Incident Number: nKMW0800954755, nKMW080054324, nMLB0608954436

Assessment and Closure Closure

Sawbuck Water Transfer

Section 23, Township 20 South, Range 24 East

County: Eddy

Vertex File Number: 22E-00123-03

Prepared for:

EOG Resources, Inc.

Prepared by:

Vertex Resource Services Inc.

Date:

July 2023

Assessment and Closure
Sawbuck Water Transfer
Section 23, Township 20 South, Range 24 East
County: Eddy

Prepared for:
EOG Resources, Inc.
104 S. 4th Street
Artesia, New Mexico 88210

New Mexico Oil Conservation Division – District 2
811 S. 1st Street
Artesia, New Mexico 88210

Prepared by:
Vertex Resource Services Inc.
3101 Boyd Drive
Carlsbad, New Mexico 88220

Chance Dixon

Chance Dixon, B.Sc.
PROJECT MANAGER, REPORTING

7/19/2023
Date

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1.0 Introduction

EOG Resources, Inc. (EOG) retained Vertex Resource Services, Inc. (Vertex) to conduct an assessment for three historical produced water releases that occurred in 2006 at Sawbuck Water Transfer. Yates Petroleum Corporation (Yates) submitted an initial C-141 Release Notification (Appendix A) to New Mexico Oil Conservation Division (NMOCD) District 2 for all three incidents. Incident ID numbers nKMW0800954755, nKMW080054324, and nMLB0608954436 were assigned to the incidents. Yates submitted a remediation work plan that was approved by NMOCD and later submitted a closure report after the remedial activities were completed.

This report provides a description of the assessment associated with the visit by Vertex. The information presented demonstrates that closure criteria established in Table I of 19.15.29.12 of the *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) related to NMOCD has been met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain approval from NMOCD for the closure of these incidents, with the release site also meeting requirements instituted in 2018 per 19.15.29.13 NMAC.

2.0 Incident Description

The first release (nMLB0608954436) occurred on March 5, 2006, due to power failure and tank overflow. All fluids were contained inside the containment for the battery area. Vacuum trucks were dispatched to recover the free fluids and power was restored. The incident was received by NMOCD via C-141 on March 6, 2006, with a Remediation Work Plan submitted on July 21, 2006, and NMOCD approval of the Work Plan occurring August 1, 2006.

The second release (nKMW0800954324) occurred on August 31, 2006, due to power failure and tank overflow. All fluids were contained inside the plastic-lined berms for the battery area. Vacuum trucks were dispatched to recover the free fluids and power was restored. The incident was received by NMOCD via C-141 on September 1, 2006, with closure submitted on October 9, 2006.

The third release (nKMW0800954755) occurred on September 20, 2006, due to a check valve failure that blew a 12” VIC clamp off of the gun barrel riser. All fluids were contained inside the plastic-lined berms for the battery area. Vacuum trucks were dispatched to recover the free fluids. The incident was received by NMOCD on September 22, 2006, with closure submitted on October 9, 2006.

3.0 Site Characteristics

The site is located approximately 8.16 miles southwest of Seven Rivers, New Mexico. The legal location for the site is Section 23, Township 20 South and Range 24 East in Eddy County, New Mexico. The release area is located on the Bureau of Land Management (BLM) property. An aerial photograph and site schematic are presented in Figure 1.

The Geological Map of New Mexico (New Mexico Bureau of Geology and Mineral Resources, 2023) indicates the site’s surface geology primarily comprises Qp – Piedmont alluvial deposits (Holocene to lower Pleistocene). The predominant soil texture on the site is Pima silt and Reagan loam. The karst geology potential for the site is high (United States Department of the Interior, Bureau of Land Management, 2023).

The location was typical of oil and gas water disposals in the Permian Basin and was used for water disposal and transport.

The surrounding landscape is associated with rolling hills and fans with elevations ranging between 1,100 and 5,400 feet. The climate is semiarid with average annual precipitation ranging between 6 and 15 inches. The soil is well-drained with high runoff. Using information from the United States Department of Agriculture, the dominant vegetation was determined to be Blue Grama. Creosote bush, mesquite, and catclaw mimosa are common shrubs (United States Department of Agriculture, Natural Resources Conservation Service, 2023).

4.0 Closure Criteria Determination

Using site characterization information, a closure criteria determination worksheet (Appendix B) was completed to determine if the releases were subject to any special case scenarios outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC. The nearest groundwater data is more than 25 years old and located more than 0.5 miles away from the release site; therefore, the depth to groundwater cannot be determined accurately. The closure for the site is determined to be associated with the following constituent concentration limits (Table 1).

Table 1. Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
< 50 feet	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS – total dissolved solids
TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics
BTEX – benzene, toluene, ethylbenzene and xylenes

5.0 Site Assessment

A remediation work plan for the first release was submitted to NMOCD on July 21, 2006. The work plan was approved by NMOCD on August 1, 2006. After remedial activities for the first release were completed, the second and third releases occurred and were fully contained in the newly lined containment area. Yates Petroleum Corporation (Yates) submitted a closure report for all three Incident IDs on October 9, 2006. Details pertaining to the remedial activities for all three releases are included in the Yates work plan and closure report included in Appendix A.

EOG retained Vertex to conduct a field investigation of any possible remaining impacts at the site prior to reclamation activities being commenced. Investigation efforts began on June 2, 2023, and were finalized on June 5, 2023. Field screening was completed on a total of 3 sample points. Vertex conducted the investigation with sample points BH23-03 through BH23-05 ranging between the surface and 1 foot bgs. After the investigation was completed, it was

determined that all samples were under NMOCD's strictest closure criteria, and it was deemed that no further investigation/remedial efforts are necessary. The DFR documenting the investigation is presented in Appendix C.

Notification that confirmatory composite samples were being collected was provided to NMOCD on May 31, 2023, and is included in Appendix D. Confirmatory samples were collected at 3 sample points (boreholes) throughout the containment area of the battery. A total of 6 samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Hall Environmental Analysis Laboratory under chain-of-custody protocols and analyzed for BTEX, TPH, and chlorides. Laboratory results are presented in Table 2, and the laboratory data reports are included in Appendix E.

Field screening was completed using Dexsil PetroFlag using EPA SW-846 Method 9074 (extractable hydrocarbons) and Hanna DiST EC Meter and HACH Chloride Test Kit (chlorides). Samples were analyzed at Hall Environmental Laboratory for BTEX (8021), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D), and total chlorides (EPA Method 300.0).

6.0 Closure Request

Vertex recommends no additional action to the site. Laboratory analyses of confirmation samples collected in the vicinities of the releases show final confirmatory values below NMOCD closure criteria for areas where depth to groundwater is less than 50 feet bgs as presented in Table 2. There are no anticipated risks to human, ecological, or hydrological receptors at this site.

Vertex requests that these incidents (nKMW0800954755, nKMW080054324, and nMLB0608954436) be closed as all closure requirements set forth at the time were met, and there is no standing exceedances to closure criteria at the site at this time. EOG certifies that all information in this report and the appendices are correct, and that they have complied with all applicable closure requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain closure on the site.

Should you have any questions or concerns, please do not hesitate to contact Chance Dixon at 575.988.1472 or cdixon@vertex.ca.

7.0 References

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8.0 Limitations

This report has been prepared for the sole benefit of EOG Resources, Inc (EOG). 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 EOG. 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 judgment 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.

Vertex Figure

Borehole Containment Area(~12749 sq.ft.)

VERTEX

0 25 50 Feet

Map Center:
Lat/Long: 32.562474, -104.556021

NAD 1983 UTM Zone 13N
Date: Jul 06/23

N

Investigation Comfirmatory Schematic
Sawbuck Water Transfer Station

FIGURE:
2

eog resources

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: Georeferenced image from Esri, 2022. Features from GPS. Vertex Professional Services Ltd., 2023.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\EOG Resources Inc\22E-001230003 - Sawbauck Water Transfer Station\Figure 2 Investigation Comfirmatory Schematic (22E-00123).mxd

Vertex Table

Table 2. Investigation Confirmatory Laboratory Results - Depth to Groundwater <50 feet bgs
EOG Resources Inc.
Sawbuck Water Transfer
NMOCD Tracking #: nKMW0800954755, nKMW080054324, and nMLB0608954436
Project #: 22E-00123-03
Lab Reports: 2306177 and 2306399

Sample Description			Petroleum Hydrocarbons										Inorganic
Sample ID	Depth (ft)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Criteria	NMOCD - NMAC <50 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	-	100	600
	NMOCD - NMAC 51-100 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	1000	2500	10000
	NMOCD - NMAC >100 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	1000	2500	20000
Boreholes													
BH23-03	0	June 2, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1	June 5, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH23-04	0	June 2, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1	June 5, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH23-05	0	June 2, 2023	0.028	0.17	0.061	0.46	0.719	6.8	ND	ND	6.8	6.8	ND
	1	June 5, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NMAC - New Mexico Administrative Code (Title 19, Chapter 15, Part 29; 2018)
ND - Not Detected at the Reporting Limit
- Denotes no standard/not analyzed

APPENDIX A - NMOCD C-141 Report and Yates Reports

Incident ID	nKMW0800954755
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.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ 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)

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

☒ 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: Chase Settle Title: Rep Safety & Environmental Sr

Signature: Chase Settle Date: 07/19/2023

email: Chase_Settle@eogresources.com Telephone: 575-703-6537

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: Ashley Maxwell Date: 7/25/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

State of New Mexico
Oil Conservation Division

Incident ID	nKMW0800954324
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.***

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

☒ 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: Chase Settle Title: Rep Safety & Environmental Sr

Signature: Chase Settle Date: 07/19/2023

email: Chase_Settle@eogresources.com Telephone: 575-703-6537

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: Ashley Maxwell Date: 07/25/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

State of New Mexico
Oil Conservation Division

Incident ID	nMLB0608954436
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.

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

☒ 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: Chase Settle Title: Rep Safety & Environmental Sr

Signature: Chase Settle Date: 07/19/2023

email: Chase_Settle@eogresources.com Telephone: 575-703-6537

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: Ashley Maxwell Date: 7/25/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

Yates Petroleum Corporation
105 S. 4th Street
Artesia, NM 88210
ATTN: Environmental Department (Sherry Bonham)

August 1, 2006

Reference: Sawbuck Water Transfer Station G-23-20s-24e

Operator,

The New Mexico Oil Conservation Division District 2 Office (OCD) is in receipt of a work plan proposal (plan) for remediation of a release of produced fluids that occurred at the above referenced facility. The plan proposes removal of a below grade tank located at this site and the installation of an above ground vessel to be utilized for overflow containment. The plan also proposes removal of soils with contaminants present above the OCD Recommended Remedial Action Levels (RRAL) for this site.

The plan is accepted with the following stipulations:

- Notify the OCD 24 hours prior to commencement of activities. ✓
- Notify the OCD 24 hours prior to removal of any below grade tank or vessel. Confirmation samples are to be obtained from excavation prior to backfilling. ✓
- Notify the OCD 24 hours prior to obtaining samples where analyses are to be submitted to the OCD. ✓
- OCD is to be provided a copy of analytical results of all witnessed samples within 3 working days of operator's receipt of results.
- Laboratory analysis for chlorides will be required prior to closure of site.
- Submit a Final Report Form C-141 upon satisfactory completion of activities.
- Remediation requirements may be subject to change as site conditions warrant.
- Remediation to be completed by August 21, 2006.

Please be advised that NMOCD acceptance of this plan does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of this plan does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If I can be of assistance, please contact me.

Sincerely,

Mike Bratcher

Mike Bratcher
NMOCD District 2
1301 W. Grand Ave.
Artesia, NM 88210
(505) 748-1283 Ext. 108
(505) 626-0857
Mike.Bratcher@state.nm.us

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210-2118
TELEPHONE (505) 748-1471

July 21, 2006

Mr. Mike Bratcher
NMOCD District II
1301 West Grand
Artesia, NM 88210

Re: Sawbuck Water Transfer
Section 23, T20S-R24E
Eddy County, New Mexico

Dear Mr. Bratcher,

Thank you for meeting with me at the Sawbuck Water Transfer on July 10, 2006 to obtain samples for evaluating VOC levels. Based on those readings, Yates Petroleum Corporation would like to submit for your consideration the enclosed work plan for the above captioned site. Scope of work described in the plan will be initiated as soon as the work plan is approved and a contractor can be scheduled.

Should you have any questions, please don't hesitate to contact me. Thank you.

Respectfully,

Sherry Bonham
Environmental Regulatory Agent

RECEIVED
JUL 21 2006
OCD-ARTESIA

YATES PETROLEUM CORPORATION

WORK PLAN
SAWBUCK WATER TRANSFER
23 T20S R24E
EDDY COUNTY, NEW MEXICO

July 20, 2006

ENTERED
7.25.06
SD

Attachments

1. Attachment 1, C-141, March 6, 2006
2. Attachment 2, Figure 1 Site Map
3. Attachment 3, Site ID: SAWBK002 VOC readings North Overflow Berm Area
4. Attachment 4, Site ID: SAWBK003 VOC readings South Overflow Berm Area

1.0 INTRODUCTION

This work plan for the Sawbuck Water Transfer has been developed to comply with Section VI, Section A Soil Remediation of the New Mexico Oil and Gas Conservation Division (OCD) *Guidelines for Remediation of Leaks, Spills and Releases* (Guidelines). This plan is based on initial reporting, visual observation, and regulations and Guidelines of the OCD.

2.0 BACKGROUND

2.1 History of Release

Yates Petroleum Corporation (Yates) is the operator of the Sawbuck Water Transfer Station. According to the C-141 filed on March 6, 2006 (Attachment 1), a release of 290 barrels produced water occurred due to a power failure causing tanks to overflow. The released water was contained within the berm.

2.2 Initial Response Action Taken

In response to the release, Yates began immediate cleanup by removing as much of the liquid as could be recovered. Approximately 260 barrels of produced water was recovered.

3.0 SITE OBSERVATIONS

On July 10, 2006 Mike Bratcher of NMOCD and Sherry Bonham of Yates Petroleum Corporation met at the Sawbuck Water Transfer. Two composite samples taken at locations specified by Mr. Bratcher were field tested using the heated headspace method to determine VOC concentrations.

A five spot composite was taken in the North Overflow Berm Area (see Attachment 2, Figure 1 Site Map). Maximum VOC concentrations were 61.5 ppm (see Attachment 3).

A three spot composite was taken in the South Overflow Berm Area (see Attachment 2, Figure 1 Site Map). Maximum VOC concentrations were 226.4 ppm (see Attachment 4).

It was noted there is an overflow pipe that could discharge into the North Overflow Berm Area. There is also an underground storage tank in the South Overflow Berm Area.

4.0 RECOMMENDED REMEDIAL ACTION LEVELS

The ranking criteria for this site is as follows (per Section IV of the Guidelines)

Depth to ground water >100' (per ChevronTexaco Water Trend Map)	0
Not in a wellhead protection area	0
Distance to surface body water <1000'	0
TOTAL RANKING SCORE =	**0**

For sites with a Total Ranking Score of **0**, the Recommended Remedial Action Levels (RRALs) are:

Benzene	10 ppm
BTEX	50 ppm
TPH	5000 ppm

5.0 REMEDIAL ACTION PLAN

Yates proposes to install an above ground containment vessel for the overflow pipe to discharge into as discussed with Mr. Bratcher. Yates also proposes removal of the existing underground storage tank which is located in the South Overflow Berm Area and re-route the line to discharge into the proposed new containment vessel as discussed with Mr. Bratcher.

Because the South Overflow Berm Area failed the VOC criteria, Yates proposes to excavate the South Overflow Berm Area until a representative sample tested in the field using the heated headspace method show readings not greater than 100 ppm. All excavated materials will be placed on plastic sheeting in a bermed area to prevent spreading contamination and/or will be disposed at a NMOCD approved offsite facility. Once these soils have been removed, the NMOCD will be contacted and given the opportunity to witness the final confirmation sampling for site closure. Confirmation samples will be collected and sent to a third party laboratory for analysis. The samples will be analyzed for TPH (GRO and DRO) by EPA Method 8015B.

If the laboratory analytical results show the soil concentrations are within the RRALs shown in section 4.0 above, excavated area will be backfilled and Yates will request closure approval from OCD per section IX of the Guidelines.

Respectfully Submitted,

Sherry Bonham
Environmental Regulatory Agent

ATTACHMENT 1

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

nMLB 0608954436
fMLB 0608953556

Release Notification and Corrective Action

OPERATOR

X Initial Report Final Report

Name of Company Yates Petroleum Corp.	Contact Dan Dolan
Address 105 S. 4th St., Artesia NM 88210	Telephone No. 748-4181
Facility Name Sawbuck Water Transfer	Facility Type Water transfer station

Surface Owner Wilbanks Ranch	Mineral Owner Fed	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Lin	Feet from the	East/West Line	County
G	23	20S	24E					Eddy

Latitude _ Longitude _

NATURE OF RELEASE

Type of Release produced water	Volume of Release 290bbl water / Volume Recovered 260bbl water
Source of Release Power failure, main control valve leaked causing tanks to overflow.	Date and Hour of Occurrence 03-05-06, 0900hrs / Date and Hour of Discovery 03-05-06, 0900hrs
Was Immediate Notice Given? X Yes No Not Required	If YES, To Whom? Mike Bratcher, District 2 NMOCD
By Whom? Dan Dolan	Date and Hour 03-06-06, 0800hrs
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Power failure, tanks overflowed. Power restored, vacuum trucks picked up free water.

Describe Area Affected and Cleanup Action Taken.*
Area was inside good berm, will be field tested for chloride, and remedial action taken based on that test. If found good, OCD will be notified for final testing.
Ranking for this area is as follows; Depth to ground water-0, Wellhead protection area-0, Distance to surface water-0. Water 125'(trend map)

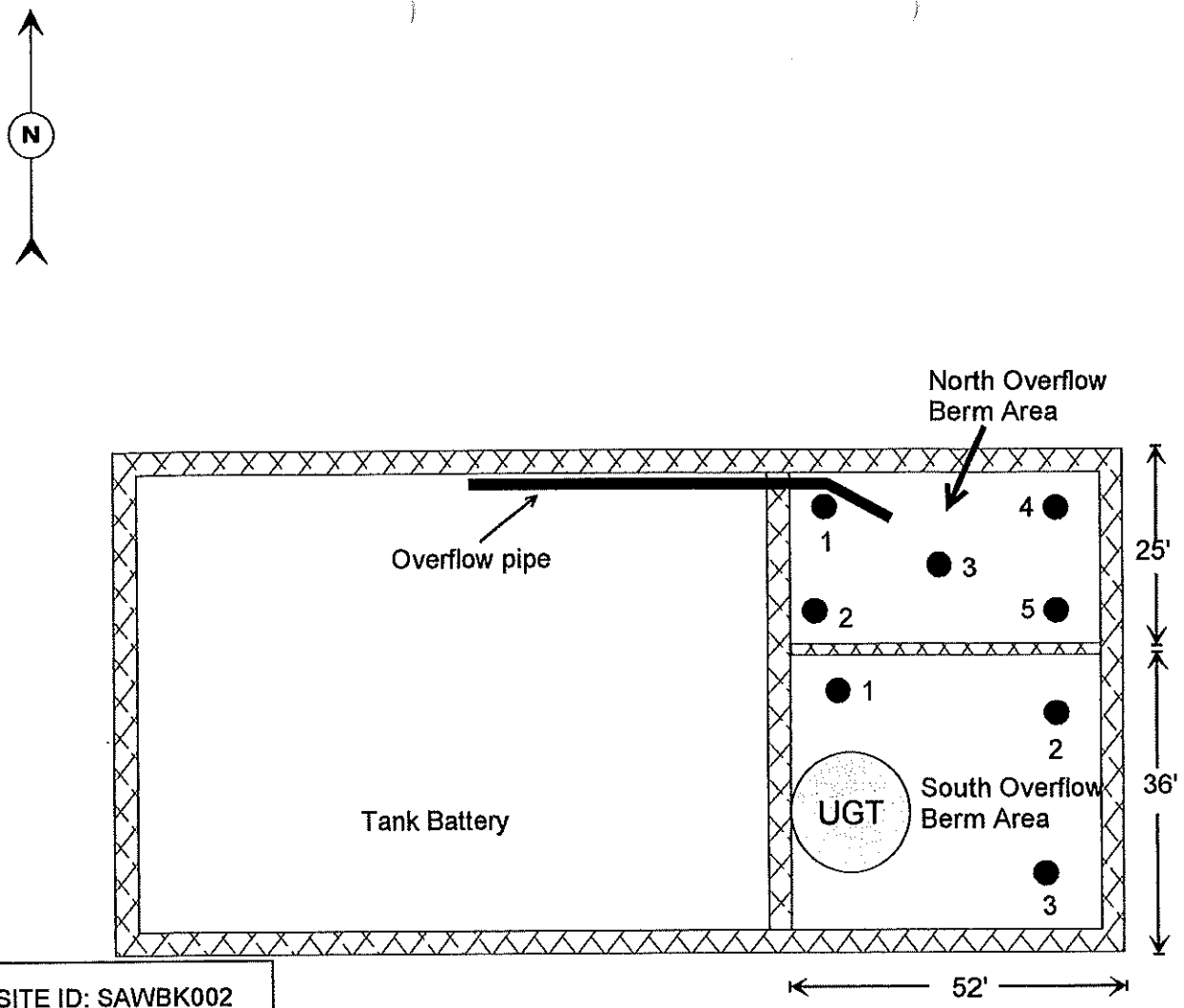
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Dan Dolan	Approved by District Supervisor: TIM GUM by MB
Title: Environmental Regulatory Agent	Approval Date: 3/30/06 / Expiration Date:
E-mail Address: ddolan@ypcnm.com	Conditions of Approval: / Attached X
Date: 03-06-06 Phone: 748-4181	

* Attach Additional Sheets If Necessary

ENTERED 4-6-06 SB

ATTACHMENT 2



SITE ID: SAWBK002
North Overflow Bermed Area Sample Coordinates

SP1	N 32.56234 W104.55543
SP2	N 32.56232 W104.55547
SP3	N 32.56230 W104.55541
SP4	N 32.56229 W104.55537
SP5	N 32.56227 W104.55540

SITE ID: SAWBK003
South Overflow Bermed Area Sample Coordinates

SP1	N 32.56227 W104.55547
SP2	N 32.56223 W104.55544
SP3	N 32.56220 W104.55550

YATES PETROLEUM CORPORATION

Sawbuck Water Transfer

Sec. 23 T20S R24E

EddyCounty, NM

FIGURE 1
SITE MAP

(Not to Scale)

ATTACHMENT 3

Instrument: MiniRAE 2000 (PGM-7600) Serial Number: 012908
User ID: SHERRBON Site ID: SAWBK002
Data Points: 1 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 07/06/2006 14:06

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	101.0	101.0	101.0
Low Alarm Levels:	101.0	101.0	101.0

Line#	Date	Time	Min(ppm)	Avg(ppm)	Max(ppm)
1	07/10/2006	09:32	-----	46.4	61.5

ATTACHMENT 4

Instrument: MiniRAE 2000 (PGM -00) Serial Numbe- 012908
User ID: SHERRBON Site ID: SAWBK003
Data Points: 1 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 07/06/2006 14:06

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	101.0	101.0	101.0
Low Alarm Levels:	101.0	101.0	101.0

Line#	Date	Time	Min(ppm)	Avg(ppm)	Max(ppm)
1	07/10/2006	10:04	-----	79.9	226.4H

Sherry Bonham

From: Bratcher, Mike, EMNRD [mike.bratcher@state.nm.us]
Sent: Wednesday, September 20, 2006 4:27 PM
To: Sherry Bonham
Subject: RE: Sawbuck Water Transfer

Sherry,

This is to confirm your notification to the OCD of the newest release at the Sawbuck Water Transfer Station and to confirm approval for an extension of time for remediation activities at this site. It appears the lined berm at this site has paid off.

Thanks,

Mike Bratcher
NMOCD District 2

From: Sherry Bonham [mailto:sherryb@YPCNM.COM]
Sent: Wednesday, September 20, 2006 9:49 AM
To: Bratcher, Mike, EMNRD
Subject: Sawbuck Water Transfer

Good morning, Mike. Thank you for visiting with me this morning on the phone regarding the Sawbuck Water Transfer.

This e-mail is to follow up on my calling in (approx. 9:05 am) a spill on the Sawbuck Water Transfer Section 12 T20S R24E Unit G today. The approximate 50 bbl produced water spill occurred this AM 9/19/06. All fluids were contained within the lined bermed area. Vacuum trucks are in process of recovering fluids.

Thanks for the verbal approval to my request for an extension for submitting final closure on the Sawbuck Water Transfer. I ask that extension be granted until October 21, 2006. As you know, original remediation activities had been completed however, a August 31, 2006 release and now a September 19, 2006 release have interfered with submitting the final. All fluids were contained within the newly lined berms. As soon as clean-up actions are complete, I plan to submit closure request.

Thanks, Mike, for your assistance. I would appreciate a confirmation response and look forward to hearing from you.

Should you have any questions or concerns, please don't hesitate to contact me.

Sherry

Sherry Bonham

From: Bratcher, Mike, EMNRD [mike.bratcher@state.nm.us]
Sent: Monday, August 21, 2006 8:11 AM
To: Sherry Bonham
Cc: Jerry Fanning
Subject: RE: Sawbuck Water Transfer

Sherry,

The request for an extension on this project to September 21, 2006 is approved.

Mike Bratcher
NMOCD District 2

ENTERED
8-21-06
SB

From: Sherry Bonham [mailto:sherryb@YPCNM.COM]
Sent: Friday, August 11, 2006 12:04 PM
To: Bratcher, Mike, EMNRD
Cc: Jerry Fanning
Subject: Sawbuck Water Transfer

Mike,
Soils have been excavated as per the approved workplan of July 20, 2006. I would like to take confirmation samples on Monday August 14, 2006 at 11:00 AM. I would like for this e-mail to provide the required 24 hour notification prior to obtaining the confirmation samples.

As one of the stipulations per your August 1, 2006 letter, you stated that remediation is to be completed by August 21, 2006. Due to there being a 10 day turn around period on samples and our waiting for those results of the confirmation samples, I would also like to request an extension until September 21, 2006 to complete remediation processes. Your consideration to this request is appreciated!

If you have any questions, please don't hesitate to contact me and should I not hear from you, I will assume that you are in agreement. Thanks for your help, Mike!

Sherry

Sherry Bonham

From: Bratcher, Mike, EMNRD [mike.bratcher@state.nm.us]
Sent: Tuesday, August 01, 2006 9:50 AM
To: Sherry Bonham
Cc: Jerry Fanning
Subject: RE: Sawbuck Water Transfer

Sherry,

Attached is the approval for the July 20, 2006 work plan proposal. If you have personnel available to commence operations on August 2, 2006 please proceed. The approval stipulation to provide OCD with 24 hours notice prior to commencement of activities will be considered to have been met.
A signed hard copy of the approval will be sent via mail.

Thanks,

Mike Bratcher
NMOCD District 2

From: Sherry Bonham [mailto:sherryb@YPCNM.COM]
Sent: Monday, July 31, 2006 4:47 PM
To: Bratcher, Mike, EMNRD
Cc: Jerry Fanning
Subject: Sawbuck Water Transfer

Mike,
We have a contractor available to begin underground tank removal and remediation on the Sawbuck Water Transfer. I haven't received a work plan approval from you and am asking if you could fast track this approval. We would like to begin work as early as Wednesday, August 2, 2006.

Thanks, Mike, for your help and attention to this request! Should you have any questions/concerns, please don't hesitate to contact me.

Sherry

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

Yates Petroleum Corporation
105 S. 4th Street
Artesia, NM 88210
ATTN: Environmental Department (Sherry Bonham)

August 1, 2006

Reference: Sawbuck Water Transfer Station G-23-20s-24e

Operator,

The New Mexico Oil Conservation Division District 2 Office (OCD) is in receipt of a work plan proposal (plan) for remediation of a release of produced fluids that occurred at the above referenced facility. The plan proposes removal of a below grade tank located at this site and the installation of an above ground vessel to be utilized for overflow containment. The plan also proposes removal of soils with contaminants present above the OCD Recommended Remedial Action Levels (RRAL) for this site.

The plan is accepted with the following stipulations:

- Notify the OCD 24 hours prior to commencement of activities.
- Notify the OCD 24 hours prior to removal of any below grade tank or vessel. Confirmation samples are to be obtained from excavation prior to backfilling.
- Notify the OCD 24 hours prior to obtaining samples where analyses are to be submitted to the OCD.
- OCD is to be provided a copy of analytical results of all witnessed samples within 3 working days of operator's receipt of results.
- Laboratory analysis for chlorides will be required prior to closure of site.
- Submit a Final Report Form C-141 upon satisfactory completion of activities.
- Remediation requirements may be subject to change as site conditions warrant.
- Remediation to be completed by August 21, 2006.

Please be advised that NMOCD acceptance of this plan does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of this plan does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If I can be of assistance, please contact me.

Sincerely,

Mike Bratcher
NMOCD District 2
1301 W. Grand Ave.
Artesia, NM 88210
(505) 748-1283 Ext. 108
(505) 626-0857
Mike.Bratcher@state.nm.us

MARTIN YATES, III
1912-1985

FRANK W. YATES
1936-1986

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210-2118
TELEPHONE (505) 748-1471

S.P. YATES
CHAIRMAN EMERITUS

JOHN A. YATES
CHAIRMAN OF THE BOARD

PEYTON YATES
PRESIDENT

FRANK YATES, JR.
EXECUTIVE VICE PRESIDENT

JOHN A. YATES, JR.
SENIOR VICE PRESIDENT

October 9, 2006

Mr. Mike Bratcher
NMOCD – District 2
1301 West Grand Street
Artesia, NM 88210

RE: Sawbuck Water Transfer
23 T20S R24E Unit G

Dear Mike,

Yates Petroleum Corporation respectfully requests closure to three separate incidents on the above mentioned site. Please find the Final Report C 141s for release dates of March 5, 2006, August 31, 2006, and September 20, 2006 in attachment A.

For the March 5, 2006 release date, the work plan for remediation including removal of a below grade tank at this site was submitted on July 21, 2006 and approved by NMOCD on August 1, 2006. Underground tank removal and all remediation activities have since been completed as per plan. The bermed area was lined with 12 mil reinforced plastic underlayment.

According to the ChevronTexaco Eddy County Depth to Ground Water Trend Map, depth to water in this area is between 250 and 275 feet. No water wells or surface waters are located within 1,000 feet of this site. Using the NMOCD ranking criteria, site investigation and data provided, this site has a Ranking Score of **0**. The soil action levels for a site with this score are as follows:

- Benzene 10 ppm
- BTEX 50 ppm
- TPH 5000 ppm

RANDY G. PATTERSON
VICE PRESIDENT

DAVID L. LANNING
ASSISTANT VICE PRESIDENT

DENNIS G. KINSEY
TREASURER

Confirmation samples (please note the sample point diagram in attachment B) taken August 14, 2006 and submitted to a third party laboratory do not exceed these criteria. The laboratory analysis is provided for your review (Attachment C).

Two additional releases occurring on August 31, 2006 and September 20, 2006 were sustained. However, both releases were contained within the newly lined bermed area. Standing fluids on both releases were vacuumed. Impacted materials of both releases were removed from the plastic liner, hauled to an OCD approved waste facility, and replaced with clean materials.

Given the analysis information and the two additional releases were contained within a plastic lined bermed area, there appears to be minimal risk to human health or the environment. In light of this evaluation, Yates Petroleum Corporation requests NMOCD grant final closure to the March 5, 2006, August 21, 2006, and September 20, 2006 releases.

Sincerely,

Sherry Bonham
Environmental Regulatory Agent

enclosures

Attachment A

District I
625 N. French Dr., Hobbs, NM 88240
District II
301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	OGRID Number	Contact
YATES PETROLEUM CORPORATION	25575	SHERRY BONHAM
Address 105 S. 4TH STREET		Telephone No. 505-748-1471
Facility Name SAWBUCK WATER TRANSFER	API Number	Facility Type SWD

Surface Owner	Mineral Owner	Lease No.
FEDERAL	FEDERAL	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	23	20S	24E					EDDY

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release PRODUCED WATER	Volume of Release 290 B/PW	Volume Recovered 260 B/PW
Source of Release TANK OVERFLOW	Date and Hour of Occurrence 3/05/06 0900	Date and Hour of Discovery 3/5/06 0900
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? MIKE BRATCHER	
By Whom? DAN DOLAN	Date and Hour 3/6/06 0900	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
POWER FAILURE. POWER RESTORED.

Describe Area Affected and Cleanup Action Taken.*
ALL FLUIDS WERE CONTAINED WITHIN BERMS. VACUUMED STANDING FLUIDS.
SITE RANKING: 0.
REMEDIATION ACTIONS COMPLETE PER APPROVED WORK PLAN. FINAL REPORT. REQUESTING CLOSURE.

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

	OIL CONSERVATION DIVISION	
Signature:	Approved by District Supervisor:	
Printed Name: Sherry Bonham		
Title: Environmental Regulatory Agent	Approval Date:	Expiration Date:
E-mail Address: sherryb@ypcnm.com	Conditions of Approval:	Attached ☐
Date: October 9, 2006 Phone: 505-748-1471		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	OGRID Number	Contact
YATES PETROLEUM CORPORATION	25575	SHERRY BONHAM
Address		Telephone No.
105 S. 4TH STREET		505-748-1471
Facility Name	API Number	Facility Type
SAWBUCK WATER TRANSFER		SWD

Surface Owner	Mineral Owner	Lease No.
FEDERAL	FEDERAL	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	23	20S	24E					EDDY

Latitude_____ Longitude_____

NATURE OF RELEASE

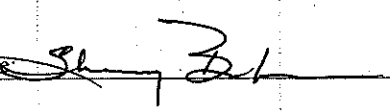
Type of Release PRODUCED WATER CRUDE OIL	Volume of Release 395 B/PW 5 B/O	Volume Recovered 380 B/PW 4 B/O
Source of Release TANK OVERFLOW	Date and Hour of Occurrence 8/31/06 1:00 PM	Date and Hour of Discovery 8/31/06 1:00 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? MIKE BRATCHER	
By Whom? SHERRY BONHAM	Date and Hour 8/31/06 3:15 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
POWER FAILURE DUE TO SEVERE THUNDERSTORM. RESULTED IN AUTO VALVE FAILURE. CLOSED MANUAL VALVES. VACUUM TRUCK AND CREW CALLED IN.

Describe Area Affected and Cleanup Action Taken.*
ALL FLUIDS WERE CONTAINED WITHIN PLASTIC LINED BERMS. STANDING FLUIDS VACUUMED. IMPACTED MATERIALS TO BE REMOVED FROM PLASTIC LINER AND REPLACED. UPON COMPLETION, FINAL C-141 TO BE SUBMITTED.
SITE RANKING: 0.
FINAL REPORT. REQUESTING CLOSURE.

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Sherry Bonham	Approved by District Supervisor:	
Title: Environmental Regulatory Agent	Approval Date:	Expiration Date:
E-mail Address: sherryb@ypcnm.com	Conditions of Approval:	Attached ☐
Date: October 9, 2006 Phone: 505-748-1471		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
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1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company YATES PETROLEUM CORPORATION	OGRID Number 25575	Contact SHERRY BONHAM
Address 105 S. 4TH STREET		Telephone No. 505-748-1471
Facility Name SAWBUCK WATER TRANSFER	API Number	Facility Type SWD

Surface Owner FEDERAL	Mineral Owner FEDERAL	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	23	20S	24E					EDDY

Latitude_____ Longitude_____

NATURE OF RELEASE

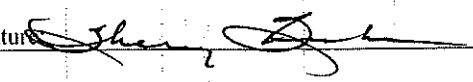
Type of Release PRODUCED WATER	Volume of Release 50 B/PW	Volume Recovered 47 B/PW
Source of Release GUN BARREL RISER	Date and Hour of Occurrence 9/20/06 8:45 AM	Date and Hour of Discovery 9/20/06 8:45 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? MIKE BRATCHER	
By Whom? SHERRY BONHAM	Date and Hour 9/20/06 9:00 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
CHECK VALVE FAILURE BLEW 12" VIC CLAMP OFF OF GUN BARREL RISER. SHUT MAIN VALVES. VACUUM TRUCK AND CREW CALLED IN.

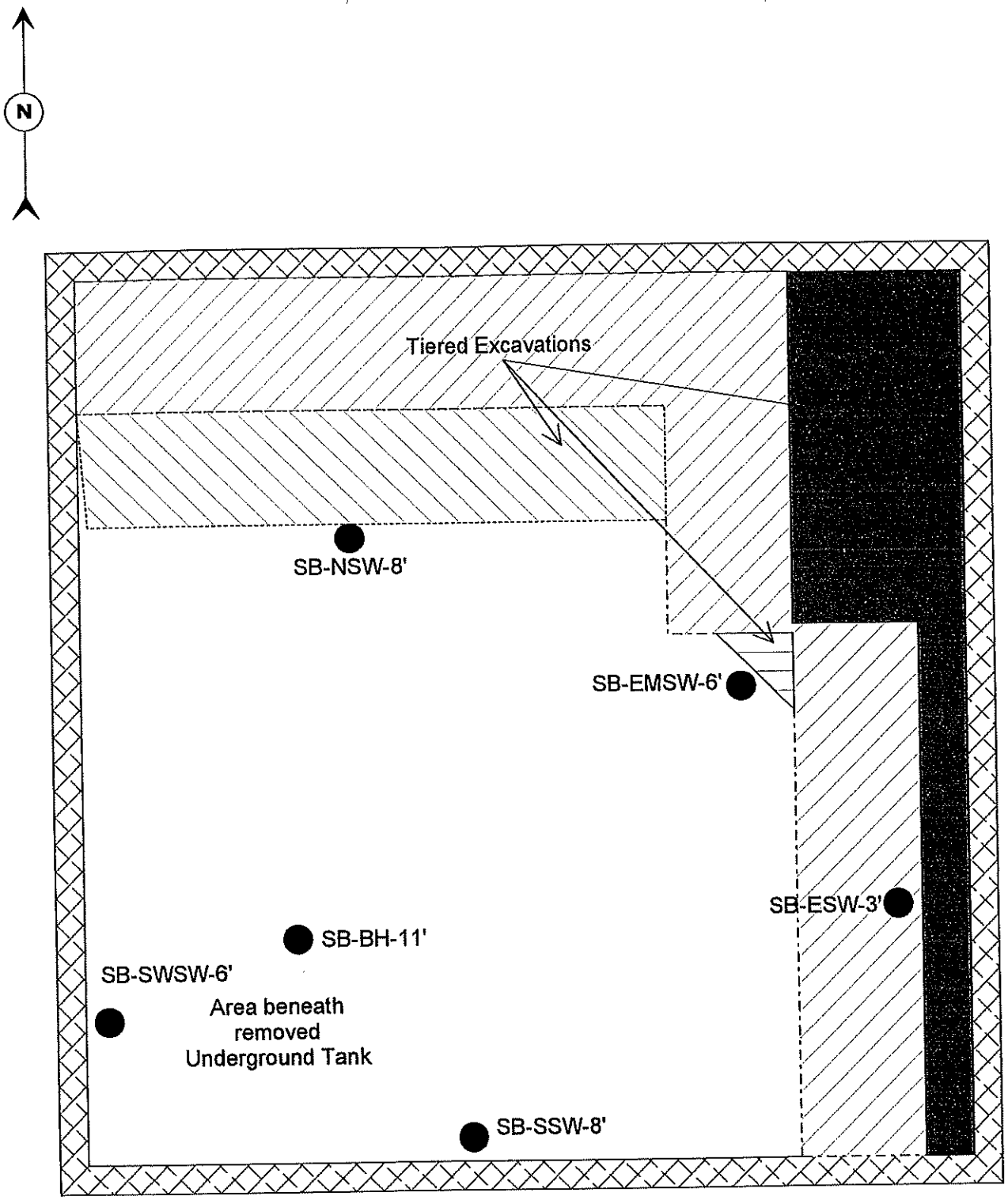
Describe Area Affected and Cleanup Action Taken.*
ALL FLUIDS WERE CONTAINED WITHIN PLASTIC LINED BERMS. STANDING FLUIDS VACUUMED. IMPACTED MATERIALS TO BE REMOVED FROM PLASTIC LINER AND REPLACED. UPON COMPLETION, FINAL C-141 TO BE SUBMITTED.
SITE RANKING: 0.
FINAL REPORT. REQUESTING CLOSURE.

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

Signature: 	OIL CONSERVATION DIVISION
Printed Name: Sherry Bonham	Approved by District Supervisor:
Title: Environmental Regulatory Agent	Approval Date: / Expiration Date:
E-mail Address: sherryb@ypcnm.com	Conditions of Approval: / Attached ☐
Date: October 9, 2006 Phone: 505-748-1471	

* Attach Additional Sheets If Necessary

Attachment B



YATES PETROLEUM CORPORATION

SAWBUCK WATER TRANSFER
Sec. 23 T20S R24E
Eddy County, NM

SAMPLE POINT DIAGRAM
AUGUST 14, 2006 SAMPLE DATE

NOT TO SCALE

Attachment C

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Sherry Bonham

Yates Petroleum Corp.

105 S. Fourth St.

Artesia, NM 88210

Project: Sawbuck Water Transfer

Project Number: G-23-20S-24E

Location: Eddy County, NM

Lab Order Number: 6H15010

Report Date: 08/21/06

Yates Petroleum Corp.	Project: Sawbuck Water Transfer	Fax: (505) 748-4662
105 S. Fourth St.	Project Number: G-23-20S-24E	
Artesia NM, 88210	Project Manager: Sherry Bonham	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-BH-11'	6H15010-01	Soil	08/14/06 10:40	08-15-2006 10:40
SB-ESW-3'	6H15010-02	Soil	08/14/06 10:55	08-15-2006 10:40
SB-SWSW-6'	6H15010-03	Soil	08/14/06 10:25	08-15-2006 10:40
SB-SSW-8'	6H15010-04	Soil	08/14/06 10:35	08-15-2006 10:40
SB-NSW-8'	6H15010-05	Soil	08/14/06 10:45	08-15-2006 10:40
SB-EMSW-6'	6H15010-06	Soil	08/14/06 10:50	08-15-2006 10:40

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Yates Petroleum Corp.	Project: Sawbuck Water Transfer	Fax: (505) 748-4662
105 S. Fourth St.	Project Number: G-23-20S-24E	
Artesia NM, 88210	Project Manager: Sherry Bonham	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-BH-11' (6H15010-01) Soil									
Carbon Ranges C6-C10	J [2.20]	10.0	mg/kg dry	1	EH61503	08/15/06	08/16/06	EPA 8015B	J
Carbon Ranges >C10-C28	193	10.0	"	"	"	"	"	"	
Total Carbon Range C6-C28	193	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*112 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*106 %*	*70-130*		"	"	"	"	
SB-ESW-3' (6H15010-02) Soil									
Carbon Ranges C6-C10	ND	10.0	mg/kg dry	1	EH61503	08/15/06	08/16/06	EPA 8015B	
Carbon Ranges >C10-C28	ND	10.0	"	"	"	"	"	"	
Total Carbon Range C6-C28	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*93.6 %*	*70-130*		"	"	"	"	
SB-SWSW-6' (6H15010-03) Soil									
Carbon Ranges C6-C10	ND	10.0	mg/kg dry	1	EH61503	08/15/06	08/16/06	EPA 8015B	
Carbon Ranges >C10-C28	ND	10.0	"	"	"	"	"	"	
Total Carbon Range C6-C28	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*97.4 %*	*70-130*		"	"	"	"	
SB-SSW-8' (6H15010-04) Soil									
Carbon Ranges C6-C10	ND	10.0	mg/kg dry	1	EH61503	08/15/06	08/16/06	EPA 8015B	
Carbon Ranges >C10-C28	ND	10.0	"	"	"	"	"	"	
Total Carbon Range C6-C28	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*99.0 %*	*70-130*		"	"	"	"	
SB-NSW-8' (6H15010-05) Soil									
Carbon Ranges C6-C10	ND	10.0	mg/kg dry	1	EH61503	08/15/06	08/16/06	EPA 8015B	
Carbon Ranges >C10-C28	ND	10.0	"	"	"	"	"	"	
Total Carbon Range C6-C28	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*99.0 %*	*70-130*		"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Yates Petroleum Corp.	Project: Sawbuck Water Transfer	Fax: (505) 748-4662
105 S. Fourth St.	Project Number: G-23-20S-24E	
Artesia NM, 88210	Project Manager: Sherry Bonham	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-EMSW-6' (6H15010-06) Soil									
Carbon Ranges C6-C10	ND	10.0	mg/kg dry	1	EH61503	08/15/06	08/16/06	EPA 8015B	
Carbon Ranges >C10-C28	ND	10.0	"	"	"	"	"	"	
Total Carbon Range C6-C28	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*97.2 %*	*70-130*		"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Yates Petroleum Corp.	Project: Sawbuck Water Transfer	Fax: (505) 748-4662
105 S. Fourth St.	Project Number: G-23-20S-24E	
Artesia NM, 88210	Project Manager: Sherry Bonham	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-BH-11' (6H15010-01) Soil									
% Moisture	5.1	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
SB-ESW-3' (6H15010-02) Soil									
% Moisture	17.4	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
SB-SWSW-6' (6H15010-03) Soil									
% Moisture	15.9	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
SB-SSW-8' (6H15010-04) Soil									
% Moisture	13.3	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
SB-NSW-8' (6H15010-05) Soil									
% Moisture	10.0	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
SB-EMSW-6' (6H15010-06) Soil									
% Moisture	13.5	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Yates Petroleum Corp.
105 S. Fourth St.
Artesia NM, 88210

Project: Sawbuck Water Transfer
Project Number: G-23-20S-24E
Project Manager: Sherry Bonham

Fax: (505) 748-4662

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH61503 - EPA 5030C (GC)										
Blank (EH61503-BLK1)				Prepared: 08/15/06 Analyzed: 08/16/06						
Carbon Ranges C6-C10	ND	10.0	mg/kg wet							
Carbon Ranges >C10-C28	ND	10.0	"							
Total Carbon Range C6-C28	ND	10.0	"							
Surrogate: 1-Chlorooctane	*51.9*		*mg/kg*	*50.0*		*104*	*70-130*			
Surrogate: 1-Chlorooctadecane	*49.2*		"	*50.0*		*98.4*	*70-130*			
LCS (EH61503-BS1)				Prepared: 08/15/06 Analyzed: 08/16/06						
Carbon Ranges C6-C10	524	10.0	mg/kg wet	500		105	75-125			
Carbon Ranges >C10-C28	467	10.0	"	500		93.4	75-125			
Total Carbon Range C6-C28	991	10.0	"	1000		99.1	75-125			
Surrogate: 1-Chlorooctane	*60.7*		*mg/kg*	*50.0*		*121*	*70-130*			
Surrogate: 1-Chlorooctadecane	*47.5*		"	*50.0*		*95.0*	*70-130*			
Calibration Check (EH61503-CCV1)				Prepared: 08/15/06 Analyzed: 08/16/06						
Carbon Ranges C6-C10	232		mg/kg	250		92.8	80-120			
Carbon Ranges >C10-C28	283		"	250		113	80-120			
Total Carbon Range C6-C28	515		"	500		103	80-120			
Surrogate: 1-Chlorooctane	*64.9*		"	*50.0*		*130*	*70-130*			
Surrogate: 1-Chlorooctadecane	*59.7*		"	*50.0*		*119*	*70-130*			
Matrix Spike (EH61503-MS1)	**Source: 6H15010-02**			Prepared: 08/15/06 Analyzed: 08/16/06						
Carbon Ranges C6-C10	630	10.0	mg/kg dry	605	ND	104	75-125			
Carbon Ranges >C10-C28	549	10.0	"	605	ND	90.7	75-125			
Total Carbon Range C6-C28	1180	10.0	"	1210	ND	97.5	75-125			
Surrogate: 1-Chlorooctane	*63.9*		*mg/kg*	*50.0*		*128*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.3*		"	*50.0*		*101*	*70-130*			
Matrix Spike Dup (EH61503-MSD1)	**Source: 6H15010-02**			Prepared: 08/15/06 Analyzed: 08/16/06						
Carbon Ranges C6-C10	677	10.0	mg/kg dry	605	ND	112	75-125	7.19	20	
Carbon Ranges >C10-C28	590	10.0	"	605	ND	97.5	75-125	7.20	20	
Total Carbon Range C6-C28	1270	10.0	"	1210	ND	105	75-125	7.35	20	
Surrogate: 1-Chlorooctane	*62.3*		*mg/kg*	*50.0*		*125*	*70-130*			
Surrogate: 1-Chlorooctadecane	*53.7*		"	*50.0*		*107*	*70-130*			

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Yates Petroleum Corp.	Project: Sawbuck Water Transfer	Fax: (505) 748-4662
105 S. Fourth St.	Project Number: G-23-20S-24E	
Artesia NM, 88210	Project Manager: Sherry Bonham	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH61601 - General Preparation (Prep)										
Blank (EH61601-BLK1)				Prepared: 08/15/06 Analyzed: 08/16/06						
% Solids	100		%							
Duplicate (EH61601-DUP1)		Source: 6H15002-01		Prepared: 08/15/06 Analyzed: 08/16/06						
% Solids	90.3		%		89.0			1.45	20	
Duplicate (EH61601-DUP2)		Source: 6H15007-04		Prepared: 08/15/06 Analyzed: 08/16/06						
% Solids	97.3		%		96.9			0.412	20	
Duplicate (EH61601-DUP3)		Source: 6H15013-01		Prepared: 08/15/06 Analyzed: 08/16/06						
% Solids	90.1		%		90.1			0.00	20	

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Yates Petroleum Corp.	Project: Sawbuck Water Transfer	Fax: (505) 748-4662
105 S. Fourth St.	Project Number: G-23-20S-24E	
Artesia NM, 88210	Project Manager: Sherry Bonham	

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 8/21/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Sherry Bonham
Company Name: Yates Petroleum Corporation
Company Address: 105 S 4th Street
City/State/Zip: Artesia, NM 88210
Telephone No: 505-748-4162 or 505-513-1529
Fax No: 505-748-4585
Sampler Signature:
e-mail: sherryb@ypcnm.com

Project Name: Sawbuck Water Transfer
Project #: G-23-20S-24E
Project Loc: Eddy County
PO #: 1032420
Report Format: ☑ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 6ft15010

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	No. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 1005	TOTAL: TPH: 418.1 8015M 1005	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	SB-BH-11'		11'	8/14/2006	10:40am	1	X									S		X											X		X
02	SB-ESW-3'		3'	8/14/2006	10:55AM	1	X									S		X											X		X
03	SB-SWSW-6'		6'	8/14/2006	10:25AM	1	X									S		X											X		X
04	SB-SSW-8'		8'	8/14/2006	10:35AM	1	X									S		X											X		X
05	SB-NSW-8'		8'	8/14/2006	10:45AM	1	X									S		X											X		X
06	SB-EMSW-6'		6'	8/14/2006	10:50AM	1	X									S		X											X		X

Special Instructions: Please analyze TPH 8015 B (GRO/DRO) -- not TPH 8015M. Please put chloride results on different report. T

Relinquished by:	Date	Time	Received by:	Date	Time
Sherry Bonham	08/14/06	3:00 PM			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Fed Ex / Courier	8/15/06	10:40

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep. ? Y N
by Courier? UPS DHL Fed Ex Lone Star
4oz glass
Temperature Upon Receipt: 3.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ent: Yates

te/ Time: 8/15/06 10:40

ID # : 6H15990

ials: CK

Sample Receipt Checklist

		Yes	No		Client Initials
	Temperature of container/ cooler?	Yes	No	3.5 °C	
	Shipping container in good condition?	Yes	No		
	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
	Chain of Custody present?	Yes	No		
	Sample instructions complete of Chain of Custody?	Yes	No		
	Chain of Custody signed when relinquished/ received?	Yes	No		
	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
	Container label(s) legible and intact?	Yes	No	Not Applicable	
10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
11	Containers supplied by ELOT?	Yes	No		
12	Samples in proper container/ bottle?	Yes	No	See Below	
13	Samples properly preserved?	Yes	No	See Below	
14	Sample bottles intact?	Yes	No		
15	Preservations documented on Chain of Custody?	Yes	No		
16	Containers documented on Chain of Custody?	Yes	No		
17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
18	All samples received within sufficient hold time?	Yes	No	See Below	
19	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Sherry Bonham

Yates Petroleum Corp.

105 S. Fourth St.

Artesia, NM 88210

Project: Sawbuck Water Transfer

Project Number: G-23-20S-24E

Location: Eddy County, NM

Lab Order Number: 6H15010

Report Date: 08/21/06

Yates Petroleum Corp.	Project: Sawbuck Water Transfer	Fax: (505) 748-4662
105 S. Fourth St.	Project Number: G-23-20S-24E	
Artesia NM, 88210	Project Manager: Sherry Bonham	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-BH-11'	6H15010-01	Soil	08/14/06 10:40	08-15-2006 10:40
SB-ESW-3'	6H15010-02	Soil	08/14/06 10:55	08-15-2006 10:40
SB-SWSW-6'	6H15010-03	Soil	08/14/06 10:25	08-15-2006 10:40
SB-SSW-8'	6H15010-04	Soil	08/14/06 10:35	08-15-2006 10:40
SB-NSW-8'	6H15010-05	Soil	08/14/06 10:45	08-15-2006 10:40
SB-EMSW-6'	6H15010-06	Soil	08/14/06 10:50	08-15-2006 10:40

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Yates Petroleum Corp.	Project: Sawbuck Water Transfer	Fax: (505) 748-4662
105 S. Fourth St.	Project Number: G-23-20S-24E	
Artesia NM, 88210	Project Manager: Sherry Bonham	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-BH-11' (6H15010-01) Soil									
Chloride	**642**	10.0	mg/kg	20	EH61511	08/15/06	08/15/06	EPA 300.0	
SB-ESW-3' (6H15010-02) Soil									
Chloride	**316**	10.0	mg/kg	20	EH61511	08/15/06	08/15/06	EPA 300.0	
SB-SWSW-6' (6H15010-03) Soil									
Chloride	**362**	10.0	mg/kg	20	EH61511	08/15/06	08/15/06	EPA 300.0	
SB-SSW-8' (6H15010-04) Soil									
Chloride	**869**	20.0	mg/kg	40	EH61511	08/15/06	08/15/06	EPA 300.0	
SB-NSW-8' (6H15010-05) Soil									
Chloride	**1090**	25.0	mg/kg	50	EH61511	08/15/06	08/15/06	EPA 300.0	
SB-EMSW-6' (6H15010-06) Soil									
Chloride	**191**	10.0	mg/kg	20	EH61511	08/15/06	08/15/06	EPA 300.0	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Yates Petroleum Corp.	Project: Sawbuck Water Transfer	Fax: (505) 748-4662
105 S. Fourth St.	Project Number: G-23-20S-24E	
Artesia NM, 88210	Project Manager: Sherry Bonham	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH61511 - Water Extraction										
Blank (EH61511-BLK1)				Prepared & Analyzed: 08/15/06						
Chloride	ND	0.500	mg/kg							
LCS (EH61511-BS1)				Prepared & Analyzed: 08/15/06						
Chloride	9.79	0.500	mg/kg	10.0		97.9	80-120			
Calibration Check (EH61511-CCV1)				Prepared & Analyzed: 08/15/06						
Chloride	9.49		mg/L	10.0		94.9	80-120			
Duplicate (EH61511-DUP1)		Source: 6H15002-02		Prepared & Analyzed: 08/15/06						
Chloride	42.2	5.00	mg/kg		43.4			2.80	20	
Duplicate (EH61511-DUP2)		Source: 6H15010-01		Prepared & Analyzed: 08/15/06						
Chloride	647	10.0	mg/kg		642			0.776	20	
Matrix Spike (EH61511-MS1)		Source: 6H15002-02		Prepared & Analyzed: 08/15/06						
Chloride	149	5.00	mg/kg	100	43.4	106	80-120			
Matrix Spike (EH61511-MS2)		Source: 6H15010-01		Prepared & Analyzed: 08/15/06						
Chloride	900	10.0	mg/kg	200	642	129	80-120			S-07

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Yates Petroleum Corp.	Project: Sawbuck Water Transfer	Fax: (505) 748-4662
105 S. Fourth St.	Project Number: G-23-20S-24E	
Artesia NM, 88210	Project Manager: Sherry Bonham	

Notes and Definitions

S-07	Recovery outside Laboratory historical or method prescribed limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 8/21/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Sherry Bonham — Project Name: Sawbuck Water Transfer

Company Name: Yates Petroleum Corporation — Project #: G-23-20S-24E

Company Address: 105 S 4th Street — Project Loc: Eddy County

City/State/Zip: Artesia, NM 88210 — PO #: 1032420

Telephone No: 505-748-4162 or 505-513-1529 — Fax No: 505-748-4585 — Report Format: ☑ Standard ☐ TRRP ☐ NPDES

Sampler Signature: — e-mail: sherryb@ypcnm.com

(lab use only) ORDER #: 6H15010

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	No. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: GW=Drinking Water SL=Sludge	GW=Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TCLP: TOTAL: TPH: 418.1 / 8015M / 1005 / 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	SB-BH-11'		11'	8/14/2006	10:40am	1	X									S		X										X					X
02	SB-ESW-3'		3'	8/14/2006	10:55AM	1	X									S		X										X					X
03	SB-SWSW-6'		6'	8/14/2006	10:25AM	1	X									S		X										X					X
04	SB-SSW-8'		8'	8/14/2006	10:35AM	1	X									S		X										X					X
05	SB-NSW-8'		8'	8/14/2006	10:45AM	1	X									S		X										X					X
06	SB-EMSW-6'		6'	8/14/2006	10:50AM	1	X									S		X										X					X

Special Instructions: Please analyze TPH 8015 B (GRO/DRO) -- not TPH 8015M. Please put chloride results on different report. T

Relinquished by:	Date	Time	Received by:	Date	Time
Sherry Bonham	08/14/05	3:00 PM			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Fed Ex / Carrie Kelly	Date 8/15/06	Time 10:40

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

4oz glass

Temperature Upon Receipt: 3.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ient: Yates

ate/ Time: 8/15/06 10:40

ib ID # : 6H1590

itials: CK

Sample Receipt Checklist

					Client Initials
1	Temperature of container/ cooler?	Yes	No	3.5 °C	
2	Shipping container in good condition?	Yes	No		
3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
5	Chain of Custody present?	Yes	No		
6	Sample instructions complete of Chain of Custody?	Yes	No		
7	Chain of Custody signed when relinquished/ received?	Yes	No		
8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
9	Container label(s) legible and intact?	Yes	No	Not Applicable	
10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
11	Containers supplied by ELOT?	Yes	No		
12	Samples in proper container/ bottle?	Yes	No	See Below	
13	Samples properly preserved?	Yes	No	See Below	
14	Sample bottles intact?	Yes	No		
15	Preservations documented on Chain of Custody?	Yes	No		
16	Containers documented on Chain of Custody?	Yes	No		
17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
18	All samples received within sufficient hold time?	Yes	No	See Below	
19	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Contact: ______ Contacted by: ______ Date/ Time: ______

Regarding: ______

Corrective Action Taken: ______

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

San Juan Water Transfer
10-3-06

Sawbuck Water Transfer
10-3-08

Sawbuck Water Transfer
10-3-06

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	OGRID Number	Contact
YATES PETROLEUM CORPORATION	25575	SHERRY BONHAM
Address		Telephone No.
105 S. 4TH STREET		505-748-1471
Facility Name	API Number	Facility Type
SAWBUCK WATER TRANSFER		SWD

Surface Owner	Mineral Owner	Lease No.
FEDERAL	FEDERAL	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	23	20S	24E					EDDY

Latitude_____ Longitude_____

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
PRODUCED WATER	50 B/PW	47 B/PW
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
GUN BARREL RISER	9/20/06 8:45 AM	9/20/06 8:45 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? MIKE BRATCHER	
By Whom? SHERRY BONHAM	Date and Hour 9/20/06 9:00 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
CHECK VALVE FAILURE BLEW 12" VIC CLAMP OFF OF GUN BARREL RISER. SHUT MAIN VALVES. VACUUM TRUCK AND CREW CALLED IN.

Describe Area Affected and Cleanup Action Taken.*
ALL FLUIDS WERE CONTAINED WITHIN PLASTIC LINED BERMS. STANDING FLUIDS VACUUMED. IMPACTED MATERIALS TO BE REMOVED FROM PLASTIC LINER AND REPLACED. UPON COMPLETION, FINAL C-141 TO BE SUBMITTED.
SITE RANKING: 0.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Sherry Bonham	Approved by District Supervisor:
Title: Environmental Regulatory Agent	Approval Date: / Expiration Date:
E-mail Address: sherryb@ypcnm.com	Conditions of Approval: / Attached ☐
Date: September 22, 2006 Phone: 505-748-1471	

Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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1301 W. Grand Avenue, Artesia, NM 88210
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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
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Form C-141
Revised October 10, 2003

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Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	OGRID Number	Contact
YATES PETROLEUM CORPORATION	25575	SHERRY BONHAM
Address		Telephone No.
105 S. 4TH STREET		505-748-1471
Facility Name	API Number	Facility Type
SAWBUCK WATER TRANSFER		SWD

Surface Owner	Mineral Owner	Lease No.
FEDERAL	FEDERAL	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	23	20S	24E					EDDY

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
PRODUCED WATER CRUDE OIL	395 B/PW 5 B/O	380 B/PW 4 B/O
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
TANK OVERFLOW	8/31/06 1:00 PM	8/31/06 1:00 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? MIKE BRATCHER	
By Whom? SHERRY BONHAM	Date and Hour 8/31/06 3:15 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
POWER FAILURE DUE TO SEVERE THUNDERSTORM. RESULTED IN AUTO VALVE FAILURE. CLOSED MANUAL VALVES. VACUUM TRUCK AND CREW CALLED IN.

Describe Area Affected and Cleanup Action Taken.*
ALL FLUIDS WERE CONTAINED WITHIN PLASTIC LINED BERMS. STANDING FLUIDS VACUUMED. IMPACTED MATERIALS TO BE REMOVED FROM PLASTIC LINER AND REPLACED. UPON COMPLETION, FINAL C-141 TO BE SUBMITTED.
SITE RANKING: 0.

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

	OIL CONSERVATION DIVISION	
Signature: Sherry Bonham		
Printed Name: Sherry Bonham	Approved by District Supervisor:	
Title: Environmental Regulatory Agent	Approval Date:	Expiration Date:
E-mail Address: sherryb@ypcnm.com	Conditions of Approval:	Attached ☐
Date: September 1, 2006 Phone: 505-748-1471		

Attach Additional Sheets If Necessary

ENTERED 9-20-06 SLB

cc Jennifer Palma 9-1-06 SB


9/1/2006 12:22:16 PM


9/1/2006 12:25:10 PM

District I
1625 N. French Dr., Hobbs, NM 88240
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Form C-141
Revised October 10, 2003

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nMLB 0608954436
fMLB 0608953556

Release Notification and Corrective Action

OPERATOR

X Initial Report Final Report

Name of Company Yates Petroleum Corp.	Contact Dan Dolan
Address 105 S. 4th St., Artesia NM 88210	Telephone No. 748-4181
Facility Name Sawbuck Water Transfer	Facility Type Water transfer station

Surface Owner	Mineral Owner	Lease No.
Wilbanks Ranch	Fed	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Lin	Feet from the	East/West Line	County
G	23	20S	24E					Eddy

Latitude _ Longitude _

NATURE OF RELEASE

Type of Release produced water	Volume of Release 290bbl water	Volume Recovered 260bbl water
Source of Release Power failure, main control valve leaked causing tanks to overflow.	Date and Hour of Occurrence 03-05-06, 0900hrs	Date and Hour of Discovery 03-05-06, 0900hrs
Was Immediate Notice Given? X Yes No Not Required	If YES, To Whom? Mike Bratcher, District 2 NMOCD	
By Whom? Dan Dolan	Date and Hour 03-06-06, 0800hrs	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Power failure, tanks overflowed. Power restored, vacuum trucks picked up free water.

Describe Area Affected and Cleanup Action Taken.*
Area was inside good berm, will be field tested for chloride, and remedial action taken based on that test. If found good, OCD will be notified for final testing.
Ranking for this area is as follows; Depth to ground water-0, Wellhead protection area-0, Distance to surface water-0. Water 125'(trend map)

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Dan Dolan	Approved by District Supervisor: TIM GUM by MB
Title: Environmental Regulatory Agent	Approval Date: 3/30/06 Expiration Date:
E-mail Address: ddolan@ypcnm.com	Conditions of Approval: Attached ☒
Date: 03-06-06 Phone: 748-4181	

* Attach Additional Sheets If Necessary

ENTERED 4-6-06 SD

APPENDIX B – Closure Criteria Research Documentation

Closure Criteria Worksheet			
Site Name: Sawbuck Water Transfer Station			
Spill Coordinates:		**X: 32.562300**	**Y: -104.556110**
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater	**<50**	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	46,667	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	46,667	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	20,067	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**	6,074	feet
	ii) Within 1000 feet of any fresh water well or spring		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	756	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	**High**	Critical High Medium Low
10	Within a 100-year Floodplain	500	year
11	Soil Type	Pima silt loam and Reagan loam	
12	Ecological Classification	Loamy and Bottomland	
13	Geology	Qp	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

Sawbuck Water Transfer Station

0.5 mile Radius
Well within radius is older than 25 years

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	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 04742	RA	ED		3	3	13	20S	24E	542408	3603517*	993	300		
RA 07771	RA	ED	4	1	4	22	20S	24E	540073	3602194*	1727			
RA 05146	RA	ED		1	2	14	20S	24E	541600	3604734*	1883	300	80	220
RA 05424	RA	ED	4	2	3	22	20S	24E	539669	3602194*	2106	1000	400	600
RA 04502	RA	ED		2	2	25	20S	24E	543656	3601480*	2413	300	268	32
RA 10140	RA	ED	2	1	1	35	20S	24E	540938	3599981*	2962	295		
RA 10139	RA	ED	3	3	2	21	20S	24E	538285	3602597*	3394	308		
RA 02775	RA	CH	1	4	3	21	20S	24E	537899	3601986*	3869	140	31	109
RA 04956	RA	ED		1	1	21	20S	24E	537605	3603101*	4072	1013		
RA 10618	RA	ED	1	1	4	20	20S	25E	546389	3602414	4739	342	212	130
RA 05038	RA	ED	1	1	4	20	20S	25E	546390	3602416*	4740	314	228	86
RA 05057	RA	ED		3	3	31	20S	25E	544071	3598678*	4815	380	312	68
RA 09978	RA	ED	3	1	2	29	20S	25E	546393	3601410*	4938	350		

Average Depth to Water: **218 feet**

Minimum Depth: **31 feet**

Maximum Depth: **400 feet**

Record Count: 13

UTMNAD83 Radius Search (in meters):

Easting (X): 541670 **Northing (Y):** 3602852 **Radius:** 5000

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

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

site_no list =

- 323341104330401

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

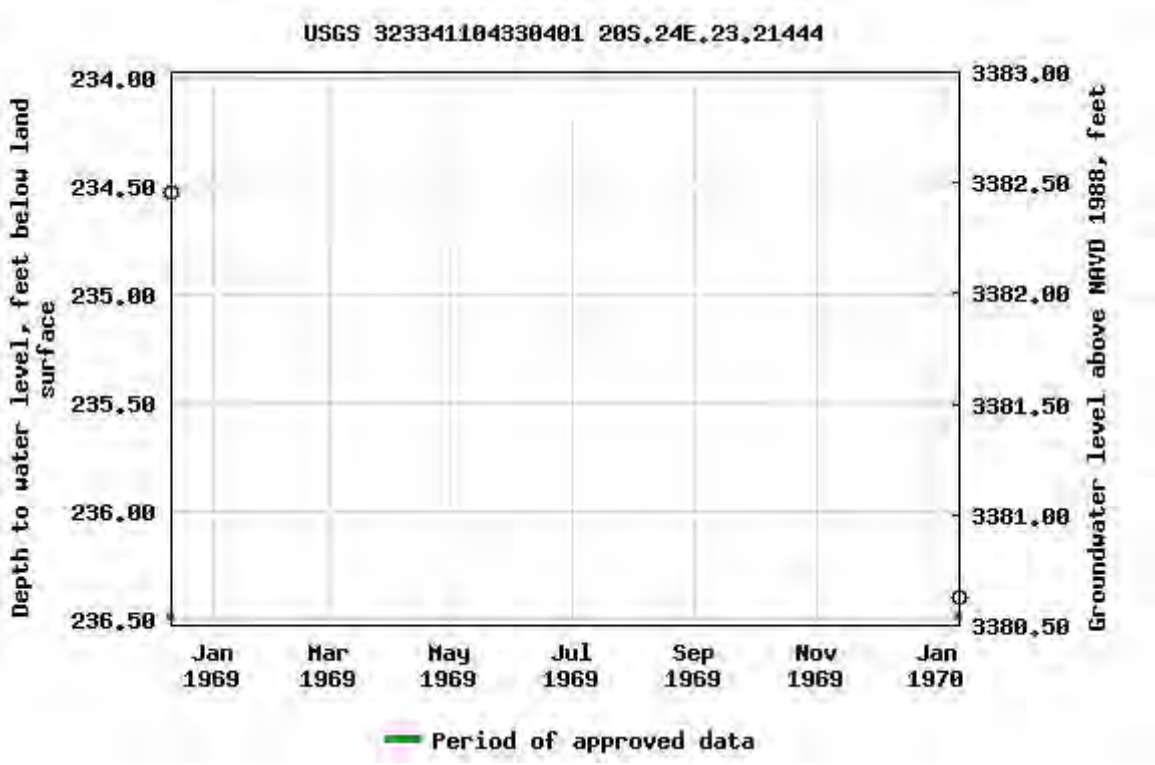
USGS 323341104330401 20S.24E.23.21444

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°33'41", Longitude 104°33'04" NAD27
Land-surface elevation 3,617 feet above NAVD88
The depth of the well is 272 feet below land surface.
This well is completed in the Roswell Basin aquifer system (S400RSWLBS) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

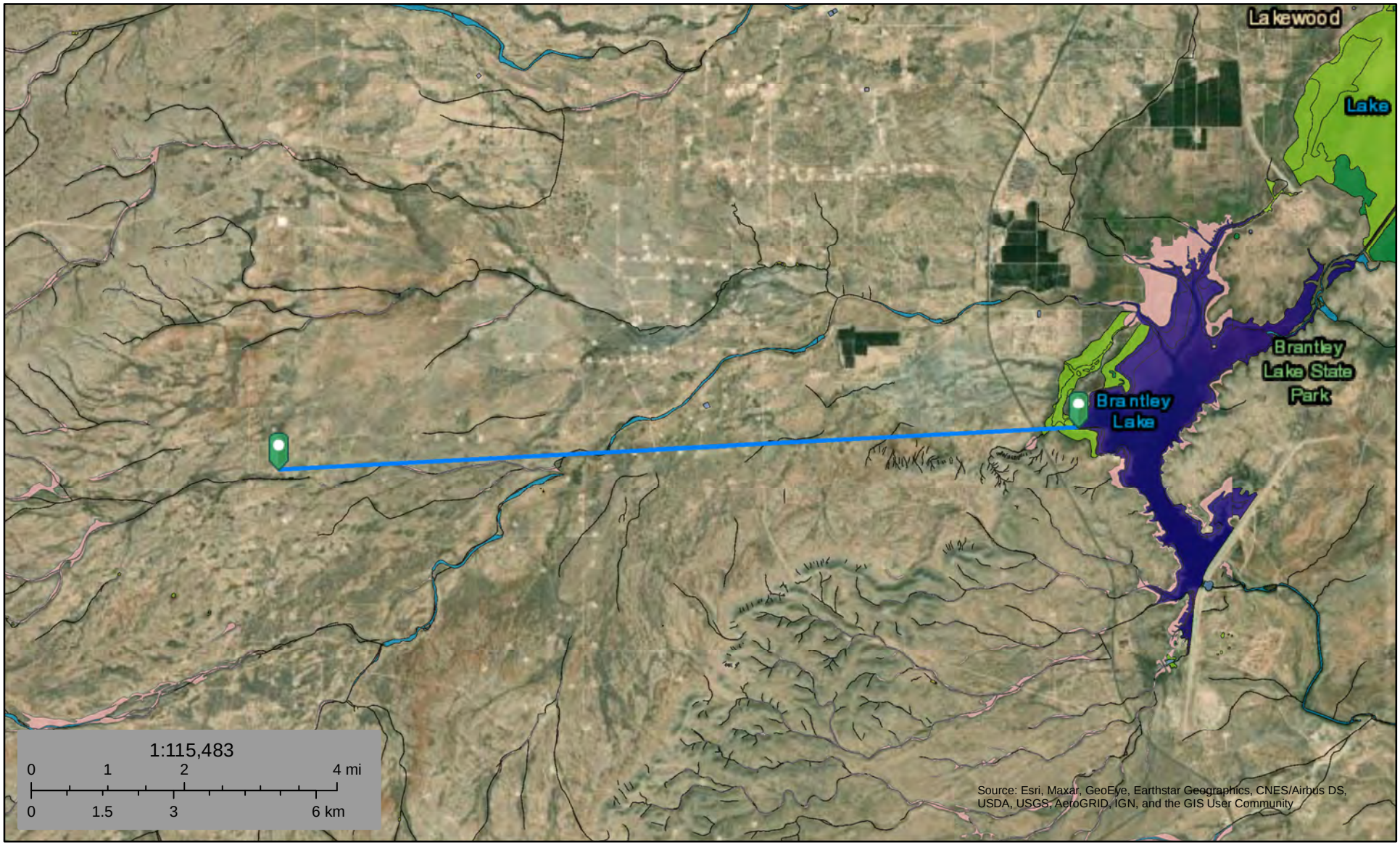
Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2021-09-13 14:13:21 EDT
0.61 0.51 nadww01

U.S. Fish and Wildlife Service
National Wetlands Inventory

Sawbuck Watercourse 46,667ft.



September 11, 2021

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

U.S. Fish and Wildlife Service

National Wetlands Inventory

Sawbuck Lake 46,667ft.

September 11, 2021

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

Sawbuck Water Transfer Station

Nearest Residence
20,065ft.

Legend

32.605600 -104.544800

32.562300 -104.556110

27
27
27
27
28

Google Earth

3 km

N

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 6416	4	Sec	Tws	Rng	X	Y	Distance
RA 04820	RA	STK	3	LOYD FOSTER	ED	RA 04820					3	2	23	20S	24E	541596	3602701*	168
RA 04742	RA	STK	3	LOYD FOSTER	ED	RA 04742				Shallow	3	3	13	20S	24E	542408	3603517*	993

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 541670 **Northing (Y):** 3602852 **Radius:** 1610

Sorted by: Distance

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

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	RA 05146		1	2	14	20S	24E	541600	3604734*

Driller License: 353 **Driller Company:** OSBOURN DRILLING & PUMP CO.
Driller Name:

Drill Start Date: 04/23/1968 **Drill Finish Date:** 05/06/1968 **Plug Date:**
Log File Date: 05/17/1968 **PCW Rcv Date:** **Source:** Shallow
Pump Type: **Pipe Discharge Size:** **Estimated Yield:**
Casing Size: **Depth Well:** 300 feet **Depth Water:** 80 feet

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

Sawbuck Water Transfer Station

Nearest Town: Seven Rivers, NM
Distance: 8.15 miles (43,046 feet)

U.S. Fish and Wildlife Service
National Wetlands Inventory

Sawbuck Wetland 756ft

September 11, 2021

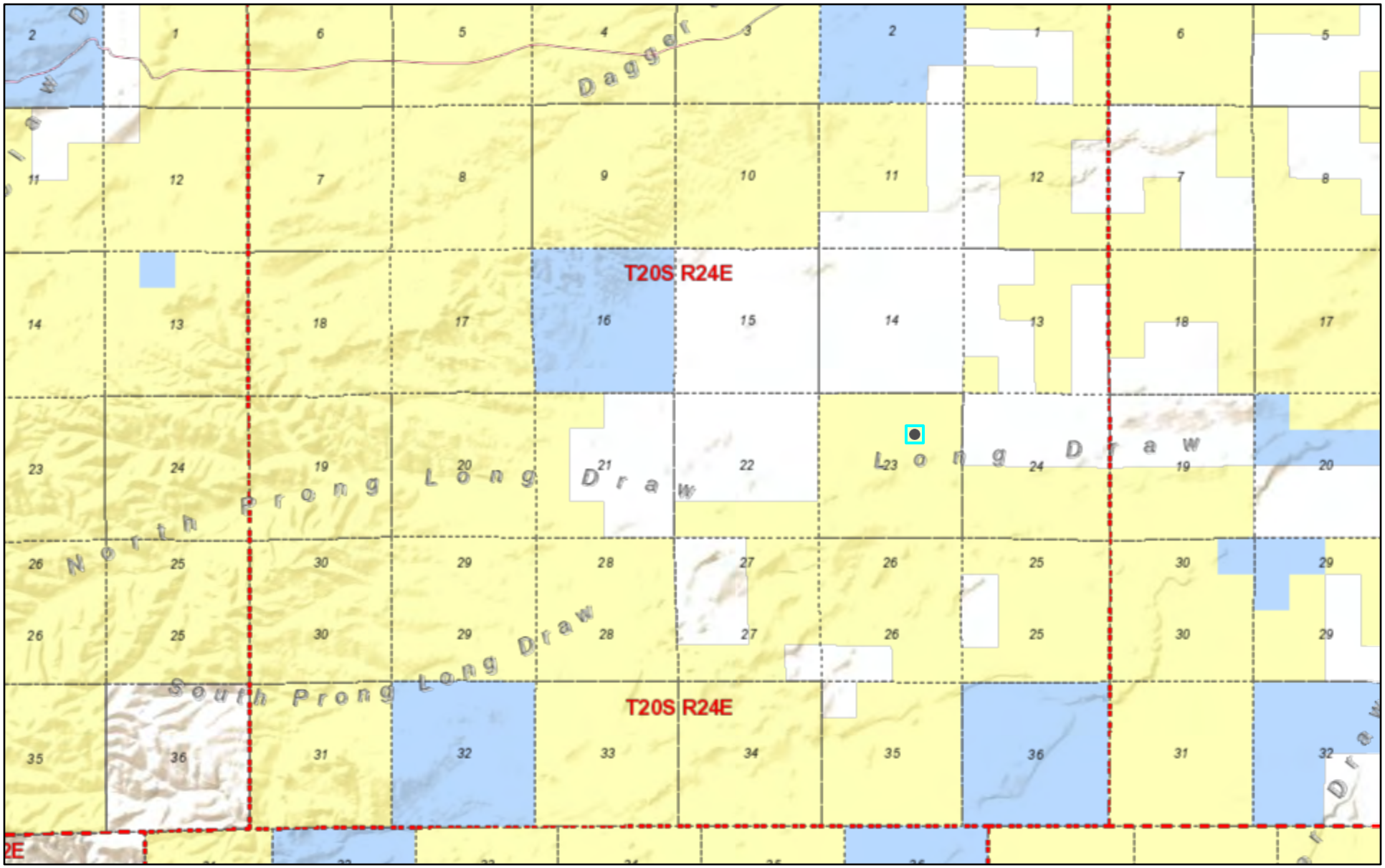
Wetlands

- 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

Active Mines in New Mexico



9/11/2021, 2:27:55 PM

1:72,224

Township / Range

Sections

Land Ownership

Bureau of Land Management

Bureau of Reclamation

Department of Agriculture

Department of Defense

Department of Energy

National Park Service

Private Land

State Game and Fish

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,

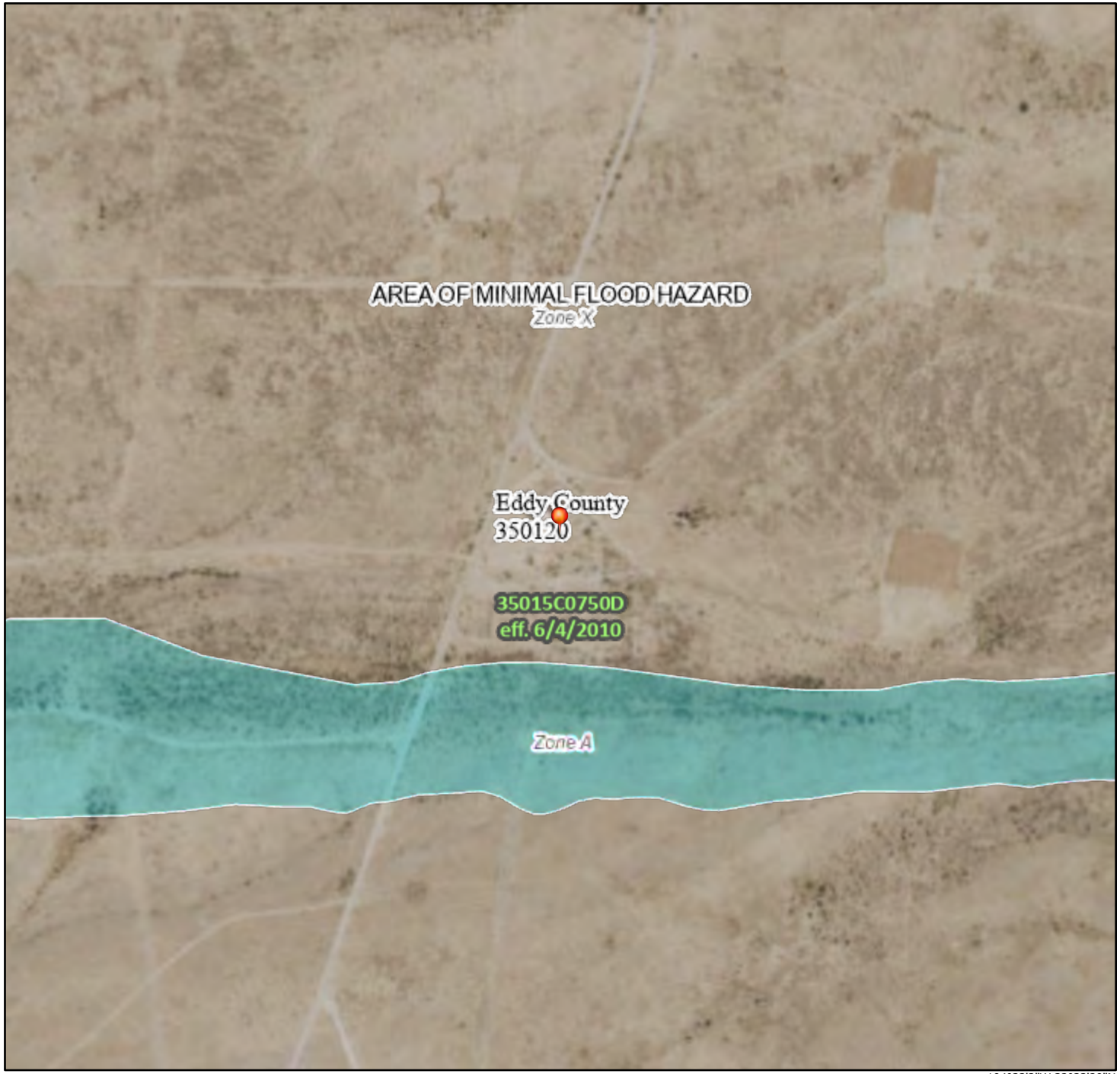
EMNRD MMD GIS Coordinator

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

National Flood Hazard Layer FIRMette

FEMA

104°33'41"W 32°33'59"N



104°33'3"W 32°33'29"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

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 Cross Sections with 1% Annual Chance
- 17.5 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 9/13/2021 at 2:34 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.

Soil Map—Eddy Area, New Mexico

Map Scale: 1:1,090 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

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 16, Jun 8, 2020

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

Date(s) aerial images were photographed: Feb 27, 2020—Feb 28, 2020

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
PM	Pima silt loam, 0 to 1 percent slopes	1.1	27.1%
RA	Reagan loam, 0 to 3 percent slopes	3.0	72.9%
Totals for Area of Interest		**4.2**	**100.0%**

Eddy Area, New Mexico

PM—Pima silt loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 1w56
Elevation: 600 to 4,200 feet
Mean annual precipitation: 8 to 25 inches
Mean annual air temperature: 60 to 70 degrees F
Frost-free period: 195 to 290 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Pima

Setting

Landform: Alluvial fans, alluvial flats, flood plains
Landform position (three-dimensional): Rise, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Alluvium

Typical profile

H1 - 0 to 3 inches: silt loam
H2 - 3 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: RareNone
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: High (about 11.9 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: C
Ecological site: R042XC017NM - Bottomland

Hydric soil rating: No

Minor Components

Dev

Percent of map unit: 1 percent
Ecological site: R042XC017NM - Bottomland
Hydric soil rating: No

Reagan

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

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 16, Jun 8, 2020

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
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 content: 40 percent
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B

Ecological site: R042XC007NM - Loamy
Hydric soil rating: No

Minor Components

Upton
Percent of map unit: 1 percent
Ecological site: R042XC025NM - Shallow
Hydric soil rating: No

Atoka
Percent of map unit: 1 percent
Ecological site: R042XC007NM - Loamy
Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 16, Jun 8, 2020

Functional / Structural Groups Worksheet

State NM **Office** NMSO **Ecological Site** Bottomland R042XC017NM

Observers John Tunberg, **Date** 2/12/10

Functional / Structural Groups			Species List for Functional / Structural Groups
Name	**Potenti.1.**	**Actu.2**	**Plant Names**
Warm season very tall bunchgrass	D		Big Sacaton
warm season mid height stolon gr	D		Tobosagrass
warm season tall bunchgrass	D		Alkali Sacaton
warm season low stolon grass	D		Vine Mesquite, Plains Bristlegrass
Warm season mid bunchgrass	S		Cane bluestem, white tridens, false rhodesgrass
salt tolerant shrub	S		Fourwing saltbush
deciduous shrub legume	M		honey mesquite
drought tolerant shrubs	M		Apache plume, american tarwort, littleleaf sumac
Forbs	M		Coyote gourd, common sunflower, pepperweed, globemallow
Biological Crust[3]			

Indicate whether each "structural/functional group" is a Dominant (D) (roughly 40-100% composition), a **Sub-dominant (S)** (roughly 11-40%) composition) a **Minor Component (M)** (3-11% composition), or a **Trace Component (T)** (<3% composition) based on weight or cover composition in the area of interest (e.g., "Actual" column) relative to the "Potential" column derived from information found in the ecological site/description and/or at the ecological reference area.

Biological Crust[3] dominance is evaluated solely on **cover** not composition by weight.

Ecological Reference Worksheet

Author(s) / participant(s): John Tunberg,

Contact for lead author : 505-761-4488 **Reference site used? Yes/No** No

Date: 2/12/2010 **MLRA:** 42.3 **Ecological Site:** Loamy This *must* be verified based on soils and climate (see Ecological Site Description). Current plant community *cannot* be used to identify the ecological site.

Indicators: For each indicator, describe the potential for the site. Where possible, **(1)** use numbers, **(2)** include expected range of values for above and below average years for **each** community within the reference state, when appropriate & **(3)** site data. Continue description on separate sheet.

1. Number and extent of rills There should not be any rills.

After wildfires, or abnormally high human or herbivore impacts or extended drought or combinations of these disturbances rills may double in number on steeper slopes at the margins of this site after high-intensity summer thunderstorms. Any rills formed should not be long lived or interconnected and should heal rapidly.

2. Presence of water flow patterns: There can be evidence of sheet flow.

There can be a few flow patterns that should be short and discontinuous. There can be some sheet flow. Water flow patterns should only be present following intense storm events on upper slope limits at the margins of this site. Numerous obstructions alter flow paths. Flow pattern length and numbers may double after wildfires, or abnormally high human or herbivore impacts or extended drought or combinations of these disturbances.

3. Number and height of erosional pedestals or terracettes: Pedestals should be rare. Terracettes can occure and should be discontinuous

There can be a few pedestals that should be less than 1 inch high. Terracettes can be common and should be discontinuous. If present plant or rock pedestals and terracettes are almost always in flow patterns. Wind caused pedestals are rare and only would be on the site following after wildfires, or abnormally high human or herbivore impacts or extended drought or combinations of these disturbances. These would show signs of healing within 1 year after event.

4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground) :

Bare ground can make up to 50% of the ground cover on this site according to the ESD. Bare patch size should be small.

5. Number of gullies and erosion associated with gullies:

Gullies and erosion associated with gullies should be rare are infrequent. Typically, gullies if present will only follow the micro topography. Natural drainages with little to no active cutting are common on this site. There should not be any accelerated erosion. After high-intensity summer thunderstorms or after wildfire, or abnormally high human or herbivore impacts or extended drought or combinations of these disturbances then gully formation would be accelerated for a year or two. Evidence of healing within 1 year of event and continuing after that.

6. Extent of wind scoured, blowouts and/or depositional area

There should not be any wind scoured, blowouts and/or depositional areas. However there can be potential for depositional areas. Wind erosion is minimal when the site is in a well vegetated condition. Significant wind erosion would only be present following high-intensity summer thunderstorms, after wildfire, or abnormally high human or herbivore impacts or extended drought or combinations of these disturbances. After rain events, exposed soil surfaces form physical crusts that tend to reduce wind erosion. Deposition from off site sources can be common on this site and is in fact a primary soil forming process. This site is succeptable to wind erosion when vegetation is removed or significantly decreased.

7. Amount of litter movement (describe size and distance expected to travel) :

Litter should be small (less than “1 in diameter) and its movement should be minimal. This site has adequate vegetation to stop litter movement after short distances. Most of the litter movement on this site will be litter that has been transported onto the site from adjacent sites. Litter produced on this site stays on the site and only travels short distances.

8. Soil surface (top few mm) resistance to erosion (stability) values are averages - most sites will show a range of values for both plant canopy and interspaces, if different) :

This site can be susceptible to alluvial erosion. Stability values are estimated to be 1-2 in interspaces and 3-5 at bases of vegetation. This would l

9. Soil surface structures and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different) :

The SOM content should be less than 1%. A--0 to 6 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; hard, friable, slightly sticky; surface 1/2 to 2 inches has weak thin to medium platy structure; common very fine and fine pores; common very fine, fine and medium roots; strongly calcareous; slightly alkaline (pH 7.6); clear smooth boundary. (4 to 8 inches thick)

10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff:

Overall, infiltration rates should be slow for this site but can be higher around bases of grasses than in interspaces and around bases of shrubs. The soils of this site are deep to moderately deep. The moderately deep soils have either a petrocalcic, petrogypsic or gypsum horizon between 30 and 40 inches. Surface textures are loam, silt loam, very fine sandy loam, or clay loam. Substratum textures are loam, silty clay loam, clay loam, or silt loams. Subsoil textures are silt loam , clay loam silty clay loam, gravelly loam, gravelly clay loam or very gravelly loam. Permeability is moderate to slow and the available water holding capacity is high to moderate.

11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction):

There should not be any compaction layers on this site. There are soil profile features in the top 9 inches of the soil profile that would be mistaken for a management induced soil compaction layer. Management induced compaction layers will be more difficult to penetrate than clay lenses.

12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: indicate much greater than (>>) , greater than (>) , and equal to (=) :

black grama >> tobosa > C 4 bunch grasses (dropseeds) > C4 midgrasses (threeawns) >= soaptree yucca, ephedra, fourwing saltbush >= forbs (croton, desert marigold, globemallow, > broom snakeweed, prickly pear, = other forbs.

13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence) :

Black grama and bunchgrasses can show decadence in centers of plants.

14. Average percent litter cover (_____ %) and depth (_____ inches).

Average 15% cover and 0.75 inch deep. (As per ESD)

15. Expected annual production (this is <u>TOTAL</u> above-ground production, not just forage production):

(Low Production 650 lbs./ac.) (Average RV Production 925 lbs./ac.) (High Production 1200 lbs./ac.) After wildfires, high herbivore impacts, extended drought, or combinations of these disturbances, can cause production to be significantly reduced (100-200 lbs per ac. the first growing season following a wildfire) and recover slowly under below average precipitation regimes.

16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "can, and often do , continue to increase regardless of the management of the site and may eventually dominate

Tarbush, creosote and mesquite can be invaders to this site. Invasive plants should not occur in reference plant community. However, lovegrass, Russian thistle, kochia, and other nonnative annuals may initialy invade following extended disturbance. Mesquite and tarbush and creosote and lovegrass are the greatest threat to dominate this site in the long term after disturbance (primarily following wildfire exclusion but also includes high human or herbivore impacts and extended drought). Mesquite and tarbush and creosote and lovegrass are most likely to retain dominance if allowed to alter natural fire regime (this alteration may require poor land management combined with years of wet winter-spring; dry summer-fall conditions). Any of these invaded communities represent a departure from the reference state.

17. Perennial plant reproductive capability :

Black grama reproduces by seed sporadically and reproduction by tiller and stolon can be common. The C4 midgrasses should have high reproductive potential and rapidly recover from drought in the absence of additional stresses (grazing).

Photograph (s)

MLRA : **Date :**

Ecological Site :

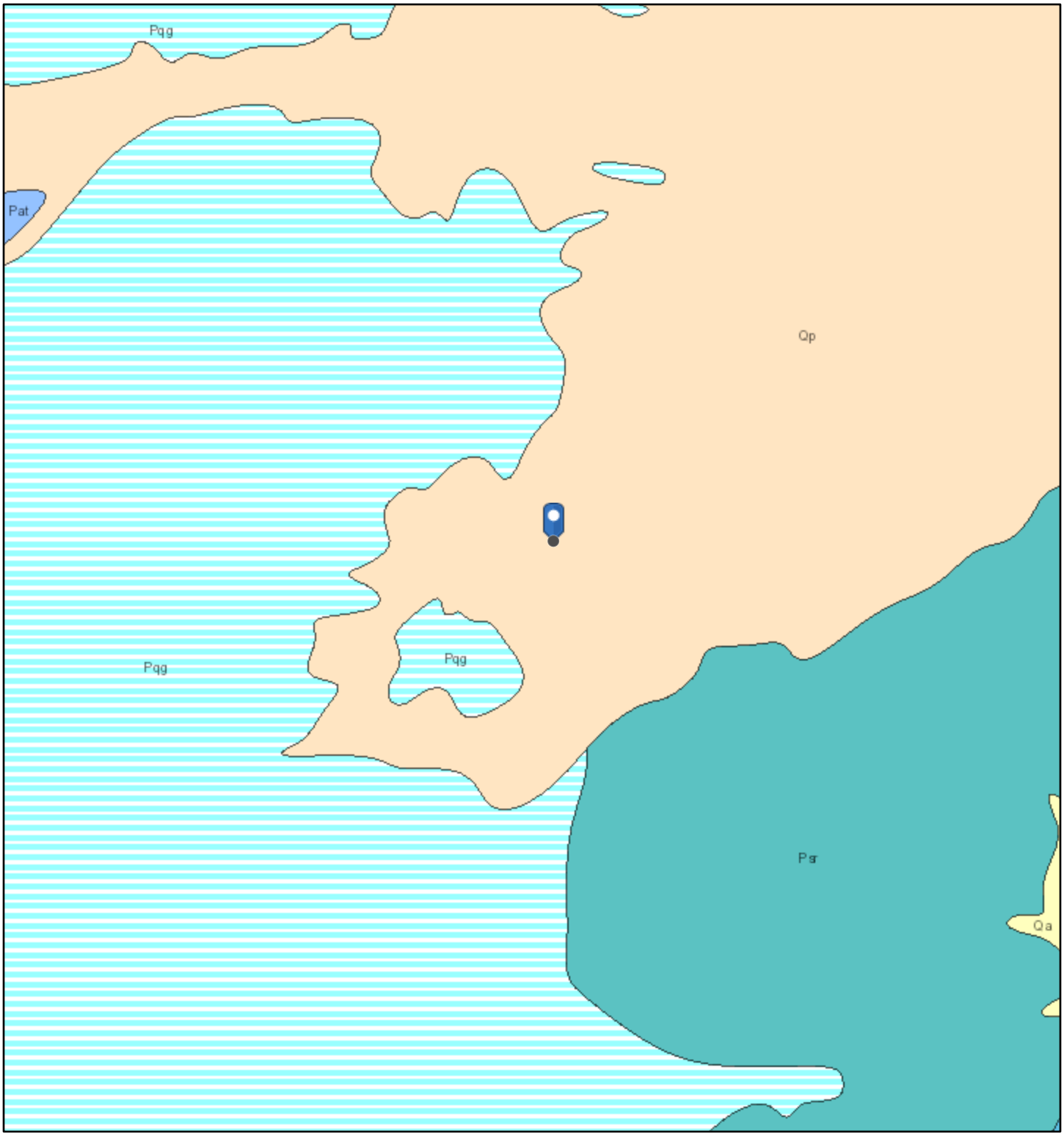
Photo # 1

Comments :

Photo # 2

Comments :

Sawbuck Water Transfer Station



9/13/2021, 12:28:36 PM

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

Lithologic Contacts	Faults	Dikes
Contact, Exposed	Fault, Exposed	<all other values>
Contact, Gradational	Fault, Intermittent	Dike
Nomenclature change	Fault, Concealed	Dike intruding fault
Map Boundary	Shere Zone	Volcanic Vents

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S.

ArcGIS Web AppBuilder

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National

APPENDIX C – Daily Field Report

Daily Site Visit Report

Client:	EOG Resources Inc.	Inspection Date:	6/5/2023
Site Location Name:	Sawbuck Water Transfer	Report Run Date:	6/5/2023 5:27 PM
Client Contact Name:	Chase Settle	API #:	
Client Contact Phone #:	575-703-6537		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	6/5/2023 9:30 AM
Departed Site	6/5/2023 12:00 PM

Field Notes

11:23 Arrived on site and filled out safety paperwork.

11:23 Collected and field screened samples BH23-03 through BH23-05 at 1’.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: Northwest

Sample collection area.

Viewing Direction: West

Sample collection area.

Viewing Direction: West

Sample collection area.

Viewing Direction: Southwest

Sample collection area.

Daily Site Visit Report

Viewing Direction: South

Sample collection area.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Hunter Klein

Signature:

APPENDIX D – Notification

From:	Tina Huerta
To:	ocd.enviro@emnrd.nm.gov; blm_nm_cfo_spill@blm.gov
Cc:	Artesia S&E Spill Remediation; Artesia Regulatory
Subject:	Sawbuck Water Transfer (nJMW1317031601 (2RP-1685), nJMW1327753065 (2RP-1973), nKMW0800954755, nKMW0800954324, nMLB0608954436, nKMW0800954709) Sampling Notification
Date:	May 30, 2023 4:44:29 PM
Attachments:	image001.png

Good afternoon,

EOG Resources, Inc. respectfully submits notification (2) business days prior to conducting sampling on the following location.

Sawbuck Water Transfer
G-23-20S-24E
Eddy County, NM
nJMW1317031601 (2RP-1685), nJMW1327753065 (2RP-1973), nKMW0800954755, nKMW0800954324, nMLB0608954436, nKMW0800954709

Sampling will begin at 9:00 a.m. on Thursday, June 1, 2023, and continue through Wednesday, June 7, 2023.

Thank you,

Tina Huerta
Regulatory Specialist
Direct: 575.748.4168
Cell: 575.703.3121
Email: tina_huerta@eogresources.com

Artesia Division

APPENDIX E – Laboratory Data Reports and Chain of Custody Forms

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

June 13, 2023

Chance Dixon

Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX:

RE: Sawbuck Water Transfer OrderNo.: 2306177

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 8 sample(s) on 6/6/2023 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

Separate Incident - Past Closure Report

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2306177**
Date Reported: **6/13/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-02 0'
Project: Sawbuck Water Transfer
Collection Date: 6/2/2023 9:25:00 AM
Lab ID: 2306177-001 **Matrix:** SOIL **Received Date:** 6/6/2023 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/7/2023 7:04:49 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/7/2023 7:04:49 PM
Surr: DNOP	92.8	69-147		%Rec	1	6/7/2023 7:04:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/10/2023 8:24:21 AM
Surr: BFB	97.7	15-244		%Rec	1	6/10/2023 8:24:21 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 8:24:21 AM
Toluene	ND	0.048		mg/Kg	1	6/10/2023 8:24:21 AM
Ethylbenzene	ND	0.048		mg/Kg	1	6/10/2023 8:24:21 AM
Xylenes, Total	ND	0.095		mg/Kg	1	6/10/2023 8:24:21 AM
Surr: 4-Bromofluorobenzene	90.8	39.1-146		%Rec	1	6/10/2023 8:24:21 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	140	60		mg/Kg	20	6/8/2023 3:42:19 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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Separate Incident - Past Closure Report

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2306177**
Date Reported: **6/13/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-02 1'
Project: Sawbuck Water Transfer
Collection Date: 6/2/2023 9:30:00 AM
Lab ID: 2306177-002 **Matrix:** SOIL **Received Date:** 6/6/2023 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	16	9.8		mg/Kg	1	6/7/2023 7:15:49 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/7/2023 7:15:49 PM
Surr: DNOP	92.5	69-147		%Rec	1	6/7/2023 7:15:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/10/2023 9:34:42 AM
Surr: BFB	99.7	15-244		%Rec	1	6/10/2023 9:34:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 9:34:42 AM
Toluene	ND	0.048		mg/Kg	1	6/10/2023 9:34:42 AM
Ethylbenzene	ND	0.048		mg/Kg	1	6/10/2023 9:34:42 AM
Xylenes, Total	ND	0.097		mg/Kg	1	6/10/2023 9:34:42 AM
Surr: 4-Bromofluorobenzene	92.4	39.1-146		%Rec	1	6/10/2023 9:34:42 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	6/8/2023 3:54:43 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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Separate Incident - Past Closure Report

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2306177**
Date Reported: **6/13/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-02 2'
Project: Sawbuck Water Transfer
Collection Date: 6/2/2023 9:35:00 AM
Lab ID: 2306177-003 **Matrix:** SOIL **Received Date:** 6/6/2023 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	10	9.4		mg/Kg	1	6/7/2023 7:37:41 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/7/2023 7:37:41 PM
Surr: DNOP	98.3	69-147		%Rec	1	6/7/2023 7:37:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/10/2023 10:45:13 AM
Surr: BFB	98.1	15-244		%Rec	1	6/10/2023 10:45:13 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	6/10/2023 10:45:13 AM
Toluene	ND	0.047		mg/Kg	1	6/10/2023 10:45:13 AM
Ethylbenzene	ND	0.047		mg/Kg	1	6/10/2023 10:45:13 AM
Xylenes, Total	ND	0.093		mg/Kg	1	6/10/2023 10:45:13 AM
Surr: 4-Bromofluorobenzene	92.4	39.1-146		%Rec	1	6/10/2023 10:45:13 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	6/8/2023 4:07:08 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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Separate Incident - Past Closure Report

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2306177**
Date Reported: **6/13/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-02 3'
Project: Sawbuck Water Transfer
Collection Date: 6/2/2023 9:40:00 AM
Lab ID: 2306177-004 **Matrix:** SOIL **Received Date:** 6/6/2023 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	9.6	8.9		mg/Kg	1	6/7/2023 7:59:26 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	6/7/2023 7:59:26 PM
Surr: DNOP	101	69-147		%Rec	1	6/7/2023 7:59:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2023 11:08:46 AM
Surr: BFB	98.0	15-244		%Rec	1	6/10/2023 11:08:46 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 11:08:46 AM
Toluene	ND	0.049		mg/Kg	1	6/10/2023 11:08:46 AM
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 11:08:46 AM
Xylenes, Total	ND	0.097		mg/Kg	1	6/10/2023 11:08:46 AM
Surr: 4-Bromofluorobenzene	91.2	39.1-146		%Rec	1	6/10/2023 11:08:46 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	6/8/2023 4:19:32 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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Separate Incident - Past Closure Report

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2306177**
Date Reported: **6/13/2023**

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-02 4'
Project: Sawbuck Water Transfer **Collection Date:** 6/2/2023 9:45:00 AM
Lab ID: 2306177-005 **Matrix:** SOIL **Received Date:** 6/6/2023 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	13	9.7		mg/Kg	1	6/7/2023 8:21:10 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/7/2023 8:21:10 PM
Surr: DNOP	88.6	69-147		%Rec	1	6/7/2023 8:21:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/10/2023 11:32:14 AM
Surr: BFB	97.4	15-244		%Rec	1	6/10/2023 11:32:14 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	6/10/2023 11:32:14 AM
Toluene	ND	0.050		mg/Kg	1	6/10/2023 11:32:14 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/10/2023 11:32:14 AM
Xylenes, Total	ND	0.099		mg/Kg	1	6/10/2023 11:32:14 AM
Surr: 4-Bromofluorobenzene	91.3	39.1-146		%Rec	1	6/10/2023 11:32:14 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	6/8/2023 4:31:57 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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306177**
Date Reported: **6/13/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-03 0'
Project: Sawbuck Water Transfer **Collection Date:** 6/2/2023 9:50:00 AM
Lab ID: 2306177-006 **Matrix:** SOIL **Received Date:** 6/6/2023 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/7/2023 8:42:52 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/7/2023 8:42:52 PM
Surr: DNOP	89.8	69-147		%Rec	1	6/7/2023 8:42:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/10/2023 11:55:41 AM
Surr: BFB	98.3	15-244		%Rec	1	6/10/2023 11:55:41 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 11:55:41 AM
Toluene	ND	0.048		mg/Kg	1	6/10/2023 11:55:41 AM
Ethylbenzene	ND	0.048		mg/Kg	1	6/10/2023 11:55:41 AM
Xylenes, Total	ND	0.097		mg/Kg	1	6/10/2023 11:55:41 AM
Surr: 4-Bromofluorobenzene	92.7	39.1-146		%Rec	1	6/10/2023 11:55:41 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	6/8/2023 5:09:11 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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306177**
Date Reported: **6/13/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-04 0'
Project: Sawbuck Water Transfer **Collection Date:** 6/2/2023 9:55:00 AM
Lab ID: 2306177-007 **Matrix:** SOIL **Received Date:** 6/6/2023 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	6/7/2023 8:53:44 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/7/2023 8:53:44 PM
Surr: DNOP	90.4	69-147		%Rec	1	6/7/2023 8:53:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/10/2023 12:19:11 PM
Surr: BFB	98.9	15-244		%Rec	1	6/10/2023 12:19:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 12:19:11 PM
Toluene	ND	0.047		mg/Kg	1	6/10/2023 12:19:11 PM
Ethylbenzene	ND	0.047		mg/Kg	1	6/10/2023 12:19:11 PM
Xylenes, Total	ND	0.095		mg/Kg	1	6/10/2023 12:19:11 PM
Surr: 4-Bromofluorobenzene	93.4	39.1-146		%Rec	1	6/10/2023 12:19:11 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	6/8/2023 5:21:36 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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306177**
Date Reported: **6/13/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-05 0'
Project: Sawbuck Water Transfer
Collection Date: 6/2/2023 10:00:00 AM
Lab ID: 2306177-008 **Matrix:** SOIL **Received Date:** 6/6/2023 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/7/2023 9:04:39 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/7/2023 9:04:39 PM
Surr: DNOP	91.6	69-147		%Rec	1	6/7/2023 9:04:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	6.8	4.8		mg/Kg	1	6/10/2023 12:42:43 PM
Surr: BFB	109	15-244		%Rec	1	6/10/2023 12:42:43 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	0.028	0.024		mg/Kg	1	6/10/2023 12:42:43 PM
Toluene	0.17	0.048		mg/Kg	1	6/10/2023 12:42:43 PM
Ethylbenzene	0.061	0.048		mg/Kg	1	6/10/2023 12:42:43 PM
Xylenes, Total	0.46	0.096		mg/Kg	1	6/10/2023 12:42:43 PM
Surr: 4-Bromofluorobenzene	95.3	39.1-146		%Rec	1	6/10/2023 12:42:43 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	6/8/2023 5:34:01 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306177**

13-Jun-23

Client: Vertex Resources Services, Inc.

Project: Sawbuck Water Transfer

Sample ID: **MB-75461**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **75461**	RunNo: **97318**
Prep Date: **6/8/2023**	Analysis Date: **6/8/2023**	SeqNo: **3535350** Units: **mg/Kg**

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

Sample ID: **LCS-75461**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **75461**	RunNo: **97318**
Prep Date: **6/8/2023**	Analysis Date: **6/8/2023**	SeqNo: **3535352** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306177**

13-Jun-23

Client: Vertex Resources Services, Inc.

Project: Sawbuck Water Transfer

Sample ID: **LCS-75370**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **75370**	RunNo: **97270**							
Prep Date: **6/6/2023**	Analysis Date: **6/7/2023**	SeqNo: **3533132**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.4		5.000		108	69	147			

Sample ID: **LCS-75399**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **75399**	RunNo: **97270**							
Prep Date: **6/6/2023**	Analysis Date: **6/7/2023**	SeqNo: **3533133**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.4	69	147			

Sample ID: **LCS-75406**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **75406**	RunNo: **97270**							
Prep Date: **6/7/2023**	Analysis Date: **6/7/2023**	SeqNo: **3533134**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.2	61.9	130			
Surr: DNOP	4.7		5.000		93.1	69	147			

Sample ID: **MB-75370**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **75370**	RunNo: **97270**							
Prep Date: **6/6/2023**	Analysis Date: **6/7/2023**	SeqNo: **3533136**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		109	69	147			

Sample ID: **MB-75399**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **75399**	RunNo: **97270**							
Prep Date: **6/6/2023**	Analysis Date: **6/7/2023**	SeqNo: **3533137**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.6		10.00		96.3	69	147			

Sample ID: **MB-75406**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **75406**	RunNo: **97270**							
Prep Date: **6/7/2023**	Analysis Date: **6/7/2023**	SeqNo: **3533138**	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	9.5		10.00		95.3	69	147			

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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306177**

13-Jun-23

Client: Vertex Resources Services, Inc.

Project: Sawbuck Water Transfer

Sample ID: **lcs-75393**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **75393**	RunNo: **97323**
Prep Date: **6/6/2023**	Analysis Date: **6/10/2023**	SeqNo: **3537032** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.4	70	130			
Surr: BFB	1900		1000		192	15	244			

Sample ID: **mb-75393**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **75393**	RunNo: **97323**
Prep Date: **6/6/2023**	Analysis Date: **6/10/2023**	SeqNo: **3537034** 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	960		1000		95.8	15	244			

Sample ID: **2306177-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-02 0'**	Batch ID: **75393**	RunNo: **97323**
Prep Date: **6/6/2023**	Analysis Date: **6/10/2023**	SeqNo: **3537047** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	23.95	0	93.2	70	130			
Surr: BFB	1900		957.9		201	15	244			

Sample ID: **2306177-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-02 0'**	Batch ID: **75393**	RunNo: **97323**
Prep Date: **6/6/2023**	Analysis Date: **6/10/2023**	SeqNo: **3537048** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	24.04	0	95.0	70	130	2.30	20	
Surr: BFB	2000		961.5		203	15	244	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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306177**

13-Jun-23

Client: Vertex Resources Services, Inc.

Project: Sawbuck Water Transfer

Sample ID: **LCS-75393** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **75393** RunNo: **97323**

Prep Date: **6/6/2023** Analysis Date: **6/10/2023** SeqNo: **3537094** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.1	70	130			
Toluene	0.90	0.050	1.000	0	90.5	70	130			
Ethylbenzene	0.89	0.050	1.000	0	88.8	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.0	70	130			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.1	39.1	146			

Sample ID: **mb-75393** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **75393** RunNo: **97323**

Prep Date: **6/6/2023** Analysis Date: **6/10/2023** SeqNo: **3537096** 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	0.90		1.000		89.7	39.1	146			

Sample ID: **2306177-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH23-02 1'** Batch ID: **75393** RunNo: **97323**

Prep Date: **6/6/2023** Analysis Date: **6/10/2023** SeqNo: **3537107** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.024	0.9709	0	90.7	70	130			
Toluene	0.88	0.049	0.9709	0	90.9	70	130			
Ethylbenzene	0.89	0.049	0.9709	0	91.4	70	130			
Xylenes, Total	2.7	0.097	2.913	0	91.6	70	130			
Surr: 4-Bromofluorobenzene	0.92		0.9709		94.8	39.1	146			

Sample ID: **2306177-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH23-02 1'** Batch ID: **75393** RunNo: **97323**

Prep Date: **6/6/2023** Analysis Date: **6/10/2023** SeqNo: **3537108** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.024	0.9737	0	90.5	70	130	0.137	20	
Toluene	0.89	0.049	0.9737	0	91.8	70	130	1.28	20	
Ethylbenzene	0.89	0.049	0.9737	0	91.1	70	130	0.103	20	
Xylenes, Total	2.7	0.097	2.921	0	92.2	70	130	0.941	20	
Surr: 4-Bromofluorobenzene	0.93		0.9737		95.2	39.1	146	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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
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 Resources Services, Inc.

Work Order Number: 2306177

RcptNo: 1

Received By: Joseph Alderette 6/6/2023 8:35:00 AM

Completed By: Tracy Casarrubias 6/6/2023 8:48:47 AM

Reviewed By: 6-6-23

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 ☐	
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: 6/6/23

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: Mailing address, phone number and Email are missing on COC- TMC 6/6/23

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.8	Good	Yes	Morty		

Chain-of-Custody Record

Client: EOG / 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:
☐ Standard ☒ Rush 5 Day

Project Name: Sawbuck Water Transfer

Project #: 22E-00123-03

Project Manager: Chance Dixon

Sampler: Hunter Klein

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 5.7 +0.1 = 5.8 (°C) (nearly)

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.	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)
6/2/23	9:25	Soil	BH23-02 0'	8 oz	Ice	-001	✓	✓					✓			
	9:30		BH23-02 1'			-002										
	9:35		BH23-02 2'			-003										
	9:40		BH23-02 3'			-004										
	9:45		BH23-02 4'			-005										
	9:50		BH23-03 0'			-006										
	9:55		BH23-04 0'			-007										
	10:00		BH23-05 0'			-008										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
6/5/23	1015	Hunter Klein			6/5/23	1015
6/5/23	1900			Courier	6-6-23	8:35

Remarks: cc: analytical@vertex
Direct Bill EOG

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.

Separate Incident - Past Closure 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

June 19, 2023

Chance Dixon
EOG
105 South Fourth Street
Artesia, NM 88210
TEL:
FAX:

RE: Sawbuck OrderNo.: 2306399

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/8/2023 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 **2306399**
Date Reported: **6/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Client Sample ID: BH23-03 1'
Project: Sawbuck
Collection Date: 6/5/2023 10:00:00 AM
Lab ID: 2306399-001 **Matrix:** SOIL **Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	ND	60		mg/Kg	20	6/14/2023 7:15:44 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/10/2023 12:37:14 AM	75498
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/10/2023 12:37:14 AM	75498
Surr: DNOP	98.4	69-147		%Rec	1	6/10/2023 12:37:14 AM	75498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/14/2023 12:15:00 AM	75478
Surr: BFB	95.4	15-244		%Rec	1	6/14/2023 12:15:00 AM	75478
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.025		mg/Kg	1	6/14/2023 12:15:00 AM	75478
Toluene	ND	0.050		mg/Kg	1	6/14/2023 12:15:00 AM	75478
Ethylbenzene	ND	0.050		mg/Kg	1	6/14/2023 12:15:00 AM	75478
Xylenes, Total	ND	0.10		mg/Kg	1	6/14/2023 12:15:00 AM	75478
Surr: 4-Bromofluorobenzene	90.8	39.1-146		%Rec	1	6/14/2023 12:15:00 AM	75478

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306399**
Date Reported: **6/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Client Sample ID: BH23-04 1'
Project: Sawbuck
Collection Date: 6/5/2023 10:05:00 AM
Lab ID: 2306399-002 **Matrix:** SOIL **Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	ND	61		mg/Kg	20	6/14/2023 7:52:47 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/10/2023 12:48:09 AM	75498
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/10/2023 12:48:09 AM	75498
Surr: DNOP	85.9	69-147		%Rec	1	6/10/2023 12:48:09 AM	75498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/14/2023 12:37:00 AM	75478
Surr: BFB	94.7	15-244		%Rec	1	6/14/2023 12:37:00 AM	75478
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.024		mg/Kg	1	6/14/2023 12:37:00 AM	75478
Toluene	ND	0.048		mg/Kg	1	6/14/2023 12:37:00 AM	75478
Ethylbenzene	ND	0.048		mg/Kg	1	6/14/2023 12:37:00 AM	75478
Xylenes, Total	ND	0.097		mg/Kg	1	6/14/2023 12:37:00 AM	75478
Surr: 4-Bromofluorobenzene	92.0	39.1-146		%Rec	1	6/14/2023 12:37:00 AM	75478

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306399**
Date Reported: **6/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Client Sample ID: BH23-05 1'
Project: Sawbuck
Collection Date: 6/5/2023 10:10:00 AM
Lab ID: 2306399-003 **Matrix:** SOIL **Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	ND	60		mg/Kg	20	6/14/2023 8:05:08 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	6/10/2023 12:59:03 AM	75498
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/10/2023 12:59:03 AM	75498
Surr: DNOP	90.4	69-147		%Rec	1	6/10/2023 12:59:03 AM	75498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/14/2023 12:58:00 AM	75478
Surr: BFB	100	15-244		%Rec	1	6/14/2023 12:58:00 AM	75478
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.024		mg/Kg	1	6/14/2023 12:58:00 AM	75478
Toluene	ND	0.048		mg/Kg	1	6/14/2023 12:58:00 AM	75478
Ethylbenzene	ND	0.048		mg/Kg	1	6/14/2023 12:58:00 AM	75478
Xylenes, Total	ND	0.096		mg/Kg	1	6/14/2023 12:58:00 AM	75478
Surr: 4-Bromofluorobenzene	93.7	39.1-146		%Rec	1	6/14/2023 12:58:00 AM	75478

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306399**

19-Jun-23

Client: EOG

Project: Sawbuck

Sample ID: **MB-75594**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **75594**	RunNo: **97431**
Prep Date: **6/14/2023**	Analysis Date: **6/14/2023**	SeqNo: **3541454** Units: **mg/Kg**

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

Sample ID: **LCS-75594**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **75594**	RunNo: **97431**
Prep Date: **6/14/2023**	Analysis Date: **6/14/2023**	SeqNo: **3541455** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306399**

19-Jun-23

Client: EOG

Project: Sawbuck

Sample ID: **LCS-75498** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **75498** RunNo: **97343**

Prep Date: **6/9/2023** Analysis Date: **6/9/2023** SeqNo: **3536614** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	35	10	50.00	0	70.8	61.9	130			
Surr: DNOP	5.0		5.000		99.4	69	147			

Sample ID: **MB-75498** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **75498** RunNo: **97343**

Prep Date: **6/9/2023** Analysis Date: **6/9/2023** SeqNo: **3536619** 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	9.7		10.00		97.3	69	147			

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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306399**

19-Jun-23

Client: EOG

Project: Sawbuck

Sample ID: **lcs-75478**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **75478**	RunNo: **97367**
Prep Date: **6/8/2023**	Analysis Date: **6/12/2023**	SeqNo: **3538457** 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	97.4	70	130			
Surr: BFB	2200		1000		220	15	244			

Sample ID: **mb-75478**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **75478**	RunNo: **97367**
Prep Date: **6/8/2023**	Analysis Date: **6/12/2023**	SeqNo: **3538458** 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	15	244			

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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306399**

19-Jun-23

Client: EOG

Project: Sawbuck

Sample ID: **lcs-75478**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **75478**	RunNo: **97367**
Prep Date: **6/8/2023**	Analysis Date: **6/12/2023**	SeqNo: **3538472** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.9	70	130			
Toluene	0.93	0.050	1.000	0	92.9	70	130			
Ethylbenzene	0.92	0.050	1.000	0	92.4	70	130			
Xylenes, Total	2.8	0.10	3.000	0	92.3	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.3	39.1	146			

Sample ID: **mb-75478**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **75478**	RunNo: **97367**
Prep Date: **6/8/2023**	Analysis Date: **6/12/2023**	SeqNo: **3538473** 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	0.97		1.000		97.5	39.1	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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
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: EOG | Work Order Number: 2306399 | RcptNo: 1

Received By: Tracy Casarrubias 6/8/2023 7:35:00 AM

Completed By: Tracy Casarrubias 6/8/2023 8:50:48 AM

Reviewed By: JN 6/8/23

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 ☐	
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:

SCM 06/08/23

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: Mailing address, phone number,and Email are missing on COC- T MC 6/8/23

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes	Yogi		

Chain-of-Custody Record

Client: EOG

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:

~~☒~~ Standard ☒ Rush 5 Day

Project Name: Sawbuck

Project #: 22E-00123 003

Project Manager: Chance Dixon

Sampler: Hunter Klein

On Ice: ☑ Yes ☐ No 4oz

# of Coolers: 1

Cooler Temp(including CF): 3.3 - 0 = 3.3 (°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. 2306399	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)
6/5/23	10:00	Soil	BH23-03 1'	4oz	Ice	001	X	X					X			
↓	10:05	↓	BH23-04 1'	↓	↓	002	X	X					X			
↓	10:30	↓	BH23-05 1'	↓	↓	003	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/5/23	13:00	Hunter Klein			6/7/23	1000
6/7/23	1900			Courier	6/8/23	7:35

Remarks: send email to cdixon@vertex.ca & analytical@vertex.ca

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.

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 242089

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 242089
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	7/25/2023