020 11:36 PM
Project Owner:	John Hurt	File (Project) #:	20E-00239
Project Manager:	Natalie Gordon	API #:	30-015-45964
Client Contact Name:	John Hurt	Reference	3/18/2020 - 12 bbls PW Spill
Client Contact Phone #:			

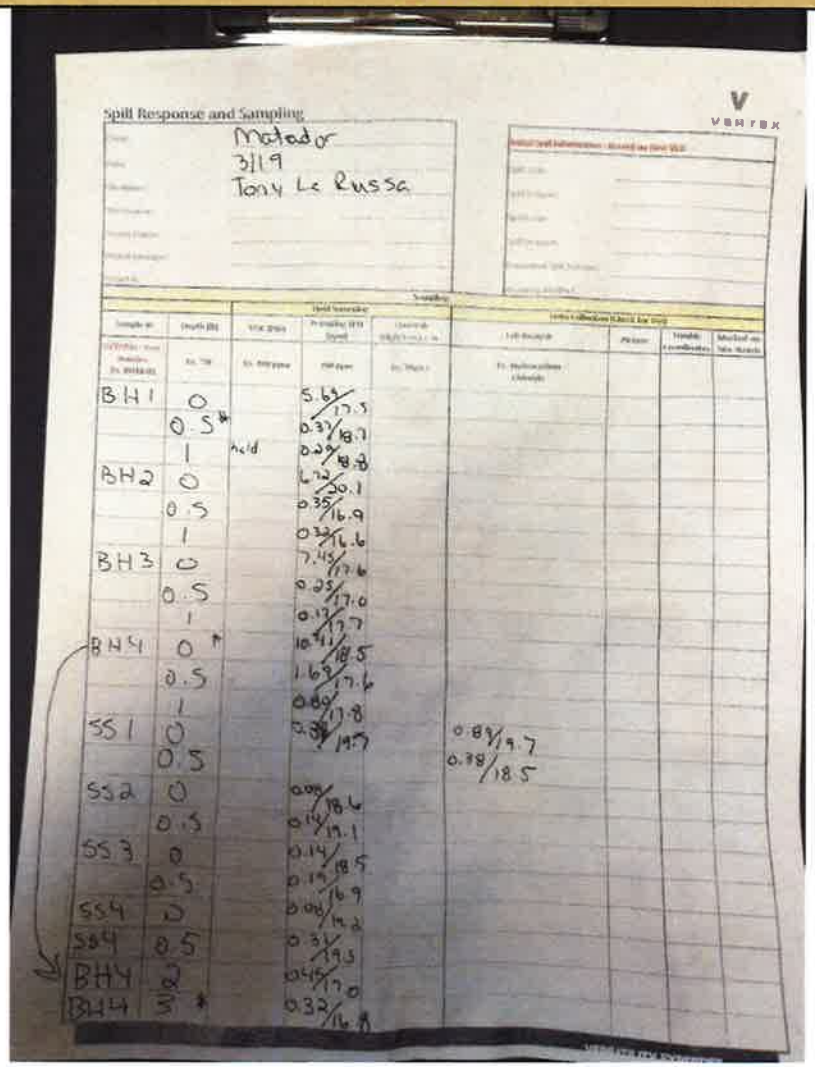
Summary of Times

Left Office	3/19/2020 11:41 AM
Arrived at Site	3/19/2020 12:27 PM
Departed Site	3/19/2020 4:00 PM
Returned to Office	3/19/2020 5:26 PM

Daily Site Visit Report

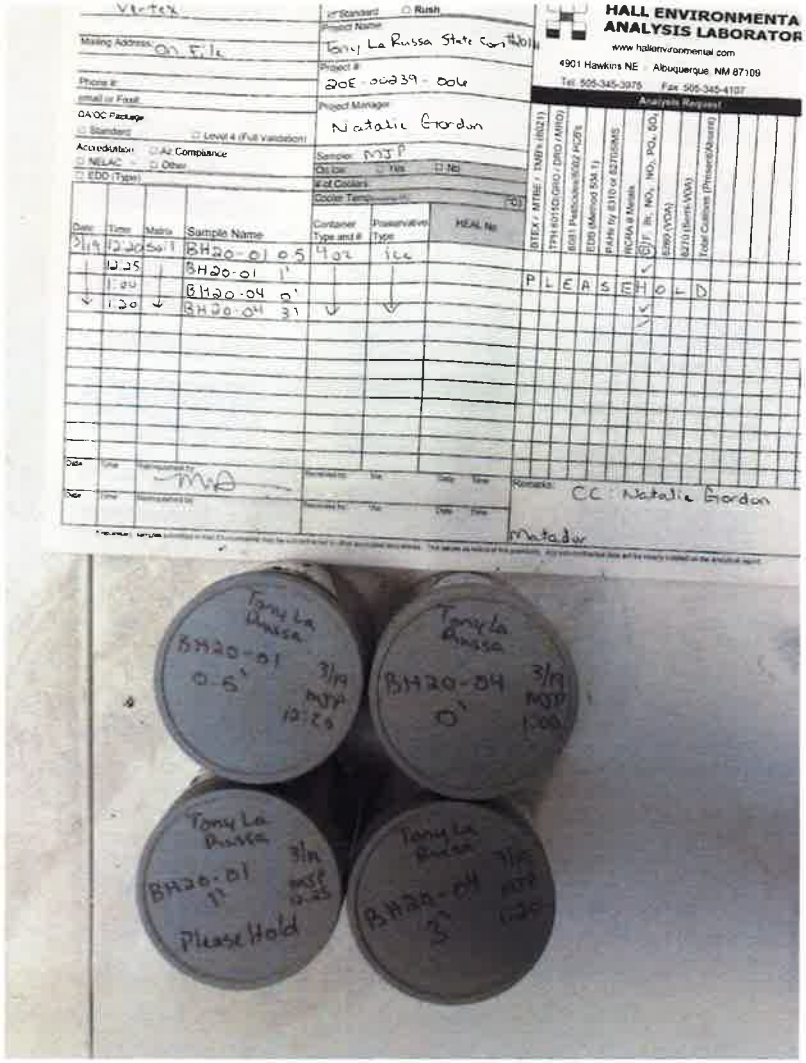
VERTEX

Site Sketch



Daily Site Visit Report

VERTEX



Daily Site Visit Report

VERTEX

Summary of Daily Operations

12:41 Characterize spill area on pad and off pad. Delineation vertically and horizontally. Part of spill is behind equipment underneath piping

14:08 Area on pad has been driven through and could use possible surface scrape where roadway goes through

16:27 Area off pad on the east side seems to have been deepest spot to clean up, fluid seemed to have puddled up and sat in this area. Soil was very loamy in pasture and under pad about 0.5 inches got loamy under what they used to build the pad. Top 0.5 inches was very rocky and hard packed

Next Steps & Recommendations

1. Wait on lab analysis
2. Get six inch scrape completed to keep chlorides from going any deeper
3. Develop work plan for remediation on off pad area in pasture
4. Possibly scrape roadway on pad for possible tracking of pw via vehicles

Daily Site Visit Report

VERTEX

Site Photos

Viewing Direction: East

Spill behind point of release under piping and behind equipment

Viewing Direction: East

Spill area on pad north of point of release

Viewing Direction: Northeast

Spill area on north side of point of release towards risers

Viewing Direction: Southeast

Spill area on pad leading to spill going to offpad area

Daily Site Visit Report

VERTEX

Viewing Direction: East	**Viewing Direction**: Southeast
	
Spill area going off pad on east side	Spill area on east side of off pad area
Viewing Direction: North	**Viewing Direction**: West
	
Spill area on east side of off pad area	Spill area off pad on east side

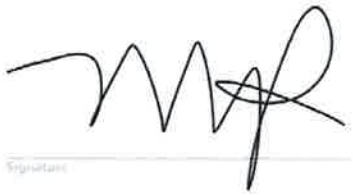
Daily Site Visit Report

VERTEX

Daily Site Visit Signature

Inspector: Monica Peppin

Signature:



Daily Site Visit Report

Client:	Matador Resources	Inspection Date:	4/20/2020
Site Location Name:	Tony La Russa State Com 201H/202H	Report Run Date:	4/20/2020 11:17 PM
Project Owner:	John Hurt	File (Project) #:	20E-00239
Project Manager:	Natalie Gordon	API #:	30-015-45964
Client Contact Name:	John Hurt	Reference	3/18/2020 - 12 bbls PW Spill
Client Contact Phone #:			

Summary of Times

Left Office	4/20/2020 6:15 AM
Arrived at Site	4/20/2020 6:50 AM
Departed Site	
Returned to Office	

Summary of Daily Operations

7:58 Begin excavation of pasture area on east side of tank battery and pad area on north side of tank battery.

15:33 Excavation to continue into tomorrow. Pasture area is complete with fencing around deeper excavated spot

Next Steps & Recommendations

1 Collect confirmation samples

2 Continue guiding excavation with field screens

Daily Site Visit Report

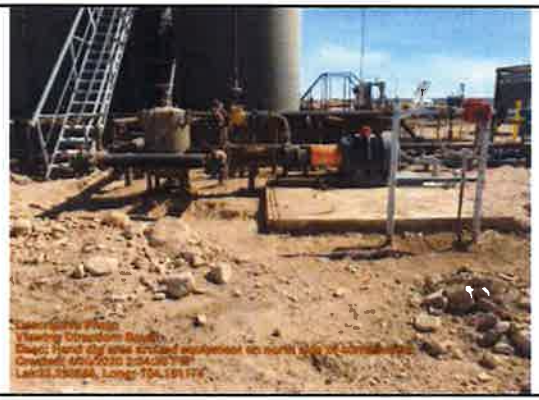
VERTEX

Site Photos

Viewing Direction: South

Pasture excavation depth of 2 ft

Viewing Direction: South



Hand dig area around equipment on north side of containment

Viewing Direction: East

Start of excavation on pad

Viewing Direction: Southeast

Excavated area where spill had went into pasture

Daily Site Visit Report

VERTEX

Viewing Direction: West	**Viewing Direction**: Northwest
	
Fenced in area around spot excavated to 2 ft	Excavation area coming from off pad to pasture

Daily Site Visit Report

VERTEX

Daily Site Visit Signature

Inspector: Monica Peppin

Signature:

Daily Site Visit Report

VERTEX

Client:	Matador Resources	Inspection Date:	4/21/2020
Site Location Name:	Tony La Russa State Com 201H/202H	Report Run Date:	4/21/2020 8:33 PM
Project Owner:	John Hurt	File (Project) #:	20E-00239
Project Manager:	Natalie Gordon	API #:	30-015-45964
Client Contact Name:	John Hurt	Reference	3/18/2020 - 12 bbls PW Spill
Client Contact Phone #:			

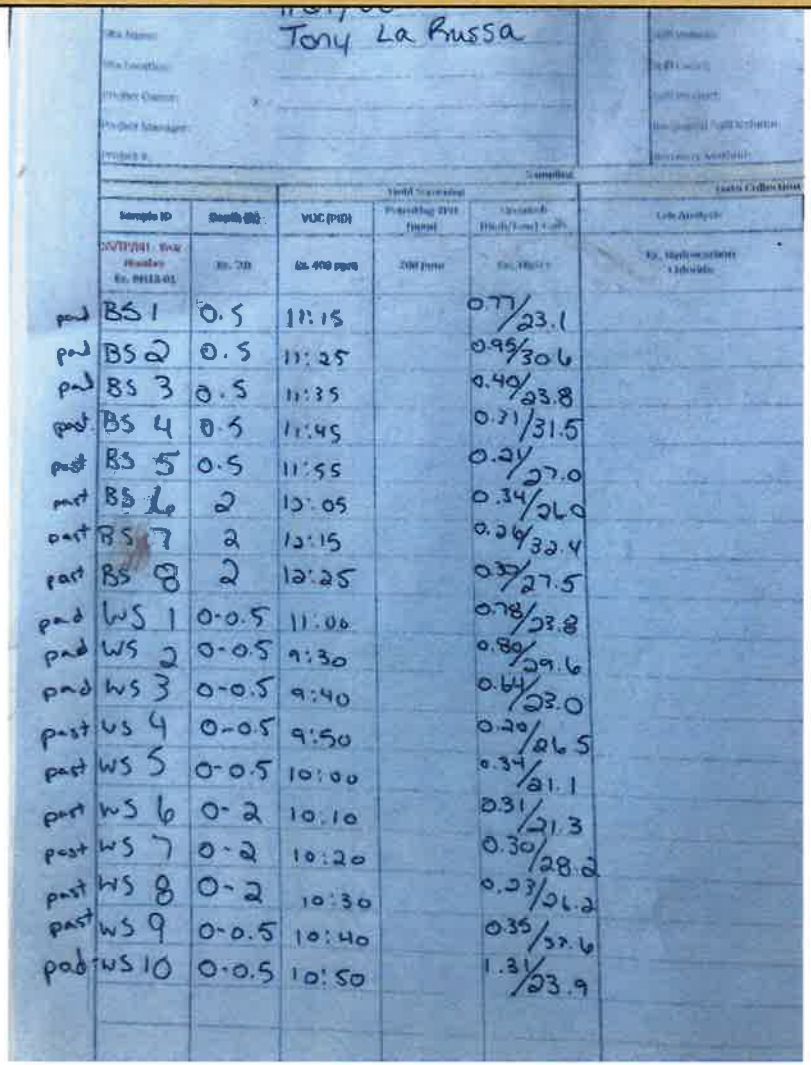
Summary of Times

Left Office	4/21/2020 6:30 AM
Arrived at Site	4/21/2020 7:00 AM
Departed Site	4/21/2020 1:10 PM
Returned to Office	

Daily Site Visit Report

VERTEX

Site Sketch



Tony La Russa

	Sample ID	Depth (ft)	VOC (PID)		
pad	BS 1	0.5	11:15		0.77/23.1
pad	BS 2	0.5	11:25		0.95/30.6
pad	BS 3	0.5	11:35		0.40/23.8
past	BS 4	0.5	11:45		0.71/31.5
past	BS 5	0.5	11:55		0.21/27.0
past	BS 6	2	12:05		0.34/26.0
past	BS 7	2	12:15		0.26/32.4
past	BS 8	2	12:25		0.39/27.5
pad	WS 1	0-0.5	11:06		0.78/23.8
pad	WS 2	0-0.5	9:30		0.80/29.6
pad	WS 3	0-0.5	9:40		0.64/23.0
past	WS 4	0-0.5	9:50		0.20/26.5
past	WS 5	0-0.5	10:00		0.34/21.1
past	WS 6	0-2	10:10		0.31/21.3
past	WS 7	0-2	10:20		0.30/28.2
past	WS 8	0-2	10:30		0.23/26.2
past	WS 9	0-0.5	10:40		0.35/32.6
pad	WS 10	0-0.5	10:50		1.31/23.9

Daily Site Visit Report

Daily Site Visit Report

VERTEX

Summary of Daily Operations

9:26 Continue guidance of excavation. Collect confirmation samples throughout excavation of base and side walls, map out excavation area and sample points

Next Steps & Recommendations

1 Await lab analysis

2 Complete backfill

3 Start closure report

Daily Site Visit Report

VERTEX

Site Photos

Viewing Direction: West

Pad area excavated on north side of containment

Viewing Direction: South

Hand dig area underneath equipment

Viewing Direction: East

Excavated area on pad going towards pasture

Viewing Direction: Southeast

Excavated area following road way from pad to pasture excavation

Daily Site Visit Report

VERTEX

Viewing Direction: South

Pasture excavation 0.5 inch leading to 2 ft area

Viewing Direction: South

2 ft excavation area on east side of pad in pasture

Viewing Direction: Northwest

2 ft excavation area going back towards pad area where 0.5 inch excavation occurred

Viewing Direction: North

Pad area excavation towards risers

Daily Site Visit Report

VERTEX

Viewing Direction: West

Side wall near containment of excavation

Daily Site Visit Report

VERTEX

Daily Site Visit Signature

Inspector: Monica Peppin

Signature:

R360

TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST
(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name: Tommy Tory
Phone No.

GENERATOR

NO. 198912

Operator No.:
Operators Name: Matador Resources
Address:
City, State, Zip:
Phone No.: 940.390.1807 / 972.371.5491

Permit/RRC No.:
Lease/Well Name & No.: Tony Lo Rosa 5# Com 201 H
County:
API No.: 30-015-45964
Rig Name & No.:
AFE/PO No.:

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		NON-INJECTABLE WATERS		OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Cuttings		Washout Water (Non-Injectable)		
Water Based Muds		Completion Fluid/Flow back (Non-Injectable)		
Water Based Cuttings		Produced Water (Non-Injectable)		
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)		
Tank Bottoms		INTERNAL USE ONLY		belly dump
E&P Contaminated Soil	24 yd	Truck Washout (exempt waste)		
Gas Plant Waste				

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analyzed and be below the threshold limits for toxicity (TCLP), ignitability, corrosivity and reactivity.

Non-Exempt Other: *please select from Non-Exempt Waste List on back

QUANTITY: B - BARRELS (24 Yard) Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

Joshua Rodriguez — 4-20-20
(PRINT) AUTHORIZED AGENTS SIGNATURE — DATE — SIGNATURE

TRANSPORTER

Transporter's Name: OK Trucking / Perez Trucking & Hot Shot
Address: 701 Ranch Rd
Phone No.: 432-664-9464

Driver's Name: [illegible]
Print Name:
Phone No.:
Truck No.: 6066 / [illegible] 4089

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

4-20-20 — [signature] — 4/20
SHIPMENT DATE — DRIVERS SIGNATURE — DELIVERY DATE — DRIVERS SIGNATURE

TRUCK TIME STAMP	DISPOSAL FACILITY	RECEIVING AREA
IN: 1:40pm OUT:		Name/No. 5/S7

Site Name/Permit No.: Red Bluff Facility/ STF-065
Address: 5053 US Highway 285, Orla, TX 79770
Phone No.: 432-448-4239

NORM READINGS TAKEN? (Circle One) YES (NO)
If YES, was reading > 50 micro roentgens? (circle one) YES NO
Chemical Analysis (Mg/l) Chloride
Conductivity (mmhos/cm)
pH

TANK BOTTOMS

	Feet	Inches
1st Gauge		
2nd Gauge		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

Jorge [illegible] — 4/20/20 — [illegible] — [signature]
NAME (PRINT) — DATE — TITLE — SIGNATURE

White - ORIGINAL Blue - TRANSPORTER Yellow - GENERATOR Version 1

R360

TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name ____________
Phone No. ____________

GENERATOR

NO. 198923

Operator No.		Permit/RRC No.	
Operators Name	Matador Resources	Lease/Well Name & No.	Tomy Lee Russell State Com 204H
Address		County	Eddy
		API No.	30-015-45564
City, State, Zip		Rig Name & No.	
Phone No.	440350 1867.9723215495	AFE/PO No.	

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

		NON-INJECTABLE WATERS		OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Muds		Washout Water (Non-Injectable)		
Oil Based Cuttings		Completion Fluid/Flow back (Non-Injectable)		
Water Based Muds		Produced Water (Non-Injectable)		
Water Based Cuttings		Gathering Line Water/Waste (Non-Injectable)		
Produced Formation Solids		INTERNAL USE ONLY		
Tank Bottoms		Truck Washout (exempt waste)		
E&P Contaminated Soil	20 yards			Bottom dump
Gas Plant Waste				

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), ignitability, corrosivity and reactivity.

Non-Exempt Other ____________ *please select from Non-Exempt Waste List on back

QUANTITY B - BARRELS 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

Justino Rodriguez — 6-20-20 — ____________
(PRINT) AUTHORIZED AGENTS SIGNATURE — DATE — SIGNATURE

TRANSPORTER

Transporter's Name	OK Trucking / Garza Trucking & Hotshot	Driver's Name	Fidel Garza
Address	1201 Loraino Road	Print Name	
		Phone No.	
Phone No.		Truck No.	6056 / WH2 4084

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

6-20-20 — Fidel Garza — ____________ — ____________
SHIPMENT DATE — DRIVER'S SIGNATURE — DELIVERY DATE — DRIVER'S SIGNATURE

TRUCK TIME STAMP
IN: 1:40pm OUT: ____________

DISPOSAL FACILITY

RECEIVING AREA
Name/No. 50/37

Site Name/ Permit No.	Red Bluff Facility/ STF-065	Phone No.	432-448-4239
Address	5053 US Highway 285, Orla, TX 79770		

NORM READINGS TAKEN? (Circle One) YES (NO) — If YES, was reading > 50 micro roentgens? (circle one) YES NO

Chemical Analysis Chloride (Mg/l) ____________ Conductivity (mmhos/cm) ____________ pH ____________

TANK BOTTOMS

	Feet	Inches
1st Gauge		
2nd Gauge		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why? ____________

Jorge Lopez — 6/20/20 — Attendant — ____________
NAME (PRINT) — DATE — TITLE — SIGNATURE

White - ORIGINAL Blue - TRANSPORTER Yellow - GENERATOR

Version 1

R360

TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST
(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name
Phone No.

GENERATOR

NO. 198934

Operator No.
Operators Name
Address
City, State, Zip
Phone No.

Permit/RRC No.
Lease/Well Name & No.
County
API No.
Rig Name & No.
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		NON-INJECTABLE WATERS		OTHER EXEMPT WASTES
Oil Based Cuttings		Washout Water (Non-Injectable)		
Water Based Muds		Completion Fluid/Flow back (Non-Injectable)		
Water Based Cuttings		Produced Water (Non-Injectable)		
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)		
Tank Bottoms		INTERNAL USE ONLY		
E&P Contaminated Soil		Truck Washout (exempt waste)		
Gas Plant Waste				

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), ignitability, Corrosivity and Reactivity.

Non-Exempt Other: *please select from Non-Exempt Waste List on back

QUANTITY B - BARRELS Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☑ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE DATE SIGNATURE

TRANSPORTER

Transporter's Name
Address
Phone No.

Driver's Name
Print Name
Phone No.
Truck No.

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE DRIVER'S SIGNATURE DELIVERY DATE DRIVER'S SIGNATURE

TRUCK TIME STAMP
IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA
Name/No.

Site Name/Permit No. Red Bluff Facility/ STF-065
Address 5053 US Highway 285, Orla, TX 79770
Phone No. 432-448-4239

NORM READINGS TAKEN? (Circle One) YES NO
If YES, was reading > 50 micro roentgens? (circle one) YES NO
Chemical Analysis (Mg/l) Chloride
Conductivity (mmhos/cm)
pH

TANK BOTTOMS

	Feet	Inches
1st Gauge		
2nd Gauge		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

NAME (PRINT) DATE TITLE SIGNATURE

White - ORIGINAL Blue - TRANSPORTER Yellow - GENERATOR

Version 1

R360

TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact information
Name [illegible]
Phone No. 940 390 [illegible]

GENERATOR

NO. 198935

Operator No.		Permit/RRC No.	
Operators Name	Matador Resources	Lease/Well Name & No.	[illegible]
Address		County	Eddy
		API No.	30-015-45964
City, State, Zip		Rig Name & No.	
Phone No.	940.390.1367 / 972.371.5477	AFE/PO No.	

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		NON-INJECTABLE WATERS		OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Cuttings		Washout Water (Non-Injectable)		
Water Based Muds		Completion Fluid/Flow back (Non-Injectable)		
Water Based Cuttings		Produced Water (Non-Injectable)		
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)		
Tank Bottoms		INTERNAL USE ONLY		
E&P Contaminated Soil	20 yds	Truck Washout (exempt waste)		Belly Dump
Gas Plant Waste				

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other _______ *please select from Non-Exempt Waste List on back

QUANTITY B - BARRELS 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☒ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

Joshua Rodriguez — (PRINT) AUTHORIZED AGENTS SIGNATURE
4.20.20 — DATE
[signature] — SIGNATURE

TRANSPORTER

Transporter's Name	[illegible]	Driver's Name	Teddy Paz
Address	1201 Rancho	Print Name	
		Phone No.	
Phone No.		Truck No.	6066 / WHP 4089

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

4-20-20 — SHIPMENT DATE; Teddy Paz — DRIVER'S SIGNATURE; DELIVERY DATE; DRIVER'S SIGNATURE

TRUCK TIME STAMP

IN: 4:54P OUT:

DISPOSAL FACILITY

RECEIVING AREA

Name/No. Solid T3

Site Name/ Permit No.	Red Bluff Facility/ STF-065	Phone No.	432-448-4239
Address	5053 US Highway 285, Orla, TX 79770		

NORM READINGS TAKEN? (Circle One) YES NO

If YES, was reading > 50 micro roentgens? (circle one) YES NO

Chemical Analysis Chloride (Mg/l) ____ Conductivity (mmhos/cm) ____ pH ____

TANK BOTTOMS

	Feet	Inches
1st Gauge		
2nd Gauge		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

Jorge Ciron — NAME (PRINT); 4/20/20 — DATE; Receiver — TITLE; [signature] — SIGNATURE

White - ORIGINAL Blue - TRANSPORTER Yellow - GENERATOR

Version 1

ATTACHMENT 5

Client Name: Matador Production Company
Site Name: Tony La Russa State Com 201H/202H
NM OCD Tracking Number: NRM2008758101
Project #: 20E-00239-006
Lab Report: 2003982

Table 2. Characterization Sample Field Screening and Laboratory Data - Depth to Groundwater 50 < 100 ft

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (Petro Flag)	Inorganics (Quantab - High/Low)	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride
			(ppm)	(ppm)	(+/-)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH 20-01	0	March 19, 2020	-	-	8,265	-	-	-	-	-	-	-	-
BH 20-01	0.5	March 19, 2020	-	-	535	-	-	-	-	-	-	-	250
BH 20-01	1	March 19, 2020	-	-	419	-	-	-	-	-	-	-	-
BH 20-02	0	March 19, 2020	-	-	9,639	-	-	-	-	-	-	-	-
BH 20-02	0.5	March 19, 2020	-	-	584	-	-	-	-	-	-	-	-
BH 20-02	1	March 19, 2020	-	-	554	-	-	-	-	-	-	-	-
BH 20-03	0	March 19, 2020	-	-	10,801	-	-	-	-	-	-	-	-
BH 20-03	0.5	March 19, 2020	-	-	435	-	-	-	-	-	-	-	-
BH 20-03	1	March 19, 2020	-	-	290	-	-	-	-	-	-	-	-
BH 20-04	0	March 19, 2020	-	-	15,034	-	-	-	-	-	-	-	**16,000**
BH 20-04	0.5	March 19, 2020	-	-	2,488	-	-	-	-	-	-	-	-
BH 20-04	1	March 19, 2020	-	-	1,195	-	-	-	-	-	-	-	-
BH 20-04	2	March 19, 2020	-	-	724	-	-	-	-	-	-	-	-
BH 20-04	3	March 19, 2020	-	-	545	-	-	-	-	-	-	-	100
SS 20-01	0	March 19, 2020	-	-	1,242	-	-	-	-	-	-	-	-
SS 20-01	0.5	March 19, 2020	-	-	558	-	-	-	-	-	-	-	-
SS 20-02	0	March 19, 2020	-	-	125	-	-	-	-	-	-	-	-
SS 20-02	0.5	March 19, 2020	-	-	186	-	-	-	-	-	-	-	-
SS 20-03	0	March 19, 2020	-	-	212	-	-	-	-	-	-	-	-
SS 20-03	0.5	March 19, 2020	-	-	353	-	-	-	-	-	-	-	-
SS 20-04	0	March 19, 2020	-	-	95	-	-	-	-	-	-	-	-
SS 20-04	0.5	March 19, 2020	-	-	414	-	-	-	-	-	-	-	-

"-" Not assessed/analyzed
Bold and shaded indicates exceedance outside of applied action level

VERTEX

Client Name: Matador Production Company
Site Name: Tony La Russa State Com #201H/202H
NM OCD Incident Tracking #: NRM2008758101
Project #: 20E-00239-006
Lab Report: 2004997/2004999/2012234

Table 3. Confirmatory Sampling Field Screen and Laboratory Data: Depth-to-Groundwater < 50 feet

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (Petro Flag)	Inorganics (Electroconductivity)	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BS 20-01	0.5	April 21, 2020	-	-	921	<0.024	<0.219	<4.9	<9.4	<47	<14.3	<61.3	200
BS 20-02	0.5	April 21, 2020	-	-	856	<0.025	<0.221	<4.9	<9.7	<48	<14.6	<62.6	**790**
BS 20-02	0.5	December 2, 2020	-	-	-	<0.025	<0.224	<5.0	<9.9	<49	<14.9	<63.9	**<60**
BS 20-03	0.5	April 21, 2020	-	-	357	<0.025	<0.221	<4.9	<9.7	<48	<14.6	<62.6	230
BS 20-04	0.5	April 21, 2020	-	-	<0	<0.025	<0.221	<4.9	<9.5	<48	<14.4	<62.4	170
BS 20-05	0.5	43942	-	-	<0	<0.024	<0.213	<4.7	<9.6	<48	<14.3	<62.3	<60
BS 20-06	2	43942	-	-	175	<0.024	<0.217	<4.8	<9.5	<47	<14.3	<61.3	140
BS 20-07	2	43942	-	-	<0	<0.024	<0.213	<4.7	<9.8	<49	<14.5	<63.5	63
BS 20-08	2	43942	-	-	52	<0.023	<0.207	<4.6	<9.7	<48	<14.3	<62.3	100
WS 20-01	0-0.5	April 21, 2020	-	-	905	<0.025	<0.222	<4.9	<9.5	<47	<14.4	<61.4	380
WS 20-02	0-0.5	April 21, 2020	-	-	683	<0.024	<0.215	<4.8	<9.3	<47	<14.1	<61.1	330
WS 20-03	0-0.5	April 21, 2020	-	-	969	<0.024	<0.219	<4.9	<9.4	<47	<14.3	<61.3	250
WS 20-04	0-0.5	43942	-	-	<0	<0.024	<0.216	<4.8	<9.8	<49	<14.6	<63.6	<60
WS 20-05	0-0.5	43942	-	-	387	<0.024	<0.217	<4.8	<9.6	<48	<14.4	<62.4	260
WS 20-06	0-2	43942	-	-	335	<0.023	<0.207	<4.6	<9.6	<48	<14.2	<62.2	220
WS 20-07	0-2	43942	-	-	22	<0.023	<0.208	<4.6	<10	<50	<14.6	<64.6	82
WS 20-08	0-2	43942	-	-	8	<0.025	<0.224	<5.0	<9.3	<47	<14.3	<61.3	120
WS 20-09	0-0.5	43942	-	-	<0	<0.025	<0.221	<4.9	<9.9	<50	<14.8	<64.8	250
WS 20-10	0-0.5	April 21, 2020	-	-	<0	<0.025	<0.224	<5.0	<9.4	<47	<14.4	<61.4	**1,800**
WS 20-10	0-0.5	December 2, 2020	-	-	-	<0.025	<0.221	<4.9	<9.8	<49	<14.7	<63.7	**<60**

"-" - Not assessed/analyzed
Green shading indicates samples from off-lease.
Bold and grey shaded indicates exceedance outside of, or near, NM OCD Closure Criteria
Bold and green-shaded indicates recollection of sample previously exceeding NM OCD Closure Criteria

VERTEX

ATTACHMENT 6

Natalie Gordon

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Thursday, April 16, 2020 4:01 PM
To: Natalie Gordon
Subject: Fwd: NRM2008758101: Tony La Russa State Com 201H/202H - 48-hr Notification of Confirmation Sampling

---------- Forwarded message ---------
From: **Dhugal Hanton** <vertexresourcegroupusa@gmail.com>
Date: Thu, Apr 16, 2020 at 4:00 PM
Subject: NRM2008758101: Tony La Russa State Com 201H/202H - 48-hr Notification of Confirmation Sampling
To: Bratcher, Mike, EMNRD <Mike.Bratcher@state.nm.us>, Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>, Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>, <rmann@slo.state.nm.us>

All,

Please accept this email as 48-hr notification that Vertex Resource Services has scheduled remediation field activities and confirmatory sampling to be conducted at Tony La Russa for the produced water release that occurred on March 18, 2020, incident tracking # NRM2008758101.

This work will be completed on behalf of Matador Production Company.

On Monday, April 20, 2020 at approximately 8:00 a.m., Monica Peppin of Vertex will be onsite to guide remediation activities. On Tuesday, April 21, 2020 starting at approximately 8:00 a.m. she will begin collecting confirmatory sampling as the remediation activities finish up. Monica can be reached at 575-361-9880. If you need directions to the site, please do not hesitate to contact her. If you have any questions or concerns regarding this notification, please give me a call at 505-506-0040.

Thank you,
Natalie

Natalie Gordon
Project Manager

Vertex Resource Group Ltd.
213 S. Mesa Street
Carlsbad, NM 88220

P 575.725.5001 ext 709
C 505.506.0040
F

www.vertex.ca

Natalie Gordon

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Friday, November 27, 2020 3:07 PM
To: Natalie Gordon
Subject: Fwd: NRM2008758101: Tony La Russa State Com 201H/202H - 48-hr Notification of Confirmatory Sampling

---------- Forwarded message ---------
From: **Dhugal Hanton** <vertexresourcegroupusa@gmail.com>
Date: Fri, Nov 27, 2020 at 3:01 PM
Subject: NRM2008758101: Tony La Russa State Com 201H/202H - 48-hr Notification of Confirmatory Sampling
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>, <spills@slo.state.nm.us>, <rmann@slo.state.nm.us>

All,

Please accept this email as 48-hr notification that Vertex Resource Services has scheduled additional remediation field activities and confirmatory sampling to be conducted at Tony La Russa for the produced water release that occurred on March 18, 2020, incident tracking # NRM2008758101.

This work will be completed on behalf of Matador Production Company.

On Wednesday, December 2, 2020 at approximately 8:00 a.m., Monica Peppin of Vertex will be onsite to guide additional remediation activities and conduct additional confirmatory sampling. She can be reached at 575-361-9880. If you need directions to the site, please do not hesitate to contact her. If you have any questions or concerns regarding this notification, please give me a call at 505-506-0040.

Thank you,
Natalie

Natalie Gordon
Project Manager

Vertex Resource Group Ltd.
213 S. Mesa Street
Carlsbad, NM 88220

P 575.725.5001 ext 709
C 505.506.0040
F

www.vertex.ca

ATTACHMENT 7

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 30, 2020

Natalie Gordon
Vertex Resource Group Ltd.
213 S. Mesa St
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX:

RE: Tony La Russa State Com 201H OrderNo.: 2003982

Dear Natalie Gordon:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/21/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **2003982**
Date Reported: **3/30/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd. **Lab Order:** 2003982
Project: Tony La Russa State Com 201H

Lab ID: 2003982-001 **Collection Date:** 3/19/2020 12:20:00 PM
Client Sample ID: BH20-01 0.5' **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	250	60		mg/Kg	20	3/26/2020 1:57:21 PM	51338

Lab ID: 2003982-003 **Collection Date:** 3/19/2020 1:00:00 PM
Client Sample ID: BH20-04 0' **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	16000	600		mg/Kg	200	3/27/2020 4:19:33 PM	51338

Lab ID: 2003982-004 **Collection Date:** 3/19/2020 1:20:00 PM
Client Sample ID: BH20-04 3' **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	100	60		mg/Kg	20	3/26/2020 2:22:03 PM	51338

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2003982**
30-Mar-20

Client: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H

Sample ID: **MB-51338** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **51338** RunNo: **67593**
Prep Date: **3/26/2020** Analysis Date: **3/26/2020** SeqNo: **2334120** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-51338** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **51338** RunNo: **67593**
Prep Date: **3/26/2020** Analysis Date: **3/26/2020** SeqNo: **2334121** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.5	90	110			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: VERTEX CARLSBAD Work Order Number: 2003982 RcptNo: 1

Received By: Yazmine Garduno 3/21/2020 8:06:00 AM

Completed By: Yazmine Garduno 3/21/2020 10:23:41 AM

Reviewed By: JO 3/23/20

Chain of Custody

1. Is Chain of Custody sufficiently complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: DAD 3/23/20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good				
2	0.5	Good				

Chain-of-Custody Record

Client: Vertex

Mailing Address: On File

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 5 Day
☑ Standard ☐ Rush

Project Name: Tony La Russa State Com #201H

Project #: 20E-00239-006

Project Manager: Natalie Gordon

Sampler: MJP

On Ice: ☑ Yes ☐ No

# of Coolers: 1 0.3-0.2-0.1

Cooler Temp (including CF): 0.1-0.2=0.5 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No 2003942	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
3/19	12:20	Soil	BH20-01 0.5	4oz	ice	-001							✓			
↓	12:25	↓	BH20-01 1'	↓	↓	-002	P	L	E	A	S	E	H	O	L	D
	1:00		BH20-04 0'			-003							✓			
↓	1:20	↓	BH20-04 3'	↓	↓	-004							✓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/20	1200	MJP	Chelsea Ellett		3/20	1400
3/20	1900	Chelsea Ellett	VA	Courier	3/21/20	0800

Remarks: CC: Natalie Gordon

Matador

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 29, 2020

Natalie Gordon
Vertex Resource Group Ltd.
213 S. Mesa St
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX

RE: Tony La Russa State Com 201H Pasture OrderNo.: 2004997

Dear Natalie Gordon:

Hall Environmental Analysis Laboratory received 11 sample(s) on 4/23/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2004997**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pasture
Lab ID: 2004997-001 **Matrix:** SOIL

Client Sample ID: BS20-04 0.5'
Collection Date: 4/21/2020 11:45:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/24/2020 5:07:33 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/24/2020 5:07:33 PM
Surr: DNOP	37.4	55.1-146	S	%Rec	1	4/24/2020 5:07:33 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	170	60		mg/Kg	20	4/26/2020 10:46:33 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.025		mg/Kg	1	4/27/2020 2:19:13 PM
Toluene	ND	0.049		mg/Kg	1	4/27/2020 2:19:13 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/27/2020 2:19:13 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/27/2020 2:19:13 PM
Surr: 1,2-Dichloroethane-d4	81.0	70-130		%Rec	1	4/27/2020 2:19:13 PM
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	1	4/27/2020 2:19:13 PM
Surr: Dibromofluoromethane	88.4	70-130		%Rec	1	4/27/2020 2:19:13 PM
Surr: Toluene-d8	95.6	70-130		%Rec	1	4/27/2020 2:19:13 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/27/2020 2:19:13 PM
Surr: BFB	98.5	70-130		%Rec	1	4/27/2020 2:19:13 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004997**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd. **Client Sample ID:** BS20-05 0.5'
Project: Tony La Russa State Com 201H Pasture **Collection Date:** 4/21/2020 11:55:00 AM
Lab ID: 2004997-002 **Matrix:** SOIL **Received Date:** 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/27/2020 3:42:04 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/27/2020 3:42:04 PM
Surr: DNOP	78.5	55.1-146		%Rec	1	4/27/2020 3:42:04 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/26/2020 11:23:32 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.024		mg/Kg	1	4/27/2020 3:44:57 PM
Toluene	ND	0.047		mg/Kg	1	4/27/2020 3:44:57 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/27/2020 3:44:57 PM
Xylenes, Total	ND	0.095		mg/Kg	1	4/27/2020 3:44:57 PM
Surr: 1,2-Dichloroethane-d4	81.4	70-130		%Rec	1	4/27/2020 3:44:57 PM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	4/27/2020 3:44:57 PM
Surr: Dibromofluoromethane	87.5	70-130		%Rec	1	4/27/2020 3:44:57 PM
Surr: Toluene-d8	94.1	70-130		%Rec	1	4/27/2020 3:44:57 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/27/2020 3:44:57 PM
Surr: BFB	97.6	70-130		%Rec	1	4/27/2020 3:44:57 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004997**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pasture
Lab ID: 2004997-003 **Matrix:** SOIL

Client Sample ID: BS20-06 2'
Collection Date: 4/21/2020 12:05:00 PM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/24/2020 5:55:43 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/24/2020 5:55:43 PM
Surr: DNOP	25.4	55.1-146	S	%Rec	1	4/24/2020 5:55:43 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	140	60		mg/Kg	20	4/27/2020 12:14:51 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.024		mg/Kg	1	4/27/2020 5:10:26 PM
Toluene	ND	0.048		mg/Kg	1	4/27/2020 5:10:26 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/27/2020 5:10:26 PM
Xylenes, Total	ND	0.097		mg/Kg	1	4/27/2020 5:10:26 PM
Surr: 1,2-Dichloroethane-d4	78.0	70-130		%Rec	1	4/27/2020 5:10:26 PM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	4/27/2020 5:10:26 PM
Surr: Dibromofluoromethane	88.9	70-130		%Rec	1	4/27/2020 5:10:26 PM
Surr: Toluene-d8	94.2	70-130		%Rec	1	4/27/2020 5:10:26 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/27/2020 5:10:26 PM
Surr: BFB	98.6	70-130		%Rec	1	4/27/2020 5:10:26 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004997**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Client Sample ID: BS20-07 2'
Project: Tony La Russa State Com 201H Pasture
Collection Date: 4/21/2020 12:15:00 PM
Lab ID: 2004997-004 **Matrix:** SOIL
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/28/2020 12:42:45 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/28/2020 12:42:45 PM
Surr: DNOP	84.8	55.1-146		%Rec	1	4/28/2020 12:42:45 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	63	60		mg/Kg	20	4/27/2020 12:27:16 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.024		mg/Kg	1	4/27/2020 5:38:56 PM
Toluene	ND	0.047		mg/Kg	1	4/27/2020 5:38:56 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/27/2020 5:38:56 PM
Xylenes, Total	ND	0.095		mg/Kg	1	4/27/2020 5:38:56 PM
Surr: 1,2-Dichloroethane-d4	79.2	70-130		%Rec	1	4/27/2020 5:38:56 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	4/27/2020 5:38:56 PM
Surr: Dibromofluoromethane	85.7	70-130		%Rec	1	4/27/2020 5:38:56 PM
Surr: Toluene-d8	94.4	70-130		%Rec	1	4/27/2020 5:38:56 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/27/2020 5:38:56 PM
Surr: BFB	101	70-130		%Rec	1	4/27/2020 5:38:56 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004997**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pasture
Lab ID: 2004997-005 **Matrix:** SOIL

Client Sample ID: BS20-08 2'
Collection Date: 4/21/2020 12:25:00 PM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/24/2020 6:44:00 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/24/2020 6:44:00 PM
Surr: DNOP	20.3	55.1-146	S	%Rec	1	4/24/2020 6:44:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	100	60		mg/Kg	20	4/27/2020 1:04:30 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.023		mg/Kg	1	4/27/2020 6:07:27 PM
Toluene	ND	0.046		mg/Kg	1	4/27/2020 6:07:27 PM
Ethylbenzene	ND	0.046		mg/Kg	1	4/27/2020 6:07:27 PM
Xylenes, Total	ND	0.092		mg/Kg	1	4/27/2020 6:07:27 PM
Surr: 1,2-Dichloroethane-d4	80.2	70-130		%Rec	1	4/27/2020 6:07:27 PM
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	4/27/2020 6:07:27 PM
Surr: Dibromofluoromethane	85.7	70-130		%Rec	1	4/27/2020 6:07:27 PM
Surr: Toluene-d8	93.8	70-130		%Rec	1	4/27/2020 6:07:27 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/27/2020 6:07:27 PM
Surr: BFB	94.0	70-130		%Rec	1	4/27/2020 6:07:27 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004997**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pasture
Lab ID: 2004997-006 **Matrix:** SOIL

Client Sample ID: WS20-04 0-0.5'
Collection Date: 4/21/2020 9:50:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/27/2020 4:30:04 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/27/2020 4:30:04 PM
Surr: DNOP	111	55.1-146		%Rec	1	4/27/2020 4:30:04 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/27/2020 1:16:54 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.024		mg/Kg	1	4/27/2020 6:36:09 PM
Toluene	ND	0.048		mg/Kg	1	4/27/2020 6:36:09 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/27/2020 6:36:09 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/27/2020 6:36:09 PM
Surr: 1,2-Dichloroethane-d4	77.3	70-130		%Rec	1	4/27/2020 6:36:09 PM
Surr: 4-Bromofluorobenzene	99.9	70-130		%Rec	1	4/27/2020 6:36:09 PM
Surr: Dibromofluoromethane	88.2	70-130		%Rec	1	4/27/2020 6:36:09 PM
Surr: Toluene-d8	97.6	70-130		%Rec	1	4/27/2020 6:36:09 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/27/2020 6:36:09 PM
Surr: BFB	103	70-130		%Rec	1	4/27/2020 6:36:09 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004997**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pasture
Lab ID: 2004997-007 **Matrix:** SOIL

Client Sample ID: WS20-05 0-0.5'
Collection Date: 4/21/2020 10:00:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/24/2020 7:32:32 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/24/2020 7:32:32 PM
Surr: DNOP	25.7	55.1-146	S	%Rec	1	4/24/2020 7:32:32 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	260	60		mg/Kg	20	4/27/2020 1:29:19 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.024		mg/Kg	1	4/27/2020 7:04:37 PM
Toluene	ND	0.048		mg/Kg	1	4/27/2020 7:04:37 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/27/2020 7:04:37 PM
Xylenes, Total	ND	0.097		mg/Kg	1	4/27/2020 7:04:37 PM
Surr: 1,2-Dichloroethane-d4	79.2	70-130		%Rec	1	4/27/2020 7:04:37 PM
Surr: 4-Bromofluorobenzene	99.1	70-130		%Rec	1	4/27/2020 7:04:37 PM
Surr: Dibromofluoromethane	89.3	70-130		%Rec	1	4/27/2020 7:04:37 PM
Surr: Toluene-d8	93.6	70-130		%Rec	1	4/27/2020 7:04:37 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/27/2020 7:04:37 PM
Surr: BFB	98.4	70-130		%Rec	1	4/27/2020 7:04:37 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004997**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pasture
Lab ID: 2004997-008 **Matrix:** SOIL

Client Sample ID: WS20-06 0-2'
Collection Date: 4/21/2020 10:10:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/24/2020 7:56:37 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/24/2020 7:56:37 PM
Surr: DNOP	29.2	55.1-146	S	%Rec	1	4/24/2020 7:56:37 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	220	60		mg/Kg	20	4/27/2020 1:41:44 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.023		mg/Kg	1	4/27/2020 7:33:05 PM
Toluene	ND	0.046		mg/Kg	1	4/27/2020 7:33:05 PM
Ethylbenzene	ND	0.046		mg/Kg	1	4/27/2020 7:33:05 PM
Xylenes, Total	ND	0.092		mg/Kg	1	4/27/2020 7:33:05 PM
Surr: 1,2-Dichloroethane-d4	79.5	70-130		%Rec	1	4/27/2020 7:33:05 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	4/27/2020 7:33:05 PM
Surr: Dibromofluoromethane	88.3	70-130		%Rec	1	4/27/2020 7:33:05 PM
Surr: Toluene-d8	96.4	70-130		%Rec	1	4/27/2020 7:33:05 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/27/2020 7:33:05 PM
Surr: BFB	100	70-130		%Rec	1	4/27/2020 7:33:05 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004997**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pasture
Lab ID: 2004997-009 **Matrix:** SOIL

Client Sample ID: WS20-07 0-2'
Collection Date: 4/21/2020 10:20:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/27/2020 4:54:04 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/27/2020 4:54:04 PM
Surr: DNOP	69.3	55.1-146		%Rec	1	4/27/2020 4:54:04 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	82	61		mg/Kg	20	4/27/2020 1:54:09 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.023		mg/Kg	1	4/27/2020 8:01:37 PM
Toluene	ND	0.046		mg/Kg	1	4/27/2020 8:01:37 PM
Ethylbenzene	ND	0.046		mg/Kg	1	4/27/2020 8:01:37 PM
Xylenes, Total	ND	0.093		mg/Kg	1	4/27/2020 8:01:37 PM
Surr: 1,2-Dichloroethane-d4	79.8	70-130		%Rec	1	4/27/2020 8:01:37 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	4/27/2020 8:01:37 PM
Surr: Dibromofluoromethane	87.7	70-130		%Rec	1	4/27/2020 8:01:37 PM
Surr: Toluene-d8	96.3	70-130		%Rec	1	4/27/2020 8:01:37 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/27/2020 8:01:37 PM
Surr: BFB	99.2	70-130		%Rec	1	4/27/2020 8:01:37 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004997**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pasture
Lab ID: 2004997-010 **Matrix:** SOIL

Client Sample ID: WS20-08 0-2'
Collection Date: 4/21/2020 10:30:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/24/2020 8:44:52 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/24/2020 8:44:52 PM
Surr: DNOP	16.0	55.1-146	S	%Rec	1	4/24/2020 8:44:52 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	120	60		mg/Kg	20	4/27/2020 2:06:34 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.025		mg/Kg	1	4/27/2020 8:30:03 PM
Toluene	ND	0.050		mg/Kg	1	4/27/2020 8:30:03 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/27/2020 8:30:03 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/27/2020 8:30:03 PM
Surr: 1,2-Dichloroethane-d4	79.2	70-130		%Rec	1	4/27/2020 8:30:03 PM
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	4/27/2020 8:30:03 PM
Surr: Dibromofluoromethane	85.2	70-130		%Rec	1	4/27/2020 8:30:03 PM
Surr: Toluene-d8	95.5	70-130		%Rec	1	4/27/2020 8:30:03 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/27/2020 8:30:03 PM
Surr: BFB	98.2	70-130		%Rec	1	4/27/2020 8:30:03 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004997**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pasture
Lab ID: 2004997-011 **Matrix:** SOIL

Client Sample ID: WS20-09 0-0.5'
Collection Date: 4/21/2020 10:40:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/24/2020 9:29:16 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/24/2020 9:29:16 AM
Surr: DNOP	100	55.1-146		%Rec	1	4/24/2020 9:29:16 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	250	60		mg/Kg	20	4/27/2020 2:18:59 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.025		mg/Kg	1	4/27/2020 8:58:30 PM
Toluene	ND	0.049		mg/Kg	1	4/27/2020 8:58:30 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/27/2020 8:58:30 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/27/2020 8:58:30 PM
Surr: 1,2-Dichloroethane-d4	79.1	70-130		%Rec	1	4/27/2020 8:58:30 PM
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	4/27/2020 8:58:30 PM
Surr: Dibromofluoromethane	88.4	70-130		%Rec	1	4/27/2020 8:58:30 PM
Surr: Toluene-d8	94.1	70-130		%Rec	1	4/27/2020 8:58:30 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/27/2020 8:58:30 PM
Surr: BFB	97.2	70-130		%Rec	1	4/27/2020 8:58:30 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004997**

29-Apr-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa State Com 201H Pasture

Sample ID: **MB-52089** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **52089** RunNo: **68426**
Prep Date: **4/26/2020** Analysis Date: **4/26/2020** SeqNo: **2367641** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-52089** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **52089** RunNo: **68426**
Prep Date: **4/26/2020** Analysis Date: **4/26/2020** SeqNo: **2367642** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.8	90	110			

Sample ID: **MB-52092** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **52092** RunNo: **68439**
Prep Date: **4/26/2020** Analysis Date: **4/26/2020** SeqNo: **2368151** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-52092** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **52092** RunNo: **68439**
Prep Date: **4/26/2020** Analysis Date: **4/27/2020** SeqNo: **2368152** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004997**

29-Apr-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa State Com 201H Pasture

Sample ID: **MB-52053**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **52053**	RunNo: **68394**
Prep Date: **4/23/2020**	Analysis Date: **4/24/2020**	SeqNo: **2366387** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		130	55.1	146			

Sample ID: **MB-52057**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **52057**	RunNo: **68394**
Prep Date: **4/23/2020**	Analysis Date: **4/24/2020**	SeqNo: **2366388** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		113	55.1	146			

Sample ID: **LCS-52053**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **52053**	RunNo: **68394**
Prep Date: **4/23/2020**	Analysis Date: **4/24/2020**	SeqNo: **2366389** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	64	10	50.00	0	128	70	130			
Surr: DNOP	6.4		5.000		129	55.1	146			

Sample ID: **LCS-52057**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **52057**	RunNo: **68394**
Prep Date: **4/23/2020**	Analysis Date: **4/24/2020**	SeqNo: **2366390** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	65	10	50.00	0	129	70	130			
Surr: DNOP	6.5		5.000		129	55.1	146			

Sample ID: **2004997-011AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **WS20-09 0-0.5'**	Batch ID: **52057**	RunNo: **68394**
Prep Date: **4/23/2020**	Analysis Date: **4/24/2020**	SeqNo: **2366398** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	9.6	47.76	0	82.4	47.4	136			
Surr: DNOP	3.0		4.776		63.8	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004997**

29-Apr-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa State Com 201H Pasture

Sample ID: **2004997-011AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **WS20-09 0-0.5'**	Batch ID: **52057**	RunNo: **68394**
Prep Date: **4/23/2020**	Analysis Date: **4/24/2020**	SeqNo: **2366399** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	9.6	48.03	0	86.3	47.4	136	5.22	43.4	
Surr: DNOP	3.2		4.803		67.4	55.1	146	0	0	

Sample ID: **LCS-52131**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **52131**	RunNo: **68463**
Prep Date: **4/28/2020**	Analysis Date: **4/28/2020**	SeqNo: **2369456** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.2	70	130			
Surr: DNOP	4.2		5.000		84.2	55.1	146			

Sample ID: **MB-52131**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **52131**	RunNo: **68463**
Prep Date: **4/28/2020**	Analysis Date: **4/28/2020**	SeqNo: **2369457** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		90.2	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004997**

29-Apr-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa State Com 201H Pasture

Sample ID: **mb-52049**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **52049**	RunNo: **68429**
Prep Date: **4/23/2020**	Analysis Date: **4/26/2020**	SeqNo: **2367765** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.42		0.5000		84.5	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.2	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		94.8	70	130			
Surr: Toluene-d8	0.49		0.5000		98.4	70	130			

Sample ID: **lcs-52049**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS**	Batch ID: **52049**	RunNo: **68429**
Prep Date: **4/23/2020**	Analysis Date: **4/26/2020**	SeqNo: **2367766** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	85.3	70	130			
Toluene	0.98	0.050	1.000	0	97.9	70	130			
Ethylbenzene	1.0	0.050	1.000	0	104	70	130			
Xylenes, Total	3.1	0.10	3.000	0	103	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		88.3	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.8	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		94.6	70	130			
Surr: Toluene-d8	0.49		0.5000		97.6	70	130			

Sample ID: **2004997-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BS20-04 0.5'**	Batch ID: **52049**	RunNo: **68461**
Prep Date: **4/23/2020**	Analysis Date: **4/27/2020**	SeqNo: **2368886** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.025	0.9872	0	81.1	70	130			
Toluene	0.97	0.049	0.9872	0	98.7	70	130			
Ethylbenzene	1.1	0.049	0.9872	0	107	70	130			
Xylenes, Total	3.1	0.099	2.962	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	0.40		0.4936		80.2	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.4936		101	70	130			
Surr: Dibromofluoromethane	0.44		0.4936		89.4	70	130			
Surr: Toluene-d8	0.48		0.4936		96.3	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004997**

29-Apr-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa State Com 201H Pasture

Sample ID: **2004997-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **BS20-04 0.5'** Batch ID: **52049** RunNo: **68461**

Prep Date: **4/23/2020** Analysis Date: **4/27/2020** SeqNo: **2368887** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	0.9980	0	83.0	70	130	3.42	20	
Toluene	1.0	0.050	0.9980	0	101	70	130	3.68	20	
Ethylbenzene	1.0	0.050	0.9980	0	105	70	130	0.833	0	
Xylenes, Total	3.2	0.10	2.994	0	106	70	130	1.96	0	
Surr: 1,2-Dichloroethane-d4	0.40		0.4990		81.1	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.48		0.4990		97.1	70	130	0	0	
Surr: Dibromofluoromethane	0.44		0.4990		87.4	70	130	0	0	
Surr: Toluene-d8	0.47		0.4990		93.8	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004997**

29-Apr-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa State Com 201H Pasture

Sample ID: **mb-52049**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **52049**	RunNo: **68429**
Prep Date: **4/23/2020**	Analysis Date: **4/26/2020**	SeqNo: **2367784** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	490		500.0		98.9	70	130			

Sample ID: **lcs-52049**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **52049**	RunNo: **68429**
Prep Date: **4/23/2020**	Analysis Date: **4/26/2020**	SeqNo: **2367785** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.8	70	130			
Surr: BFB	500		500.0		100	70	130			

Sample ID: **2004997-002ams**	SampType: **MS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **BS20-05 0.5'**	Batch ID: **52049**	RunNo: **68461**
Prep Date: **4/23/2020**	Analysis Date: **4/27/2020**	SeqNo: **2368924** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.9	24.46	0	92.5	70	130			
Surr: BFB	490		489.2		99.1	70	130			

Sample ID: **2004997-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **BS20-05 0.5'**	Batch ID: **52049**	RunNo: **68461**
Prep Date: **4/23/2020**	Analysis Date: **4/27/2020**	SeqNo: **2368925** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.32	0	91.4	70	130	1.85	20	
Surr: BFB	490		486.4		101	70	130	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: VERTEX CARLSBAD Work Order Number: 2004997 RcptNo: 1

Received By: Juan Rojas 4/23/2020 9:40:00 AM

Completed By: Isaiah Ortiz 4/23/2020 8:49:48 AM

Reviewed By: JR 4/23/20

Chain of Custody

1. Is Chain of Custody sufficiently complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: EM 4/23/20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.2	Good	Not Present			
2	3.3	Good	Not Present			

Chain-of-Custody Record

Client: Vertex

Natalie Gordon

Mailing Address: on file

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn Around Time: 5 Day

☑ Standard ☐ Rush

Project Name: Tony La Russa State Com #201H (Pasture)

Project #: 20E-00239

Project Manager: Natalie Gordon

Sampler: MJP

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 0.7-0=0.2 (°C) 3.3-0=3.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2004997	BTEX MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
4/21	11:45	Soil	BS20-04 0.5'	402	ice	-001	✓	✓					✓			
	10:55		BS20-05 0.5'			-002	✓	✓					✓			
	12:05		BS20-06 2'			-003	✓	✓					✓			
	12:15		BS20-07 2'			-004	✓	✓					✓			
	12:25		BS20-08 2'			-005	✓	✓					✓			
	9:50		WS20-04 0-0.5'			-006	✓	✓					✓			
	10:00		WS20-05 0-0.5'			-007	✓	✓					✓			
	10:10		WS20-06 0-2'			-008	✓	✓					✓			
	10:20		WS20-07 0-2'			-009	✓	✓					✓			
	10:30		WS20-08 0-2'			-010	✓	✓					✓			
↓	10:40	↓	WS20-09 0-0.5'	↓	↓	-011	✓	✓					✓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
4/22/20	1300				4/22/20	1300
4/22/20	1900			courier	4/23/20	9:40

Remarks: CC: Natalie Gordon

Matador

If necessary, samples submitted to Hall Environmental may be subcontracted to accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 29, 2020

Natalie Gordon
Vertex Resource Group Ltd.
213 S. Mesa St
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX

RE: Tony La Russa State Com 201H Pad OrderNo.: 2004999

Dear Natalie Gordon:

Hall Environmental Analysis Laboratory received 7 sample(s) on 4/23/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2004999**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pad
Lab ID: 2004999-001 **Matrix:** SOIL

Client Sample ID: BS20-01 0.5'
Collection Date: 4/21/2020 11:15:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/24/2020 10:41:10 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/24/2020 10:41:10 AM
Surr: DNOP	66.5	55.1-146		%Rec	1	4/24/2020 10:41:10 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	200	60		mg/Kg	20	4/27/2020 2:31:23 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.024		mg/Kg	1	4/27/2020 9:27:24 PM
Toluene	ND	0.049		mg/Kg	1	4/27/2020 9:27:24 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/27/2020 9:27:24 PM
Xylenes, Total	ND	0.097		mg/Kg	1	4/27/2020 9:27:24 PM
Surr: 1,2-Dichloroethane-d4	79.1	70-130		%Rec	1	4/27/2020 9:27:24 PM
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	4/27/2020 9:27:24 PM
Surr: Dibromofluoromethane	88.0	70-130		%Rec	1	4/27/2020 9:27:24 PM
Surr: Toluene-d8	99.0	70-130		%Rec	1	4/27/2020 9:27:24 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/27/2020 9:27:24 PM
Surr: BFB	98.3	70-130		%Rec	1	4/27/2020 9:27:24 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004999**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pad
Lab ID: 2004999-002 **Matrix:** SOIL

Client Sample ID: BS20-02 0.5'
Collection Date: 4/21/2020 11:25:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/24/2020 11:05:09 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/24/2020 11:05:09 AM
Surr: DNOP	102	55.1-146		%Rec	1	4/24/2020 11:05:09 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	790	60		mg/Kg	20	4/27/2020 3:33:27 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.025		mg/Kg	1	4/27/2020 9:56:01 PM
Toluene	ND	0.049		mg/Kg	1	4/27/2020 9:56:01 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/27/2020 9:56:01 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/27/2020 9:56:01 PM
Surr: 1,2-Dichloroethane-d4	80.0	70-130		%Rec	1	4/27/2020 9:56:01 PM
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	4/27/2020 9:56:01 PM
Surr: Dibromofluoromethane	89.3	70-130		%Rec	1	4/27/2020 9:56:01 PM
Surr: Toluene-d8	98.1	70-130		%Rec	1	4/27/2020 9:56:01 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/27/2020 9:56:01 PM
Surr: BFB	99.3	70-130		%Rec	1	4/27/2020 9:56:01 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004999**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pad
Lab ID: 2004999-003 **Matrix:** SOIL

Client Sample ID: BS20-03 0.5'
Collection Date: 4/21/2020 11:35:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/24/2020 2:17:23 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/24/2020 2:17:23 PM
Surr: DNOP	98.7	55.1-146		%Rec	1	4/24/2020 2:17:23 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	230	60		mg/Kg	20	4/27/2020 3:45:51 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.025		mg/Kg	1	4/27/2020 10:24:46 PM
Toluene	ND	0.049		mg/Kg	1	4/27/2020 10:24:46 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/27/2020 10:24:46 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/27/2020 10:24:46 PM
Surr: 1,2-Dichloroethane-d4	79.5	70-130		%Rec	1	4/27/2020 10:24:46 PM
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	4/27/2020 10:24:46 PM
Surr: Dibromofluoromethane	87.5	70-130		%Rec	1	4/27/2020 10:24:46 PM
Surr: Toluene-d8	98.4	70-130		%Rec	1	4/27/2020 10:24:46 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/27/2020 10:24:46 PM
Surr: BFB	99.2	70-130		%Rec	1	4/27/2020 10:24:46 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2004999**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pad
Lab ID: 2004999-004 **Matrix:** SOIL

Client Sample ID: WS20-01 0-0.5'
Collection Date: 4/21/2020 11:00:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/24/2020 2:41:35 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/24/2020 2:41:35 PM
Surr: DNOP	108	55.1-146		%Rec	1	4/24/2020 2:41:35 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	380	60		mg/Kg	20	4/27/2020 3:58:16 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.025		mg/Kg	1	4/28/2020 2:14:57 AM
Toluene	ND	0.049		mg/Kg	1	4/28/2020 2:14:57 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/28/2020 2:14:57 AM
Xylenes, Total	ND	0.099		mg/Kg	1	4/28/2020 2:14:57 AM
Surr: 1,2-Dichloroethane-d4	78.2	70-130		%Rec	1	4/28/2020 2:14:57 AM
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	4/28/2020 2:14:57 AM
Surr: Dibromofluoromethane	87.7	70-130		%Rec	1	4/28/2020 2:14:57 AM
Surr: Toluene-d8	99.1	70-130		%Rec	1	4/28/2020 2:14:57 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2020 2:14:57 AM
Surr: BFB	102	70-130		%Rec	1	4/28/2020 2:14:57 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2004999**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pad
Lab ID: 2004999-005 **Matrix:** SOIL

Client Sample ID: WS20-02 0-0.5'
Collection Date: 4/21/2020 9:30:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/24/2020 3:05:38 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/24/2020 3:05:38 PM
Surr: DNOP	114	55.1-146		%Rec	1	4/24/2020 3:05:38 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	330	60		mg/Kg	20	4/27/2020 4:10:40 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.024		mg/Kg	1	4/28/2020 2:43:53 AM
Toluene	ND	0.048		mg/Kg	1	4/28/2020 2:43:53 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/28/2020 2:43:53 AM
Xylenes, Total	ND	0.095		mg/Kg	1	4/28/2020 2:43:53 AM
Surr: 1,2-Dichloroethane-d4	77.7	70-130		%Rec	1	4/28/2020 2:43:53 AM
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	4/28/2020 2:43:53 AM
Surr: Dibromofluoromethane	88.4	70-130		%Rec	1	4/28/2020 2:43:53 AM
Surr: Toluene-d8	99.4	70-130		%Rec	1	4/28/2020 2:43:53 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/28/2020 2:43:53 AM
Surr: BFB	98.4	70-130		%Rec	1	4/28/2020 2:43:53 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2004999**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pad
Lab ID: 2004999-006 **Matrix:** SOIL

Client Sample ID: WS20-03 0-0.5'
Collection Date: 4/21/2020 9:40:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/24/2020 3:29:45 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/24/2020 3:29:45 PM
Surr: DNOP	69.2	55.1-146		%Rec	1	4/24/2020 3:29:45 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	250	60		mg/Kg	20	4/27/2020 4:23:04 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.024		mg/Kg	1	4/28/2020 3:12:47 AM
Toluene	ND	0.049		mg/Kg	1	4/28/2020 3:12:47 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/28/2020 3:12:47 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/28/2020 3:12:47 AM
Surr: 1,2-Dichloroethane-d4	78.3	70-130		%Rec	1	4/28/2020 3:12:47 AM
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	4/28/2020 3:12:47 AM
Surr: Dibromofluoromethane	88.2	70-130		%Rec	1	4/28/2020 3:12:47 AM
Surr: Toluene-d8	98.3	70-130		%Rec	1	4/28/2020 3:12:47 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2020 3:12:47 AM
Surr: BFB	97.8	70-130		%Rec	1	4/28/2020 3:12:47 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2004999**
Date Reported: **4/29/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa State Com 201H Pad
Lab ID: 2004999-007 **Matrix:** SOIL

Client Sample ID: WS20-10 0-0.5'
Collection Date: 4/21/2020 10:50:00 AM
Received Date: 4/23/2020 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/24/2020 3:53:55 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/24/2020 3:53:55 PM
Surr: DNOP	99.6	55.1-146		%Rec	1	4/24/2020 3:53:55 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	1800	60		mg/Kg	20	4/27/2020 4:35:29 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**
Benzene	ND	0.025		mg/Kg	1	4/28/2020 3:41:38 AM
Toluene	ND	0.050		mg/Kg	1	4/28/2020 3:41:38 AM
Ethylbenzene	ND	0.050		mg/Kg	1	4/28/2020 3:41:38 AM
Xylenes, Total	ND	0.099		mg/Kg	1	4/28/2020 3:41:38 AM
Surr: 1,2-Dichloroethane-d4	77.5	70-130		%Rec	1	4/28/2020 3:41:38 AM
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	4/28/2020 3:41:38 AM
Surr: Dibromofluoromethane	87.3	70-130		%Rec	1	4/28/2020 3:41:38 AM
Surr: Toluene-d8	97.3	70-130		%Rec	1	4/28/2020 3:41:38 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/28/2020 3:41:38 AM
Surr: BFB	99.7	70-130		%Rec	1	4/28/2020 3:41:38 AM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004999**

29-Apr-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa State Com 201H Pad

Sample ID: **MB-52092**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **52092**	RunNo: **68439**							
Prep Date: **4/26/2020**	Analysis Date: **4/26/2020**	SeqNo: **2368151**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-52092**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **52092**	RunNo: **68439**							
Prep Date: **4/26/2020**	Analysis Date: **4/27/2020**	SeqNo: **2368152**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004999**

29-Apr-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa State Com 201H Pad

Sample ID: **MB-52057**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **52057**	RunNo: **68394**
Prep Date: **4/23/2020**	Analysis Date: **4/24/2020**	SeqNo: **2366388** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		113	55.1	146			

Sample ID: **LCS-52057**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **52057**	RunNo: **68394**
Prep Date: **4/23/2020**	Analysis Date: **4/24/2020**	SeqNo: **2366390** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	65	10	50.00	0	129	70	130			
Surr: DNOP	6.5		5.000		129	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004999**

29-Apr-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa State Com 201H Pad

Sample ID: **mb-52049**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **52049**	RunNo: **68429**
Prep Date: **4/23/2020**	Analysis Date: **4/26/2020**	SeqNo: **2367765** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.42		0.5000		84.5	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.2	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		94.8	70	130			
Surr: Toluene-d8	0.49		0.5000		98.4	70	130			

Sample ID: **lcs-52049**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS**	Batch ID: **52049**	RunNo: **68429**
Prep Date: **4/23/2020**	Analysis Date: **4/26/2020**	SeqNo: **2367766** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	85.3	70	130			
Toluene	0.98	0.050	1.000	0	97.9	70	130			
Ethylbenzene	1.0	0.050	1.000	0	104	70	130			
Xylenes, Total	3.1	0.10	3.000	0	103	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		88.3	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.8	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		94.6	70	130			
Surr: Toluene-d8	0.49		0.5000		97.6	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004999**

29-Apr-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa State Com 201H Pad

Sample ID: **mb-52049**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **52049**	RunNo: **68429**
Prep Date: **4/23/2020**	Analysis Date: **4/26/2020**	SeqNo: **2367784** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	490		500.0		98.9	70	130			

Sample ID: **lcs-52049**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **52049**	RunNo: **68429**
Prep Date: **4/23/2020**	Analysis Date: **4/26/2020**	SeqNo: **2367785** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.8	70	130			
Surr: BFB	500		500.0		100	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **VERTEX CARLSBAD** Work Order Number: **2004999** RcptNo: **1**

Received By: **Juan Rojas** **4/23/2020 9:40:00 AM** Juan Rojas

Completed By: **Isaiah Ortiz** **4/23/2020 10:04:40 AM** I-Ortiz

Reviewed By: JR 4/23/20

Chain of Custody

1. Is Chain of Custody sufficiently complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: EM 4/23/20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.2	Good	Not Present			
2	3.3	Good	Not Present			

Chain-of-Custody Record

Client: Vertex

Natalie Gordon

Mailing Address:

on file

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 Day

☑ Standard ☐ Rush

Project Name: Tony La Russa State Com #201H (Pad)

Project #: 20E-00239

Project Manager: Natalie Gordon

Sampler: MJP

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 0.2-0=0.2 (°C) 3.3-0=3.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2004999	(BTEX) MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	(Cl) F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
4/21	11:15	Soil	BS20-01 0.5'	4oz	ice	-001	✓	✓					✓			
	11:25		BS20-02 0.5'			-002	✓	✓					✓			
	11:35		BS20-03 0.5'			-003	✓	✓					✓			
	11:00		WS20-01 0-0.5'			-004	✓	✓					✓			
	9:30		WS20-02 0-0.5'			-005	✓	✓					✓			
	9:40		WS20-03 0-0.5'			-006	✓	✓					✓			
	10:50		WS20-10 0-0.5'			-007	✓	✓					✓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
4/22/20	1300				4/22/20	1300
4/22/20	1900			courier	4/23/20	9:40

Remarks: CC: Natalie Gordon

Matador

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 10, 2020

Natalie Gordon
Vertex Resource Group Ltd.
3101 Boyd Drive
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX:

RE: Tony La Russa St Com 201H OrderNo.: 2012234

Dear Natalie Gordon:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/4/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2012234**
Date Reported: **12/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa St Com 201H
Lab ID: 2012234-001 **Matrix:** SOIL

Client Sample ID: BS20-02 0.5'
Collection Date: 12/2/2020 8:10:00 AM
Received Date: 12/4/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/5/2020 12:06:16 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/5/2020 12:06:16 PM
Surr: DNOP	113	30.4-154		%Rec	1	12/5/2020 12:06:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/5/2020 1:22:15 PM
Surr: BFB	102	75.3-105		%Rec	1	12/5/2020 1:22:15 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/5/2020 1:22:15 PM
Toluene	ND	0.050		mg/Kg	1	12/5/2020 1:22:15 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/5/2020 1:22:15 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/5/2020 1:22:15 PM
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	12/5/2020 1:22:15 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	ND	60		mg/Kg	20	12/7/2020 4:40:30 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2012234**
Date Reported: **12/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resource Group Ltd.
Project: Tony La Russa St Com 201H
Lab ID: 2012234-002 **Matrix:** SOIL

Client Sample ID: WS20-10 0-0.5'
Collection Date: 12/2/2020 8:20:00 AM
Received Date: 12/4/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/5/2020 12:35:16 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/5/2020 12:35:16 PM
Surr: DNOP	110	30.4-154		%Rec	1	12/5/2020 12:35:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/5/2020 2:33:52 PM
Surr: BFB	103	75.3-105		%Rec	1	12/5/2020 2:33:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	12/5/2020 2:33:52 PM
Toluene	ND	0.049		mg/Kg	1	12/5/2020 2:33:52 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/5/2020 2:33:52 PM
Xylenes, Total	ND	0.098		mg/Kg	1	12/5/2020 2:33:52 PM
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/5/2020 2:33:52 PM
EPA METHOD 300.0: ANIONS						Analyst: **VP**
Chloride	ND	60		mg/Kg	20	12/7/2020 4:52:54 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2012234**

10-Dec-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa St Com 201H

Sample ID: **MB-56826**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **56826**	RunNo: **73830**
Prep Date: **12/7/2020**	Analysis Date: **12/7/2020**	SeqNo: **2604047** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-56826**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **56826**	RunNo: **73830**
Prep Date: **12/7/2020**	Analysis Date: **12/7/2020**	SeqNo: **2604048** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.6	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2012234**

10-Dec-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa St Com 201H

Sample ID: **MB-56804**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **56804**	RunNo: **73808**
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**	SeqNo: **2601641** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		133	30.4	154			

Sample ID: **LCS-56804**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **56804**	RunNo: **73808**
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**	SeqNo: **2601643** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.9	70	130			
Surr: DNOP	5.1		5.000		103	30.4	154			

Sample ID: **2012234-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BS20-02 0.5'**	Batch ID: **56804**	RunNo: **73808**
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**	SeqNo: **2601672** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.6	47.76	0	100	15	184			
Surr: DNOP	5.0		4.776		105	30.4	154			

Sample ID: **2012234-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BS20-02 0.5'**	Batch ID: **56804**	RunNo: **73808**
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**	SeqNo: **2601673** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.9	49.41	0	93.7	15	184	3.15	23.9	
Surr: DNOP	4.6		4.941		93.6	30.4	154	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2012234**

10-Dec-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa St Com 201H

Sample ID: **mb-56802**	SampType: **MBLK**			TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID: **PBS**	Batch ID: **56802**			RunNo: **73815**					
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**			SeqNo: **2602132**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		105	75.3	105			

Sample ID: **lcs-56802**	SampType: **LCS**			TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID: **LCSS**	Batch ID: **56802**			RunNo: **73815**					
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**			SeqNo: **2602133**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.3	72.5	106			
Surr: BFB	1100		1000		112	75.3	105			S

Sample ID: **2012234-002AMS**	SampType: **MS**			TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID: **WS20-10 0-0.5'**	Batch ID: **56802**			RunNo: **73815**					
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**			SeqNo: **2602136**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.9	24.46	0	105	61.3	114			
Surr: BFB	1100		978.5		115	75.3	105			S

Sample ID: **2012234-002AMSD**	SampType: **MSD**			TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID: **WS20-10 0-0.5'**	Batch ID: **56802**			RunNo: **73815**					
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**			SeqNo: **2602137**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.63	0	99.0	61.3	114	5.01	20	
Surr: BFB	1100		985.2		111	75.3	105	0	0	S

Sample ID: **mb-56805**	SampType: **MBLK**			TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID: **PBS**	Batch ID: **56805**			RunNo: **73815**					
Prep Date: **12/4/2020**	Analysis Date: **12/6/2020**			SeqNo: **2602155**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		100	75.3	105			

Sample ID: **lcs-56805**	SampType: **LCS**			TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID: **LCSS**	Batch ID: **56805**			RunNo: **73815**					
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**			SeqNo: **2602156**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		112	75.3	105			S

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2012234**
10-Dec-20

Client: Vertex Resource Group Ltd.
Project: Tony La Russa St Com 201H

Sample ID: **mb-56802**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **56802**	RunNo: **73815**
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**	SeqNo: **2602184** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: **LCS-56802**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **56802**	RunNo: **73815**
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**	SeqNo: **2602185** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.2	80	120			
Toluene	0.99	0.050	1.000	0	98.5	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.9	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.8	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: **2012234-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BS20-02 0.5'**	Batch ID: **56802**	RunNo: **73815**
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**	SeqNo: **2602187** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.024	0.9728	0	93.7	76.3	120			
Toluene	0.94	0.049	0.9728	0.01509	95.3	78.5	120			
Ethylbenzene	0.96	0.049	0.9728	0	98.4	78.1	124			
Xylenes, Total	2.9	0.097	2.918	0	98.2	79.3	125			
Surr: 4-Bromofluorobenzene	0.99		0.9728		102	80	120			

Sample ID: **2012234-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BS20-02 0.5'**	Batch ID: **56802**	RunNo: **73815**
Prep Date: **12/4/2020**	Analysis Date: **12/5/2020**	SeqNo: **2602188** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	0.9833	0	94.6	76.3	120	2.05	20	
Toluene	0.96	0.049	0.9833	0.01509	96.3	78.5	120	2.02	20	
Ethylbenzene	0.96	0.049	0.9833	0	97.4	78.1	124	0.0173	20	
Xylenes, Total	2.9	0.098	2.950	0	98.6	79.3	125	1.55	20	
Surr: 4-Bromofluorobenzene	1.0		0.9833		104	80	120	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2012234**

10-Dec-20

Client: Vertex Resource Group Ltd.

Project: Tony La Russa St Com 201H

Sample ID: **mb-56805**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **56805**	RunNo: **73815**
Prep Date: **12/4/2020**	Analysis Date: **12/6/2020**	SeqNo: **2602207** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID: **LCS-56805**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **56805**	RunNo: **73815**
Prep Date: **12/4/2020**	Analysis Date: **12/6/2020**	SeqNo: **2602208** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resource Group Ltd. Work Order Number: 2012234 RcptNo: 1

Received By: Sean Livingston 12/4/2020 8:00:00 AM

Completed By: Desiree Dominguez 12/4/2020 8:30:19 AM

Reviewed By: 12/4/20

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: SGL 12/4/20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good				
2	1.5	Good				
3	0.2	Good				

Chain-of-Custody Record

Client: Vortex

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 5 Day
☑ Standard ☐ Rush

Project Name: Tony La Russa St Com 201H

Project #: 20E-00239

Project Manager: Natalie Gordon

Sampler: MJP

On Ice: ☑ Yes ☐ No

# of Coolers: 3

Cooler Temp(including CF): See remarks (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2012234	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/2	8:10	Soil	BS20-02 0.5'	4oz	ice	-001	✓	✓					✓			
12/2	8:20	Soil	WS20-10 0-0.5'	4oz	ice	-002	✓	✓					✓			

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			Cummings		12/3/20	1135
Date: 12/3/20	Time: 1900	Relinquished by: Cummings	Received by:	Via: Sue courier	Date 12/4/20	Time 8:00

Remarks:
CC: Natalie Gordon
0.3-0.2=0.1% 1.7-0.2=1.5%
0.4-0.2=0.2%
Matador

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

ATTACHMENT 8

Natalie Gordon

From: John Hurt <JHurt@matadorresources.com>
Sent: Friday, November 20, 2020 10:16 AM
To: Natalie Gordon
Subject: FW: Closure Denied - Matador - Tony La Russa St Com 201H-202H - (Incident #NRM2008758101)
Attachments: Closure Denied - Matador - Tony La Russa St Com 201H-202H - (Incident #NRM2008758101).pdf

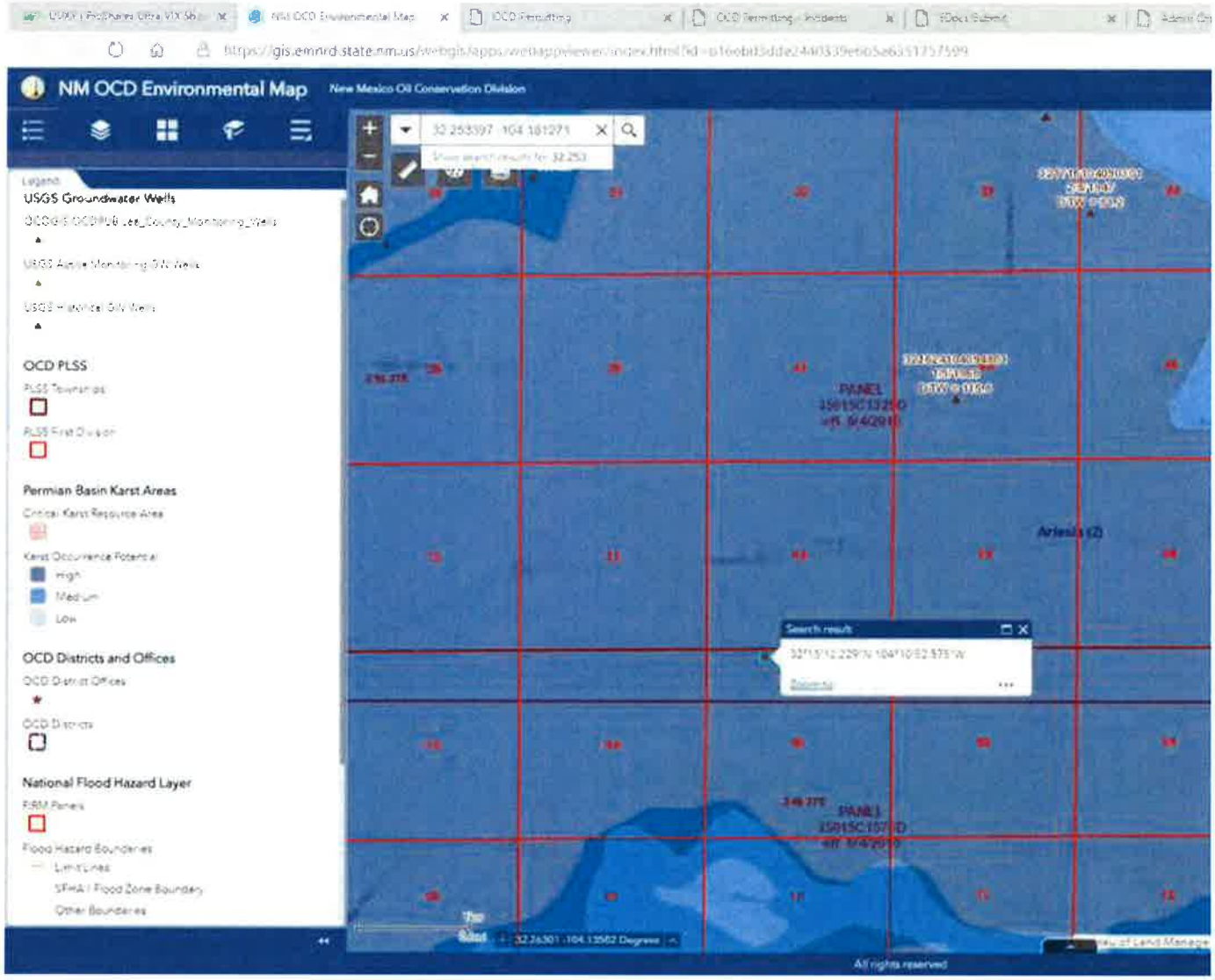
WTF

From: Hamlet, Robert, EMNRD [mailto:Robert.Hamlet@state.nm.us]
Sent: Friday, November 20, 2020 10:09 AM
To: John Hurt <JHurt@matadorresources.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>; spills@slo.state.nm.us
Subject: Closure Denied - Matador - Tony La Russa St Com 201H-202H - (Incident #NRM2008758101)

EXTERNAL EMAIL
John,

We have received your closure report and final C-141 for **Incident #NRM2008758101 Tony La Russa St Com 201H-202H,** thank you. This closure is denied.

- This release has occurred in a High Karst area and will need to be remediated to the strictest closure criteria of <50' depth to groundwater from Table 1 of the spill rule. The current spill rule may be viewed here: http://164.64.110.134/parts/title19/19.015.0029.html
- When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less.
- Please continue to horizontally delineate sample points BS 20-02 and WS20-10 to 600 mg/kg for chlorides.



Please let me know if you have any further questions.

Regards,

Robert Hamlet • Environmental Eng. Tech. III
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
505.748.1283 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Natalie Gordon

From: John Hurt <JHurt@matadorresources.com>
Sent: Friday, November 20, 2020 10:17 AM
To: Natalie Gordon
Subject: FW: New Mexico OCD Application Submission was Rejected by the OCD

From: OCDOnline@state.nm.us [mailto:OCDOnline@state.nm.us]
Sent: Friday, November 20, 2020 10:35 AM
To: John Hurt <JHurt@matadorresources.com>
Subject: New Mexico OCD Application Submission was Rejected by the OCD

EXTERNAL EMAIL

The Oil Conservation Division (OCD) has rejected the application PO: YOFWH-200727-C-1410.
The original application was submitted by John Hurt for MATADOR PRODUCTION COMPANY.

The user added the additional comment:

> "We have received your closure report and final C-141 for Incident #NRM2008758101 Tony La Russa St Com 201H-202H, thank you. This closure is denied.".

If you are concerned about receiving this email or have any other questions,
please feel free to contact our Santa Fe OCD office.

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NRM2008758101
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

[x] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[x] Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

[x] Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

[x] Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: John Hurt Title: RES Specialist

Signature: [signature] Date: 7/27/20

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Robert Hamlet Date: 11/20/2020

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Denied Date: 11/20/2020

Printed Name: Robert Hamlet Title: Environmental Eng. Tech. III

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NRM2008758101
District RP	
Facility ID	
Application ID	

Closure

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Printed Name: John Hurt Title: RES Specialist

Signature: John Hurt Date: 1/26/21

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Robert Hamlet Date: 6/4/2021

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Robert Hamlet Date: 6/4/2021

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 15647

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 15647
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NRM2008758101 TONY LA RUSSA STATE COM 201H/202H, thank you. This closure is approved.	6/4/2021