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C-141s

(6)

Marathon Petroleum Company LP

January 6, 2020

Mr. Dave Cobrain
New Mexico Environmental Department
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, NM 87SOS-6303

RE: Response Action Report
Flare KOD Pump Sodium Hydroxide Release
Marathon Petroleum Company LP, Gallup Refinery
(dba Western Refining Southwest, Inc.)
EPA ID# NMD000333211
WRG-17-MISC

Dear Mr. Cobrain:

Marathon Petroleum Company LP (dba Western Refining Southwest, Inc.) Gallup Refinery is submitting this Response Action Report for the Flare KOD Pump Sodium Hydroxide Release that occurred on April 21, 2017. The Response Action Report has been enclosed for your review. If there are any questions, please call Brian Moore at 505-726-9745.

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction of supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,
Marathon Petroleum Company LP, Gallup Refinery

Robert S Hanks

Robert S. Hanks
Refinery General Manager

Enclosure

cc C. Chavez NMOCD
L. King, EPA
B. Moore Marathon Gallup Refinery

92 Giant Crossing Road
Jamestown, NM 87347

MARATHON REFINING LOGISTICS SERVICES

RESPONSE ACTION REPORT

FLARE KOD PUMP SODIUM HYDROXIDE RELEASE

MARATHON PETROLEUM COMPANY, LP

GALLUP REFINING DIVISION

GALLUP, NEW MEXICO

EPA ID# NMD000333211

Table of Contents

Executive Summary

The Marathon Petroleum Company Gallup Refinery (Refinery) is located 17 miles east of Gallup, New Mexico. This Response Action Report provides the details of the response actions and related data for a sodium hydroxide release on April 20, 2017.

A hose attached to a sandpiper (double diaphragm) pump at the Flare Knockout Drum (KOD) tank ruptured which resulted in a release of approximately 80 barrels of caustic (approximately 20-30% sodium hydroxide) (pH – 12.0) to the surrounding area.

Approximately 20-30 gallons of caustic were pumped from the area into a vacuum truck, which had been diluted with approximately 100 gallons of water, and pumped into the refinery sewer system at a pH of 8.0.

Introduction

The Marathon Petroleum Company Gallup Refinery (Refinery) is located approximately 17 miles east of Gallup, McKinley County, New Mexico along the north side of Interstate Highway I-40. The physical address is I-40, Exit #39 Jamestown, New Mexico 87347. The Refinery property covers approximately 810 acres. Figure 1 presents the location of the caustic knockout drum (KOD) flare in the northwestern portion of the Refinery. Figure 2 presents an aerial photograph of the caustic KOD flare release area. Figure 3 presents a closeup of the release area.

General Information

The Refinery processes Four Corners area crude oil which is transported by pipeline or tanker truck. Various refinery unit processes are operated, including crude distillation, reforming, fluidized catalytic cracking, alkylation, sulfur recovery, merox treating, and hydrotreating. Current and past operations have produced gasoline, diesel fuels, jet fuels, kerosene, propane, butane, and residual fuel.

Discussion of the Release

At 09:30 PM on April 20, 2017, during regular rounds, an operator noticed the hose to the sandpiper pump had ruptured spraying caustic (20-30% sodium hydroxide) from the hose. During the operator's previous round of the area at approximately 07:00 PM, there was no problem observed. The operator that found the leak turned off the sandpiper pump and blocked it in. The shift foreman, refinery manager, and the Environmental Department were notified of the incident. Maintenance personnel used a vacuum truck with approximately 100 gallons of water in the tank, to collect approximately 20-30 gallons of caustic. The collected water/caustic mixture, with a pH value of 8, was discharged to a sewer drain to tank T-35. Maintenance personnel also sprayed water on surrounding equipment in an attempt to clean the equipment of caustic. Pumping and transfer of the caustic was switched to the east caustic pump. The area was taped off using barricade tape to limit access.

The initial estimate of the release was four barrels. After further investigation on the morning of April 21, 2017, it was apparent that the release was larger than initially estimated. Based on mass balance calculations of the

KOD tank, where the caustic was stored, the release volume was estimated to be 80 bbls. Photos of the release area can be found in Appendix B.

Verbal notifications to New Mexico Oil Conservation Division (OCD) (Carl Chavez) were made on April 21, 2017 at 12:30 PM and New Mexico Enviornmental Department (NMED) at 12:47 PM (voice mail to Kristin VanHorn.

Characterization of the Release Material

The material released to the ground consisted of caustic (20-30% sodium hydroxide (NaOH)) from the KOD tank. Approximately 80 bbls of the caustic contacted the ground. The Safety Data Sheet (SDS) for the caustic is presented in Appendix C for NMED's review

Discussion of the Process Area

The KOD tank is located approximately 300 feet northwest of Tank 102 and is adjacent to the old American Petroleum Institute (API) oil/water separator. The flare KOD removes liquids and the caustic is used to remove H_2S and other impurities from the gas stream.

Site Conditions That Affect the Release

Local site topographic features include southeastern high ground gradually decreasing to a northwestern lowland fluvial plain. Refinery elevations range from 7,040 feet to 6,860 feet (ft) above mean sea level (amsl). The approximate elevation of the area of the KOD tank is 6,915 ft msl.

Remediation Activities

Remediation activities consists of the actions taken by plant personnel to address the release and mitigate any further contact of the released material with the surrounding area including the subsurface and surficial waters.

Remediation

The caustic release remediation consisted of the initial liquid caustic removal via vacuum truck. Maintenance personnel also sprayed water on surrounding equipment in an attempt to remove the caustic from the equipment.

Initial Remediation

The maintenance department was called to remove the caustic from the pump containment. Maintenance was also instructed to add 100 gallons of water to the vacuum truck before they vacuumed the caustic (20-30 gallons) into the truck. The diluted caustic was pumped down the sewer drain to Tank T-35 at a pH of 8. Maintenance also had sprayed water on the surrounding equipment in an attempt to remove the caustic.

Intitial estimates of the release volume was four barrels. The release volume was later revised to 80 barrels of caustic in the morning when it was found that spillage into the old API separator footprint had enlarged the spill footprint. The area was barricaded with barricade tape to isolate the release area until the area was deemed safe by operations.

Additional Remediation

No additional remediation was conducted.

Assessment – Soil Confirmation

There was no soils remediation conducted therefore no confirmation sampling was conducted.

Soil Sampling

As stated above, no soil confirmation sampling was conducted.

Soil Screening Results

No soil screening was conducted.

Soil Sampling Analytical Results

As stated above, no soil sampling was conducted, therefore, no analytical results were received.

Subsurface Soil Conditions

No soil borings or monitor wells were installed during the investigation because of the small amount of material released.

Groundwater Conditions

A groundwater investigation was not conducted. The nearest monitoring wells are OAPIS-1 (112 feet west) and NAPIS-2 (148 feet north). The depth to groundwater in OAPIS-1 in August 2019 was 8.73 ft below ground surface (bgs) or 6,905.64 feet elevation. The depth to groundwater in NAPIS-2 in August 2019 was 8.4 feet bgs or 6,903.5 feet elevation. These monitoring wells have not been analyzed for pH.

Surface Water Conditions

The Flare KOD Caustic release flowed northward below the KOD and into the old API separator pit pooling in a depression. The release was confined to the plant property and did not reach surface water.

Surface Air and Subsurface Vapor Conditions

The area was immediately blocked off to traffic. The refinery fire department began monitoring the area with LEL/H_2S monitors. There were no elevated H2S or LEL readings. The spill response personnel vacuumed the spill material from the ground and from within the old API separator containment. The environmental department was notified of the incident.

Regulatory Criteria Comparisons

The potential cleanup levels (i.e., screening levels) are specified in NMED's *Risk Assessment Guidance for Site Investigations and Remediation* dated March 2017 and in the Environmental Protection Agency's (EPA) Regional Screening Levels dated June 2017, if NMED values are not available.

For non-residential properties (e.g., the Refinery), the soil screening levels (SSLs) must be protective of commercial/industrial workers throughout the upper one foot of surface soils and construction workers throughout the upper ten feet based on NMED criteria. NMED residential soil screening levels are applied to the upper ten feet and soil screening levels for protection of groundwater apply throughout the vadose zone. EPA soil screening levels for direct contact exposure apply to the upper two feet of the vadose zone. The cleanup

criteria for caustic (20-30% sodium hydroxide) are not available in either the NMED Risk Assessment Guidance or the EPA's Regional Screening Levels.

Conclusions and Recommendations

At 09:30 PM on April 20, 2017, during regular rounds, an operator noticed the hose to the sandpiper pump had ruptured. Caustic (20-30% sodium hydroxide) was spraying from the ruptured hose. The sandpiper pump was immediately shut down and maintenance personnel used a vacuum truck, with approximately 100 gallons of water in the tank, to collect approximately 20-30 gallons of caustic. The collected water/caustic mixture, with a pH value of 8, was discharged to a sewer drain to tank T-35.

Recommended Additional Excavation and Assessment

This near surface release is unlikely to pose a threat to groundwater resources. The caustic-contaminated soil has most likely been neutralized by precipitation seeping into the soil. However, several soil samples in the release footprint should be collected to a depth of one foot below ground surface and analyzed for pH (Figure 4). An additional soil sample collected from the same depth should also be collected outside the footprint of the release to establish a background pH for near surface soils.

Figures

Image Cite: Trihydro Corperation – UAS Aerial Photography – Publication: 2018

EXPLANATION

6935 — EXISTING CONTAINMENT ELEVATION CONTOURS (INTERVAL = 1')

TANK

KOD — KNOCKOUT DRUM

N

0 300'

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 1

KOD CAUSTIC RELEASE LOCATION MAP

MARATHON PETROLEUM COMPANY
GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP	Checked By: PH	Scale:1" = 300'	Date:12/24/2019	File: GALLUP_KODCAUSTICRELEASE-201912

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Image Cite: Trihydro Corperation – UAS Aerial Photography – Publication: 2018

EXPLANATION

6935	EXISTING CONTAINMENT ELEVATION CONTOURS (INTERVAL = 1')
	SPILL EXTENT
KOD	KNOCKOUT DRUM

N

0 50'

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 2

RELEASE AREA OVERVIEW
KOD CAUSTIC RELEASE

MARATHON PETROLEUM COMPANY
GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP	Checked By: PH	Scale:1" = 50'	Date:12/24/2019	File: GALLUP_KODCAUSTICREL-OV-201912

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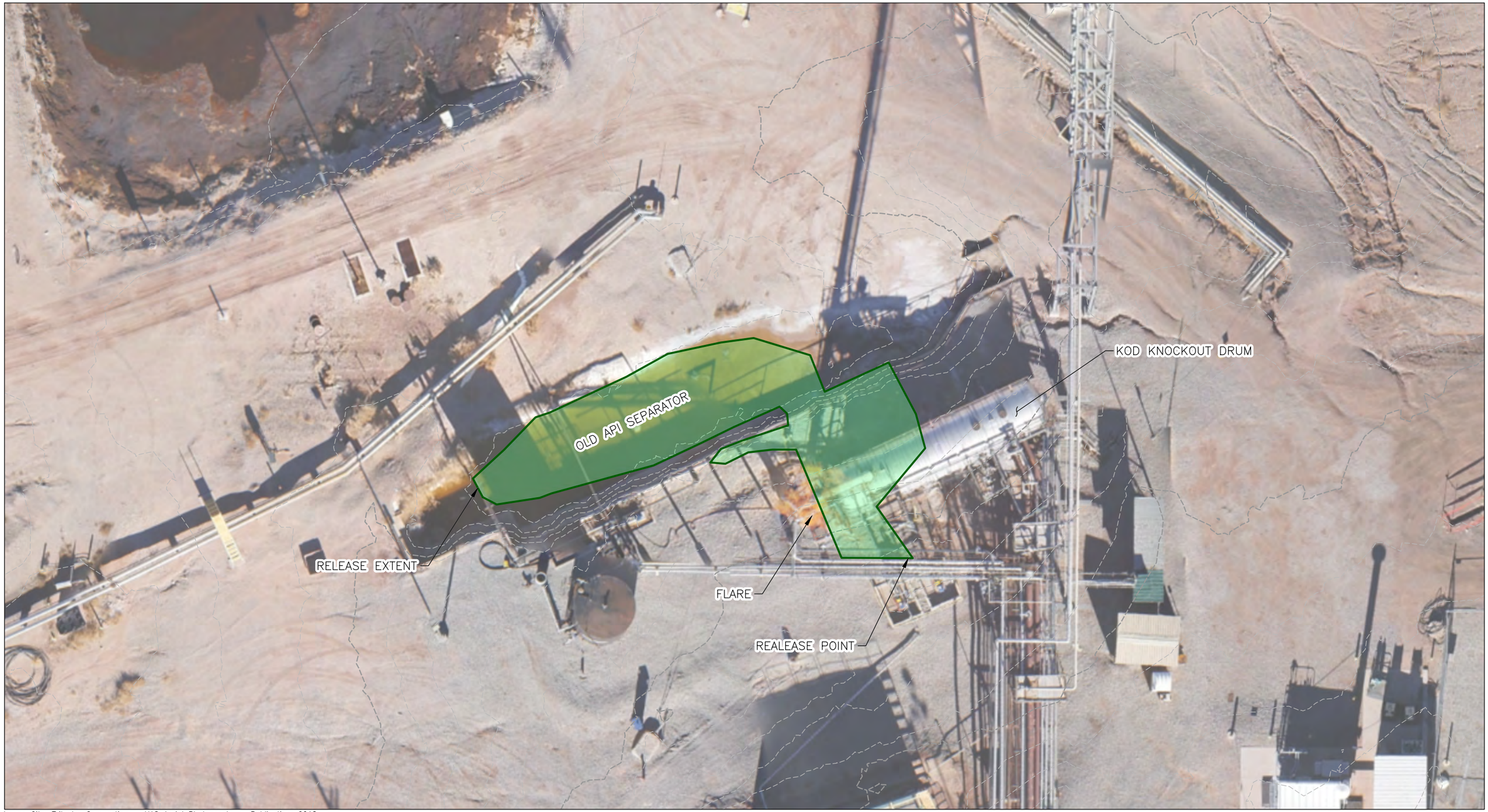

Image Cite: Trihydro Corperation – UAS Aerial Photography – Publication: 2018

EXPLANATION

6935 — EXISTING CONTAINMENT ELEVATION CONTOURS (INTERVAL = 1')

RELEASE EXTENT

KOD — KNOCKOUT DRUM

N

0 20'

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 3

CLOSE UP OF RELEASE AREA
KOD CAUSTIC RELEASE

MARATHON PETROLEUM COMPANY
GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP	Checked By: PH	Scale:1" = 20'	Date:12/24/2019	File: GALLUP_KODCAUSTICREL-OV-201912

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Image Cite: Trihydro Corperation – UAS Aerial Photography – Publication: 2018

EXPLANATION

6935 — EXISTING CONTAINMENT ELEVATION CONTOURS (INTERVAL = 1')

RELEASE EXTENT

PROPOSED SOIL SAMPLE LOCATIONS

KOD — KNOCKOUT DRUM

N

0 20'

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 4

PROPOSED SAMPLE LOCATIONS
KOD CAUSTIC RELEASE

MARATHON PETROLEUM COMPANY
GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP	Checked By: PH	Scale:1" = 20'	Date:12/24/2019	File: GALLUP_KODCAUSTICREL-OV-201912

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Appendix A: Form C-141 (April 20, 2017) – April 20, 2017 Caustic Release

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Western Refining	Contact	William Bailey
Address	92 Giant Crossing Road, Gallup, NM 87301	Telephone No.	505-726-9743
Facility Name	Western Refining, Gallup Refinery	Facility Type	Petroleum Refinery

Surface Owner	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	28	15N	15W					McKinley

Latitude 35° 29' 26" **Longitude** 108° 25' 45" NAD83

NATURE OF RELEASE

Type of Release: Sodium Hydroxide Leak	Volume of Release: 80 bbls	Volume Recovered: 30 gal
Source of Release: API Caustic Pump Hose from Flare KOD Tank	Date and Hour of Occurrence: 04/20/2017 2100 hrs	Date and Hour of Discovery: 04/20/2017 2130 hrs
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NRC/ NM OCD (C. Chavez) / NMED HWB (K. VanHorn - msg)	
By Whom? Janelle Vestal	Date and Hour: 04/21/2014 1150 hrs / 1230 hrs / 1247 hrs	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

At 2130 hr on 4/20/2017, during regular rounds, operator noticed the hose to the sandpiper pump had ruptured. Caustic (20-30% sodium hydroxide - SDS attached) was spraying out of the hole. Previous round of the area at approximately 1900 hr on 4/20/2017 had shown no problem with this pump hose. The operator who found the leak donned the proper PPE, turned off the sandpiper, and blocked it in. The shift foreman, refinery manager, and Environmental Department were notified of the incident. Maintenance pumped approximately 20-30 gallons of caustic into a vacuum truck. Initial estimates of the leak were less than 4 bbls. Maintenance also sprayed water on surrounding equipment in an attemp to clean off the caustic. Pumping of the caustic was switched to the east caustic pump. The area was taped off with barricade tape to limit access. After further investigation the following morning, it was apparent that the leak was larger than first thought.

Based on the initial mass balance calculations on the KOD tank where the caustic came from, estimates of the leak volume are approximately 80 bbls.

Describe Area Affected and Cleanup Action Taken.*

The caustic and cleaning water was somewhat confined to the caustic pump containment. A volume spilled over a retaining wall to a bermed area North of the pump and KOD tank. A volume also sprayed surrounding equipment and out of the containments to surrounding ground. A cleanup action plan will be established.

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: William Bailey	OIL CONSERVATION DIVISION	
Printed Name: William Bailey	Approved by Environmental Specialist:	
Title: Environmental Supervisor	Approval Date:	Expiration Date:
E-mail Address: William.Bailey@wnr.com	Conditions of Approval:	Attached ☐
Date: 04/27/2014 Phone: 505-726-9743		

* Attach Additional Sheets If Necessary

Appendix B: Photographs Of Release


2017/04/21


2017/04/21


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Appendix C: Safety Data Sheets (SDS)

Material Safety Data Sheet
Sodium Hydroxide 20-30%

ACC# 88810

Section 1 - Chemical Product and Company Identification

MSDS Name: Sodium Hydroxide 20-30%
Catalog Numbers: M-090, M090, MCC-030345, NC9168938, NC9453737, NC9648407, NC9848909, NC9872309, XXCMS0204L, XXNAOH20%200LI, XXSODHY6N20L
Synonyms: Caustic Soda; Soda Lye; Sodium Hydrate.
Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7732-18-5	Water	70-80	231-791-2
1310-73-2	Sodium hydroxide	20-30	215-185-5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Clear liquid.
Danger! Corrosive. Causes eye and skin burns. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns.
Target Organs: Eyes, skin, mucous membranes.

Potential Health Effects

Eye: Causes eye burns. May cause chemical conjunctivitis and corneal damage.
Skin: Causes skin burns. May cause deep, penetrating ulcers of the skin. May cause skin rash (in milder cases), and cold and clammy skin with cyanosis or pale color.
Ingestion: May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. May cause perforation of the digestive tract. Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause systemic effects.
Inhalation: Irritation may lead to chemical pneumonitis and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. Causes chemical burns to the respiratory tract. Aspiration may lead to pulmonary edema. May cause systemic effects.
Chronic: Prolonged or repeated skin contact may cause dermatitis. Effects may be delayed.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid immediately.
Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.
Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Use water with caution and in flooding amounts. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.
Extinguishing Media: Do NOT get water inside containers. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.
Flash Point: Not applicable.
Autoignition Temperature: Not applicable.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 1

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Discard contaminated shoes.
Storage: Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids. Keep away from metals. Keep away from flammable liquids. Keep away from organic halogens.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Water	none listed	none listed	none listed
Sodium hydroxide	2 mg/m3 Ceiling	10 mg/m3 IDLH	2 mg/m3 TWA

OSHA Vacated PELs: Water: No OSHA Vacated PELs are listed for this chemical. Sodium hydroxide: No OSHA

Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear chemical splash goggles and face shield.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: Clear
Odor: none reported
pH: Alkaline
Vapor Pressure: 14 mm Hg
Vapor Density: >1.0
Evaporation Rate: Not available.
Viscosity: >1 (ether=1)
Boiling Point: 212 deg F
Freezing/Melting Point:32 deg F
Decomposition Temperature: Not available.
Solubility: Completely soluble in water.
Specific Gravity/Density:1.0
Molecular Formula: NaOH
Molecular Weight: Not available.

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid: Extreme temperatures.
Incompatibilities with Other Materials: Metals, acids, flammable liquids, halogenated organics (e.g. dibromoethane, hexachlorobenzene, methyl chloride, trichloroethylene), aluminum, tin, zinc, nitromethane, nitro compounds.
Hazardous Decomposition Products: Toxic fumes of sodium oxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 7732-18-5: ZC0110000
CAS# 1310-73-2: WB4900000
LD50/LC50:
CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg;
.

CAS# 1310-73-2:
Draize test, rabbit, eye: 400 ug Mild;
Draize test, rabbit, eye: 1% Severe;
Draize test, rabbit, eye: 50 ug/24H Severe;
Draize test, rabbit, eye: 1 mg/24H Severe;
Draize test, rabbit, skin: 500 mg/24H Severe;
.

Carcinogenicity:
CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 1310-73-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: No information found
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	SODIUM HYDROXIDE SOLUTION	No information available.
Hazard Class:	8	
UN Number:	UN1824	
Packing Group:	II	

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 7732-18-5 is listed on the TSCA inventory.
CAS# 1310-73-2 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
CAS# 1310-73-2: 1000 lb final RQ; 454 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 1310-73-2: immediate, reactive.
Section 313 No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 1310-73-2 is listed as a Hazardous Substance under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS# 1310-73-2 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

C

Risk Phrases:

R 35 Causes severe burns.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 37/39 Wear suitable gloves and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7732-18-5: No information available.
CAS# 1310-73-2: 1

Canada - DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 1310-73-2 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of E.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 1310-73-2 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 12/12/1997
Revision #6 Date: 10/05/2004

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AP__111___

C-141s

(6)

From:	Vestal, Janelle
To:	Chavez, Carl J, EMNRD
Cc:	VanHorn, Kristen, NMENV; Moore, John
Subject:	[EXT] Initial C-141 FCC Slurry Line Leak
Date:	Friday, December 6, 2019 11:41:12 AM
Attachments:	image003.png 2019-11-26 C141 FCC Slurry Line Leak - INITIAL.pdf

Good Morning Carl,

Attached please find the Initial C-141 Release Notification for the release on 11/26/19 of FCC Slurry Oil.

Thank you for your attention to this matter,

Janelle Vestal | Environmental Engineer
Gallup Refinery
JVestal1@Marathonpetroleum.com

Marathon Petroleum Company
92 Giant Crossing Road
Gallup, NM 87301
o: 505 726 9721
m: 505 285 8193

www.marathonpetroleum.com

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Marathon – Gallup Refinery	OGRID
Contact Name: JOHN MOORE	Contact Telephone: 505-722-0205
Contact email: JMOORE5@MARATHONPETROLEUM.COM	Incident # *(assigned by OCD)*
Contact mailing address: 92 Giant Crossing Road, Gallup, NM 87301	

Location of Release Source

Latitude 35°29'29.70"N *(NAD 83 in decimal degrees to 5 decimal places)*

Longitude 108°25'25.00"W

Site Name: Gallup Refinery	Site Type: Refinery
Date Release Discovered: 11/26/19	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
SWNE	33	15N	15W	McKinley

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe) FCC Slurry Oil	Volume/Weight Released (provide units) Approximately 9 bbls	Volume/Weight Recovered (provide units) 8.5 bbls

Cause of Release
On 11/26/19 at approximately 2:30 pm, approximately 9 bbls of FCC slurry leaked from a crack in the slurry line. The line was immediately isolated. Spilled material and impacted soils were placed in a roll-off box and drums for disposal.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

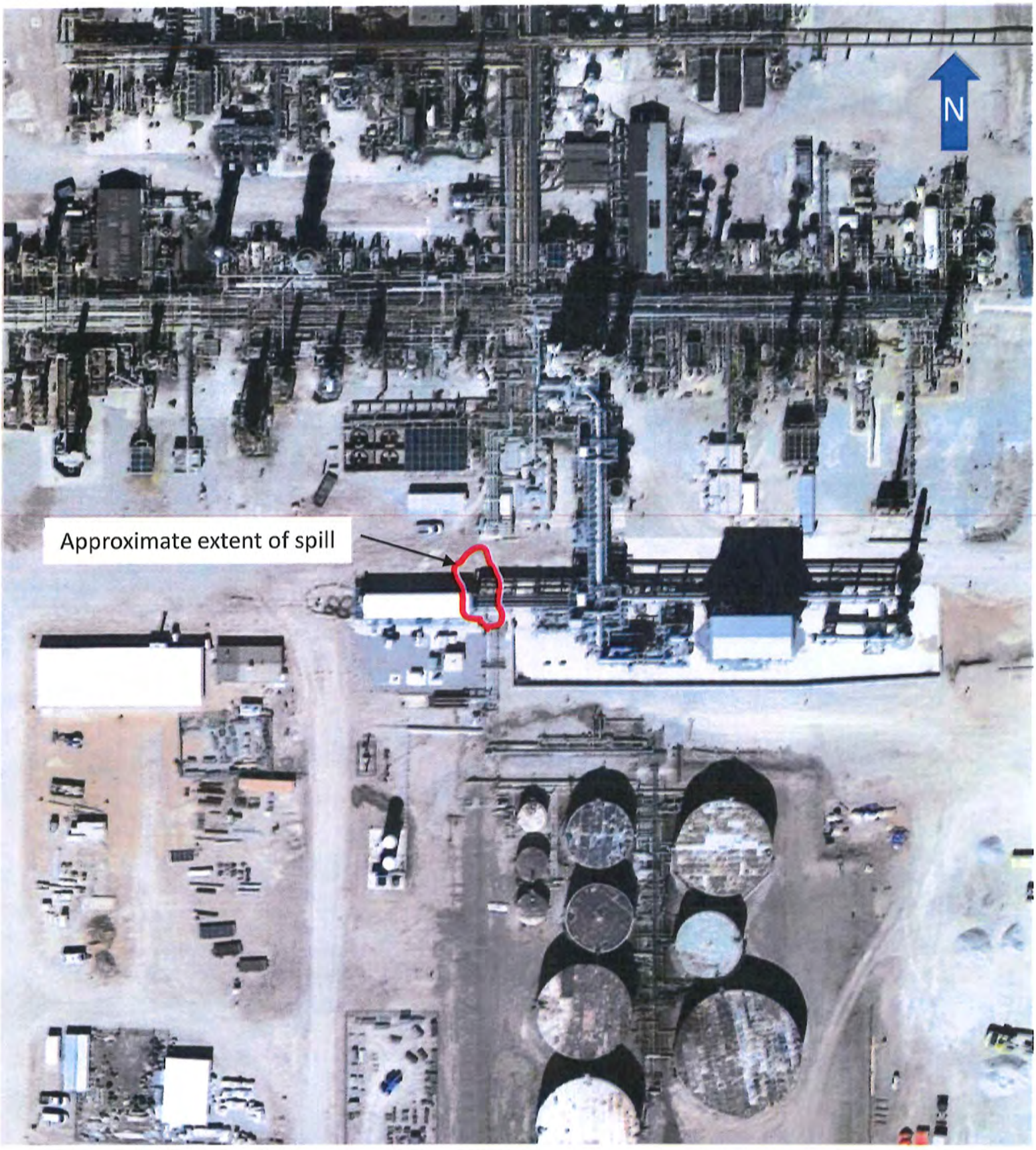
Printed Name: John Moore Title: Environmental Supervisor

Signature: Date: 12-6-19

email: jmoore5@marathonpetroleum.com Telephone: 505-863-3205

OCD Only

Received by: Date:


N
Approximate extent of spill

Chavez, Carl J, EMNRD

From: Vestal, Janelle <JVestal1@Marathonpetroleum.com>
Sent: Thursday, November 7, 2019 4:00 PM
To: Chavez, Carl J, EMNRD
Cc: VanHorn, Kristen, NMENV; Moore, John
Subject: [EXT] Initial C-141 Line Leak at Truck Rack
Attachments: 2018-10-27 Line Leak at Truck Rack - INITIAL.pdf

Good Afternoon Carl,

Attached please find the Initial C-141 Release Notification for the release on 10/27/19 from a leaking underground gasoline transfer line at the Truck Rack.

Thank you for your attention to this matter,

Janelle Vestal | Environmental Engineer
Gallup Refinery
JVestal1@Marathonpetroleum.com

Marathon Petroleum Company
92 Giant Crossing Road
Gallup, NM 87301
o: 505 726 9721
m: 505 285 8193

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State of New Mexico
Energy Minerals and Natural Resources Department

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1220 South St. Francis Dr.
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Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
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Release Notification

Responsible Party

Responsible Party: Marathon – Gallup Refinery	OGRID
Contact Name: JOHN MOORE	Contact Telephone: 505-722-0205
Contact email: JMOORE5@MARATHONPETROLEUM.COM	Incident # *(assigned by OCD)*
Contact mailing address: 92 Giant Crossing Road, Gallup, NM 87301	

Location of Release Source

Latitude 35°29'29.70"N *(NAD 83 in decimal degrees to 5 decimal places)*

Longitude 108°25'25.00"W

Site Name: Gallup Refinery	Site Type: Refinery
Date Release Discovered: 10/27/19	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
SWNE	33	15N	15W	McKinley

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe) Unleaded Gasoline	Volume/Weight Released (provide units) Estimated greater than 100 BBLS Gasoline to ground	Volume/Weight Recovered (provide units) No significant recovery to date

Cause of Release
On 10/27/19 staining, that was initially thought to be historic, was discovered on the ground W of the truck rack. Hydrocarbon was found to be seeping out of the ground into a stormwater ditch. An earthen berm was placed to stop flow in the ditch and a vac truck was used to vacuum up any hydrocarbon and water accumulating. There has been no significant amount of hydrocarbon accumulating. Once it was determined that the leak was from an underground transfer line, the line was blocked in. Repair of the line is in progress.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The quantity is estimated to be greater than 25 BBLS.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? John Moore notified Carl Chavez, OCD, on 11/5/19, after it was determined the leak was likely greater than 100 BBLS.	

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

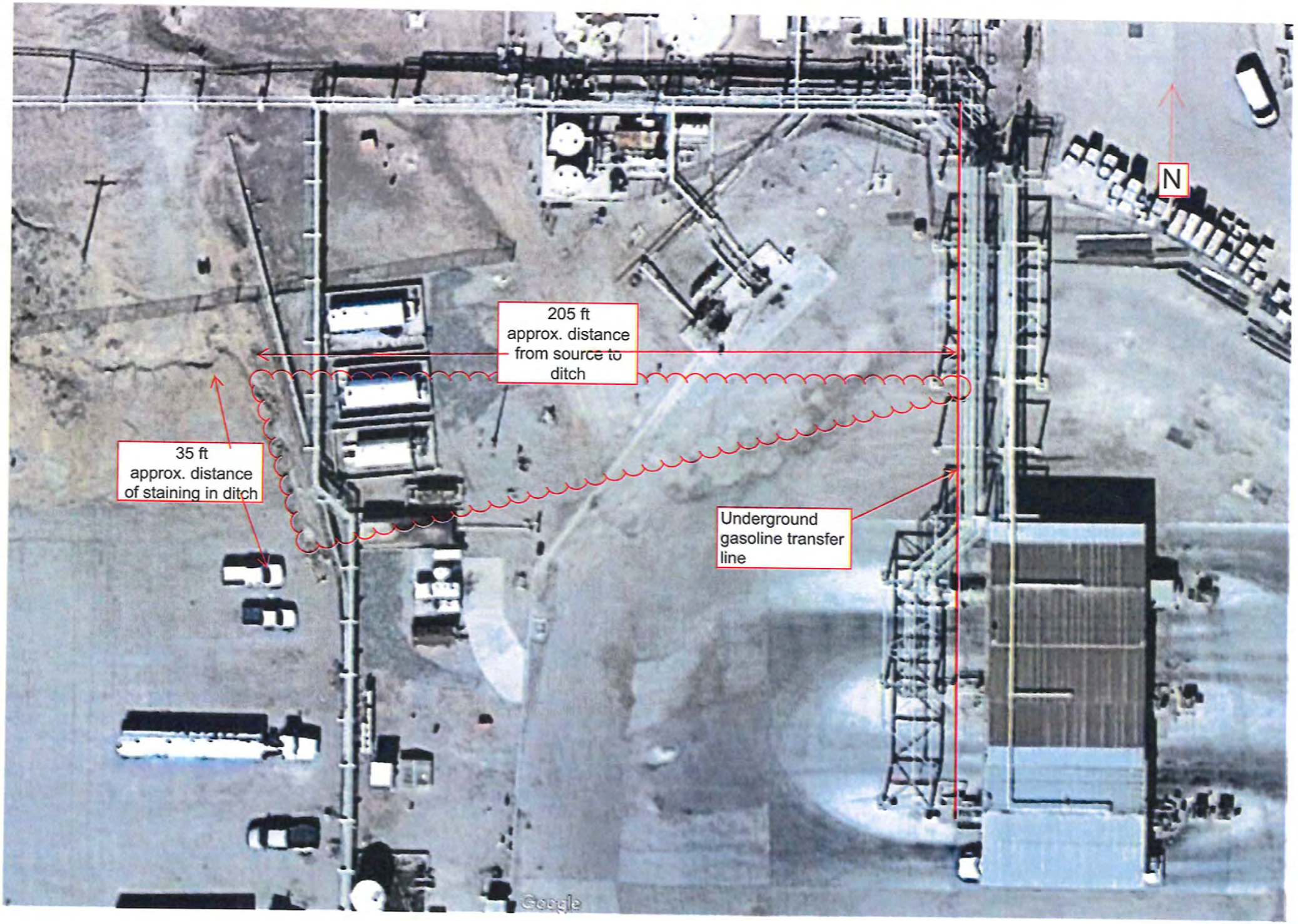
Printed Name: John Moore Title: Environmental Superintendent

Signature: Date: 11-7-19

email: jmoore5@marathonpetroleum.com Telephone: 505-863-3205

OCD Only

Received by: Date:


N
205 ft
approx. distance
from source to
ditch
35 ft
approx. distance
of staining in ditch
Underground
gasoline transfer
line
Google

Marathon Petroleum Company LP

October 4, 2019

Mr. John E. Kieling, Chief
New Mexico Environmental Department
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, NM 87SOS-6303

RE: Response Action Report
Tank 35 – Oil Water Release
Marathon Petroleum Company LP, Gallup Refinery
(dba Western Refining Southwest, Inc.)
EPA ID# NMD000333211
WRG-18-MISC

Dear Mr. Kieling:

Marathon Petroleum Company LP (dba Western Refining Southwest, Inc.) Gallup Refinery is submitting this Response Action Report for the Tank 35 – Oil Water Release that occurred on July 30, 2017. The Response Action Report has been enclosed for your review. If there are any questions, please contact me at 505-726-9745.

Sincerely,
Marathon Petroleum Company LP, Gallup Refinery

Brian K. Moore
Senior HES Professional

Enclosure

cc K. Van Horn NMED
C. Chavez NMOCD
L. King, EPA
B. Moore Marathon Gallup Refinery

MARATHON REFINING LOGISTICS SERVICES
RESPONSE ACTION REPORT
TANK 35 – OILY WATER RELEASE
EPA ID# NMD000333211

SUBMITTED BY: Trihydro Corporation

1252 Commerce Drive, Laramie, WY 82070

Table of Contents

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Executive Summary

The Marathon Petroleum Company Gallup Refinery (Refinery) is located 17 miles east of Gallup, New Mexico. This Response Action Report provides the details of the response actions and related data for an oily water mixture release from Tank 35 on July 30, 2017.

Approximately 100 cubic yards of soil were excavated from the spill area. Soil confirmation samples were collected and analyzed for volatile organics, total petroleum hydrocarbons, semi-volatile organics, and metals.

Two soil confirmation samples collected from the spill area were reported to contain concentrations that exceed the residential screening levels for Diesel Range Organics and/or Motor Oil Range Organics. However, none of the reported concentrations exceed the screening levels for on-site workers and no further action is recommended.

Introduction

The Marathon Petroleum Company Gallup Refinery (Refinery) is located approximately 17 miles east of Gallup, McKinley County, New Mexico along the north side of Interstate Highway I-40. The physical address is I-40, Exit #39 Jamestown, New Mexico 87347. The Refinery property covers approximately 810 acres. Tank 35 is a

wastewater overflow tank located on the Refinery's west side (Figure 1). Figure 2 presents an aerial photograph of the Tank 35 area.

General Information

The Refinery processes crude oil transported by pipeline or tanker truck from the Four Corners region. Various process units operated at the Refinery include: crude distillation, reformer, fluidized catalytic cracker, alkylation, sulfur recovery, merox treater, and hydrotreater. Current and past operations have produced gasoline, diesel fuels, jet fuels, kerosene, propane, butane, and residual fuel.

Discussion of the Release

The Refinery received heavy rainfall on July 29 and July 30, 2017. During this time, a fire water line was also leaking within the Amine Unit. The Waste Water Treatment Plant (WWTP) was operating at the system's maximum 260 gallons per minute flow rate and preventing the processing of the rainstorm and fire water leak water volume going to Tank 35. The operator had switched the water flow to rundown tanks trying to maintain the water influx to all three wastewater storage tanks (Tank 27, Tank 28, and Tank 35). At approximately 1:30 AM on July 30, 2017, the Tank 35 oily water began to overflow. The oily water flowed through the tank's top vents and onto the ground, pooling inside the tank berm. The overflow stopped at approximately 2:45 AM. The operator closed the Tank 35 rundown line so the WWTP could process the excess flow and lower the Tank 35 fluid level. The onsite Fire Department was notified, and they applied a foam layer to the spill site minimizing vapor and fire hazards.

An earthen berm (227 feet (ft) by 60 ft) contained the overflow with the deepest pooling of water occurring inside the northern area. A thin, oily layer and sheen was observed on the water surface. Clean up activities were not immediately initiated due to severe weather (i.e., lightning) and muddy conditions on July 30, and July 31, 2017. Clean up activities began on August 1, 2017 with the oily water mixture vacuuming. As of August 3, 2017, an estimated 18,000 gallons of oily water mixture had been removed.

The New Mexico Environment Department Hazardous Waste Bureau (NMED) and the New Mexico Oil Conservation Division (NMOCD) were notified of the spill via email. An initial written report (Form C-141) was submitted on July 30, 2017 to NMED and NMOCD. A copy of the letter and Form C-141 are provided in Appendix A. No personnel injuries were reported, and no fires occurred. Photographs of the release are included in Appendix B.

Characterization of the Release Material

The fluid released to the ground consisted of an oily water mixture. The volume released was estimated at 22,764 gallons (542 barrels). A sample was analyzed and reported to contain 112.9 parts per million (ppm) benzene. The release calculations and the chemical analysis are included in Appendix C.

Discussion of the Process Area

The release occurred from a 78 ft diameter tank used for temporary wastewater storage. The tank is a steel, 32 ft high tank, built in 2010 with a capacity of 976,920 gallons (23,260 barrels). The next internal inspection is scheduled for January 2030. The external shell was inspected in December 2014 and is scheduled for another inspection in December 2019.

Site Conditions that Affect the Release

Local topographic features include southeastern high ground gradually decreasing to a northwestern lowland fluvial plain. Refinery elevations range from 7,040 ft to 6,860 ft above mean sea level (amsl). The approximate elevation of Tank 35 is 6,893 ft amsl and the tank is located within a bermed containment area. The release was contained within the tank berm; therefore, site topography did not affect the release path.

Remediation Activities

Remediation consisted of the initial spill response and one subsequent soil excavation event. The initial spill response began on August 1, 2017 and is described in Section 1. Details of the soil excavation is discussed below.

Extent of soil impacts was determine based on hydrocarbon staining of surface soils. The estimated extent of the soil contamination based on field observations of staining prior to excavation activities is depicted in Figure 3. On August 14, 2017, Advanced Chemical Transport (ACT) was contracted to excavate the stained soil and also remove the tank wall staining using a biodegradable cleaning solution. ACT was issued an excavation permit to remove stained soil to a depth not greater than 6-inches below ground surface (bgs). Some berms were affected, and the stained soil was removed from these berms as well. Field screening (e.g., visual and olfactory) was conducted during the excavation event to determine the remediation extent. The extent of the soil excavation is depicted in Figure 4. The waste profile manifests are included in Appendix E. The remediation activities were completed by August 18, 2017. All contaminated personal protective equipment, rags and material were placed in one 55-gallon drum for subsequent disposal.

The stained soil and gravel were placed into five 20-cubic yard bins. The excavated areas were backfilled with clean soil and gravel. On August 23, 2017, a composite soil sample, collected from all five bins, was submitted to Hall
Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico. Analytical Report No. 1708D66 was issued on August 30, 2017 (Appendix D).

Assessment – Soil Confirmation Sampling Event

Both field screening and analytical sampling were completed to confirm contamination was removed. Soil samples were collected from six locations shown on Figure 5.

Soil Sampling

The six confirmation soil samples, T-35-1 through T-35-6 were collected from locations that appeared to have the heaviest staining. These soil confirmation samples were collected on August 30, 2017 from 0 to 6-inches below the backfill using a trowel that was decontaminated between sample locations (Figure 5).

Soil Field Screening

The soil samples were collected from locations based on visual staining to best represent the soil conditions. On August 31, 2017, samples T-35-1 through T-35-6 were delivered to HEAL.

Soil Sampling Analytical Results

Each soil confirmation sample was analyzed for the following:

- Total Petroleum Hydrocarbons – EPA Method 8015D
- Volatile Organics – EPA Method 8260B
- Semi-volatile Organics – EPA Method 8270B
- RCRA 8 Metals – EPA Method 6010B & 7470

On September 11, 2017, HEAL issued Analytical Report No. 1708H80 (Appendix D). An analytical results summary is provided in Table 1.

Subsurface Soil Conditions

No soil borings or monitoring wells were installed during the investigation. Based on the release, impacts were limited to surface soils.

Groundwater Conditions

A groundwater investigation was not conducted. The nearest monitoring well to Tank 35 is MKTF-40, approximately 160 ft northwest. The groundwater depth in this well is approximately 10 ft bgs.

Surface Water Conditions

Tank 35 berms contained the release. Therefore, the release did not reach surface water.

Surface Air and Subsurface Vapor Conditions

A precautionary foam layer was applied to the release area preventing a vapor release.

Regulatory Criteria Comparisons

The potential cleanup levels (i.e., screening levels) are specified in NMED's *Risk Assessment Guidance for Site Investigations and Remediation* dated March 2017 and in the Environmental Protection Agency's (EPA) Regional Screening Levels dated June 2017, if NMED values are not available.

For non-residential properties (e.g., the Refinery), the soil screening levels (SSLs) must be protective of commercial/industrial workers throughout the upper 1 foot (ft) of surface soils and construction workers throughout the upper ten ft based on NMED criteria. NMED residential soil screening levels are applied to the upper 10 ft and soil screening levels for protection of groundwater apply throughout the vadose zone. EPA soil screening levels for direct contact exposure apply to the upper 2 ft of the vadose zone. The cleanup criteria are shown on the analytical summary table (Table 1). A review of the analytical results (Table 1) for the following soil samples collected on August 30, 2017 reported that the lead concentrations detected exceeded the Risk Based Soil Screening Level (SSL) for a Dilution and Attenuation Factor (DAF) of 20 (0.052 milligram/kilogram (mg/kg)).

- T-35-1 – 3.5 mg/kg
- T-35-2 – 1.7 mg/kg
- T-35-3 – 3.9 mg/kg
- T-35-4 – 4 mg/kg
- T-35-5 – 14 mg/kg
- T-35-6 – 0.51 mg/kg

The reported Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) concentrations listed below are the only sample results that exceeded the Residential Soil Screening Levels (1000 mg/kg):

- T-35-4 – DRO – 1300 mg/kg
- T-35-6 – DRO – 2800 mg/kg
- T-35-6 – MRO – 1400 mg/kg

Conclusions and Recommendations

The Refinery received heavy rainfall on July 29, 2017 and July 30, 2017. On July 30, 2017, Tank 35 began to overflow with oily water. The oily water flowed through the vents at the top of the tank and pooled inside the tank berm. An estimated 18,000 gallons of the oily water mixture was vacuumed from the area beginning on August 1, 2017. Excavation of visually stained soil was conducted between August 14, 2017 and August 18, 2017.

Soil Confirmation Sampling Results

A review of the analytical results shows that only three samples had reported concentrations of total petroleum hydrocarbons above the residential screening levels and no samples exceeded the industrial/occupational or construction worker screening levels.

Recommended Additional Excavation and Assessment

Stained soil was removed and the reported concentrations in the confirmation samples are all below applicable screening levels for on-site workers. Therefore, no further action is recommended.

Table

Table 1. Soil Analytical Results - August 30, 2017
Gallup Refinery
Gallup, New Mexico

	Residential Soil Screening Level	Source	Non-Residential Soil Screening Level	Source	Leachate DAF (20) (mg/kg) SoilGW	Source	T-35-1		T-35-2		T-35-3		T-35-4		T-35-5		T-35-6	
							1708H80-001		1708H80-002		1708H80-003		1708H80-004		1708H80-005		1708H80-006	
							8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017	
Metals (mg/kg)																		
Arsenic	7.07	(1)	35.9	(4)	5.83	(8)	<4.3	u	<2.49	u	<12	u	<4.3	u	<12	u	<12	u
Barium	15,600	(1)	4,390	(5)	1,650	(8)	450	v	500	v	220	v	400	v	170	v	72	v
Cadmium	70.5	(1)	72.1	(5)	7.52	(8)	<0.062	u	<0.063	u	<0.062	u	<0.061	u	<0.063	u	<0.062	u
Chromium	96.6	(1)	134	(5)	3,600,000	(8)	7.1	v	4.5	v	13	v	10	v	6.4	v	4.8	v
Lead	400	(2)	800	(6)	0.052	(8)	3.5	v	1.7	v	3.9	v	4	v	14	v	0.51	v
Mercury	23.6	(1)	20.5	(5)	2.09	(8)	0.013	J	0.0073	J	0.011	J	0.066	v	0.0071	J	<0.0065	u
Selenium	391	(1)	1,750	(5)	5.17	(8)	<1.8	u	<1.8	u	<1.8	u	<1.7	u	<1.8	u	<1.8	u
Silver	391	(1)	1,770	(5)	13.8	(8)	<0.061	u	<0.062	u	<0.061	u	<0.06	u	<0.062	u	<0.061	u
Volatiles (mg/kg)																		
1,1,1,2-Tetrachloroethane	27.8	(1)	136	(4)	0.036	(8)	<0.0044	u	<0.0033	u	<0.0038	u	<0.0043	u	<0.004	u	<0.004	u
1,1,1-Trichloroethane	14,300	(1)	13,500	(5)	1.28	(8)	<0.0051	u	<0.0039	u	<0.0044	u	<0.0049	u	<0.0046	u	<0.0046	u
1,1,2,2-Tetrachloroethane	7.93	(1)	39.1	(4)	0.00481	(8)	<0.0112	u	<0.0085	u	<0.0098	u	<0.0109	u	<0.0102	u	<0.0101	u
1,1,2-Trichloroethane	2.59	(1)	2.28	(5)	0.0268	(8)	<0.0042	u	<0.0032	u	<0.0036	u	<0.004	u	<0.0038	u	<0.0037	u
1,1-Dichloroethane	77.9	(1)	380	(4)	0.136	(8)	<0.0157	u	<0.0119	u	<0.0136	u	<0.0152	u	<0.0142	u	<0.0141	u
1,1-Dichloroethene	436	(1)	420	(5)	0.0479	(8)	<0.0157	u	<0.0119	u	<0.0136	u	<0.0152	u	<0.0142	u	<0.0141	u
1,1-Dichloropropene	-	-	-	-	-	-	<0.0044	u	<0.0034	u	<0.0038	u	<0.0043	u	<0.004	u	<0.004	u
1,2,3-Trichlorobenzene	63	(2)	930	(6)	0.42	(9)	<0.0036	u	<0.0027	u	<0.0031	u	<0.0035	u	<0.0032	u	<0.0032	u
1,2,3-Trichloropropane	0.051	(1)	1.21	(4)	0.0000582	(8)	<0.0196	u	<0.0149	u	<0.0171	u	<0.0191	u	<0.0178	u	<0.0176	u
1,2,4-Trichlorobenzene	82.2	(1)	78.4	(5)	3.1	(8)	<0.004	u	<0.003	u	<0.0034	u	<0.0039	u	<0.0036	u	<0.0036	u
1,2,4-Trimethylbenzene	300	(2)	1,800	(6)	1.62	(9)	0.86	u	<0.0026	u	<0.003	u	<0.0033	u	<0.0031	u	<0.0031	u
1,2-Dibromo-3-chloropropane	0.0851	(1)	1.17	(4)	0.00139	(8)	<0.0054	u	<0.0041	u	<0.0047	u	<0.0052	u	<0.0049	u	<0.0048	u
1,2-Dibromoethane (EDB)	0.668	(1)	3.28	(4)	0.000236	(8)	<0.005	u	<0.0038	u	<0.0043	u	<0.0048	u	<0.0045	u	<0.0045	u
1,2-Dichlorobenzene	2,140	(1)	2,470	(5)	9.08	(8)	<0.002	u	<0.0015	u	<0.0017	u	<0.0019	u	<0.0018	u	<0.0018	u
1,2-Dichloroethane (EDC)	8.25	(1)	40.3	(4)	0.0238	(8)	<0.0041	u	<0.0031	u	<0.0035	u	<0.004	u	<0.0037	u	<0.0037	u
1,2-Dichloropropane	17.6	(1)	25.2	(5)	0.0277	(8)	<0.0024	u	<0.0018	u	<0.0021	u	<0.0024	u	<0.0022	u	<0.0022	u
1,3,5-Trimethylbenzene	270	(2)	1,500	(6)	1.74	(9)	0.6	u	<0.0019	u	<0.0022	u	<0.0024	u	<0.0022	u	<0.0022	u
1,3-Dichlorobenzene	-	-	-	-	-	-	<0.0034	u	<0.0026	u	<0.003	u	<0.0034	u	<0.0031	u	<0.0031	u
1,3-Dichloropropane	1,600	(2)	23,000	(6)	2.6	(9)	<0.0097	u	<0.0073	u	<0.0084	u	<0.0094	u	<0.0088	u	<0.0087	u
1,4-Dichlorobenzene	1,290	(1)	6,730	(4)	1.12	(8)	<0.0044	u	<0.0033	u	<0.0038	u	<0.0042	u	<0.0039	u	<0.0039	u
1-Methylnaphthalene	172	(1)	813	(7)	0.893	(8)	<0.0028	u	<0.0021	u	<0.0024	u	<0.0027	u	<0.0025	u	<0.0025	u
2,2-Dichloropropane	-	-	-	-	-	-	<0.0044	u	<0.0034	u	<0.0039	u	<0.0043	u	<0.004	u	<0.004	u
2-Butanone	37,300	(1)	91,200	(5)	20.1	(8)	<0.0232	u	<0.0176	u	<0.0202	u	<0.0225	u	<0.021	u	<0.0208	u
2-Chlorotoluene	1,560	(1)	7,080	(5)	3.56	(8)	<0.003	u	<0.0023	u	<0.0026	u	<0.003	u	<0.0028	u	<0.0027	u
2-Hexanone	200	(2)	1,300	(6)	0.176	(9)	<0.0076	u	<0.0058	u	<0.0066	u	<0.0074	u	<0.0069	u	<0.0069	u
2-Methylnaphthalene	232	(1)	1,000	(5)	2.76	(8)	<0.0032	u	<0.0024	u	<0.0028	u	<0.0031	u	<0.0029	u	<0.0029	u
4-Chlorotoluene	1,600	(2)	23,000	(6)	4.8	(9)	<0.0035	u	<0.0027	u	<0.0031	u	<0.0034	u	<0.0032	u	<0.0032	u
4-Isopropyltoluene	-	-	-	-	-	-	0.056	v	<0.0023	u	<0.0026	u	<0.0029	u	<0.0027	u	<0.0027	u
4-Methyl-2-pentanone	5,810	(1)	20,200	(5)	4.800	(8)	<0.0084	u	<0.0064	u	<0.0073	u	<0.0081	u	<0.0076	u	<0.0075	u
Acetone	66,300	(1)	241,000	(5)	49.8	(8)	<0.0426	u	<0.0323	u	<0.037	u	<0.0414	u	<0.0386	u	<0.0382	u
Benzene	17.7	(1)	86.5	(4)	0.0418	(8)	<0.0038	u	<0.0029	u	<0.0033	u	<0.0037	u	<0.0035	u	<0.0035	u
Bromobenzene	290	(2)	1,800	(6)	0.84	(9)	<0.0029	u	<0.0022	u	<0.0025	u	<0.0028	u	<0.0026	u	<0.0026	u
Bromodichloromethane	6.14	(1)	29.9	(4)	0.00621	(8)	<0.0051	u	<0.0039	u	<0.0044	u	<0.005	u	<0.0046	u	<0.0046	u
Bromoform	674	(1)	1,750	(4)	0.147	(8)	<0.0096	u	<0.0073	u	<0.0084	u	<0.0093	u	<0.0087	u	<0.0086	u
Bromomethane	17.6	(1)	17.7	(5)	0.0343	(8)	0.025	J	<0.0051	u	0.017	u	<0.0066	u	<0.0061	u	<0.0061	u
Carbon disulfide	1,540	(1)	1,610	(5)	4.42	(8)	<0.0047	u	<0.0035	u	<0.004	u	0.011	J	<0.0042	u	<0.0042	u
Carbon tetrachloride	10.6	(1)	52.1	(4)	0.0367	(8)	<0.0039	u	<0.0029	u	<0.0034	u	<0.0038	u	<0.0035	u	<0.0035	u
Chlorobenzene	376	(1)	408	(5)	1.08	(8)	<0.0023	u	<0.0018	u	<0.002	u	<0.0023	u	<0.0021	u	<0.0021	u
Chloroethane	18,800	(1)	16,500	(5)	107	(8)	<0.0129	u	<0.0098	u	<0.0112	u	<0.0125	u	<0.0117	u	<0.0116	u
Chloroform	5.85	(1)	28.4	(4)	0.0109	(8)	<0.0024	u	<0.0018	u	<0.0021	u	<0.0023	u	<0.0021	u	<0.0021	u
Chloromethane	40.8	(1)	199	(4)	0.0952	(8)	<0.0082	u	<0.0062	u	<0.0071	u	<0.008	u	<0.0075	u	<0.0074	u
cis-1,2-DCE	156	(1)	708	(5)	0.352	(8)	<0.005	u	<0.0038	u	<0.0043	u	<0.0049	u	<0.0045	u	<0.0045	u
cis-1,3-Dichloropropene	29.1	(1)	129	(5)	0.028	(8)	<0.003	u	<0.0023	u	<0.0026	u	<0.0029	u	<0.0027	u	<0.0027	u
Dibromochloromethane	13.8	(1)	66.9	(4)	0.00755	(8)	<0.0033	u	<0.0025	u	<0.0029	u	<0.0032	u	<0.003	u	<0.003	u
Dibromomethane	57.4	(1)	53.4	(5)	0.0335	(8)	<0.0019	u	<0.0015	u	<0.0017	u	<0.0019	u	<0.0017	u	<0.0017	u

Table 1. Soil Analytical Results - August 30, 2017
Gallup Refinery
Gallup, New Mexico

	Residential Soil Screening Level	Source	Non-Residential Soil Screening Level	Source	Leachate DAF (20) (mg/kg) SoilGW	Source	T-35-1		T-35-2		T-35-3		T-35-4		T-35-5		T-35-6	
							1708H80-001		1708H80-002		1708H80-003		1708H80-004		1708H80-005		1708H80-006	
							8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017	
Dichlorodifluoromethane	180	(1)	159	(5)	7.23	(8)	<0.0161	u	<0.0122	u	<0.014	u	<0.0157	u	<0.0146	u	<0.0145	u
Ethylbenzene	74.5	(1)	365	(4)	12.3	(8)	<0.0027	u	<0.0021	u	<0.0024	u	<0.0027	u	<0.0025	u	<0.0025	u
Hexachlorobutadiene	61.6	(1)	51.7	(4)	0.0413	(8)	<0.0097	u	<0.0074	u	<0.0085	u	<0.0095	u	<0.0088	u	<0.0087	u
Isopropylbenzene	2,350	(1)	2,710	(5)	11.4	(8)	<0.0026	u	<0.002	u	<0.0023	u	<0.0026	u	<0.0024	u	<0.0024	u
Methyl tert-butyl ether (MTBE)	968	(1)	4,780	(4)	0.553	(8)	<0.006	u	<0.0046	u	<0.0052	u	<0.0058	u	<0.0054	u	<0.0054	u
Methylene chloride	409	(1)	1,200	(5)	0.0221	(8)	<0.0157	u	<0.0119	u	<0.0136	u	<0.0152	u	<0.0142	u	<0.0141	u
Naphthalene	1,160	(1)	5,020	(5)	0.0823	(8)	<0.004	u	<0.003	u	<0.0034	u	<0.0039	u	<0.0036	u	<0.0036	u
n-Butylbenzene	3,900	(2)	58,000	(6)	64	(9)	<0.0035	u	<0.0027	u	<0.003	u	<0.0034	u	<0.0032	u	<0.0031	u
n-Propylbenzene	3,800	(2)	24,000	(6)	24	(9)	<0.0024	u	<0.0018	u	<0.0021	u	<0.0024	u	<0.0022	u	<0.0022	u
sec-Butylbenzene	7,800	(2)	120,000	(6)	118	(9)	0.016	J	<0.0031	u	<0.0035	u	<0.0039	u	<0.0037	u	<0.0036	u
Styrene	7,230	(1)	10,100	(5)	1.71	(8)	<0.0068	u	<0.0052	u	<0.0059	u	<0.0066	u	<0.0062	u	<0.0061	u
tert-Butylbenzene	7,800	(2)	120,000	(6)	32	(9)	<0.0032	u	<0.0024	u	<0.0028	u	<0.0031	u	<0.0029	u	<0.0028	u
Tetrachloroethene (PCE)	110	(1)	119	(5)	0.0398	(8)	<0.0031	u	<0.0024	u	<0.0027	u	<0.003	u	<0.0028	u	<0.0028	u
Toluene	5,220	(1)	14,000	(5)	11.1	(8)	0.0092	J	<0.0024	u	<0.0028	u	<0.0031	u	<0.0029	u	<0.0028	u
trans-1,2-DCE	293	(1)	303	(5)	0.503	(8)	<0.0157	u	<0.0119	u	<0.0136	u	<0.0152	u	<0.0142	u	<0.0141	u
trans-1,3-Dichloropropene	29.1	(1)	129	(5)	0.0281	(8)	<0.0047	u	<0.0035	u	<0.0041	u	<0.0045	u	<0.0042	u	<0.0042	u
Trichloroethene (TCE)	6.72	(1)	6.84	(5)	0.031	(8)	<0.0047	u	<0.0036	u	<0.0041	u	<0.0046	u	<0.0043	u	<0.0043	u
Trichlorofluoromethane	1,220	(1)	1,120	(5)	15.7	(8)	<0.0059	u	<0.0045	u	<0.0051	u	<0.0057	u	<0.0053	u	<0.0053	u
Vinyl chloride	0.741	(1)	28.3	(4)	0.0134	(8)	<0.0033	u	<0.0025	u	<0.0028	u	<0.0032	u	<0.003	u	<0.0029	u
Xylenes, Total	863	(1)	791	(5)	154	(8)	4.8	u	<0.0093	u	<0.0106	u	<0.0119	u	<0.0111	u	<0.011	u
Semi-volatiles (mg/kg)																		
1,2,4-Trichlorobenzene	82.2	(1)	78.4	(5)	3.1	(8)	<1.7867	D	<1.7746	D	<1.8013	D	<1.835	D	<1.7972	D	<1.824	D
1,2-Dichlorobenzene	2,140	(1)	2,470	(5)	9.08	(8)	<1.4571	D	<1.4473	D	<1.4691	D	<1.4966	D	<1.4657	D	<1.4876	D
1,3-Dichlorobenzene	-	-	-	-	-	-	<1.345	D	<1.3359	D	<1.356	D	<1.3814	D	<1.3529	D	<1.3731	D
1,4-Dichlorobenzene	1,290	(1)	6,730	(4)	1.12	(8)	<1.5771	D	<1.5664	D	<1.59	D	<1.6198	D	<1.5864	D	<1.6101	D
1-Methylnaphthalene	172	(1)	813	(7)	0.893	(8)	<1.8747	D	<1.8619	D	<1.89	D	<1.9254	D	<1.8857	D	<1.9139	D
2,4,5-Trichlorophenol	6,160	(1)	26,900	(5)	66.2	(8)	<1.4374	D	<1.4276	D	<1.4492	D	<1.4763	D	<1.4459	D	<1.4675	D
2,4,6-Trichlorophenol	61.6	(1)	269	(5)	0.674	(8)	<1.528	D	<1.5176	D	<1.5405	D	<1.5693	D	<1.537	D	<1.56	D
2,4-Dichlorophenol	185	(1)	807	(5)	0.825	(8)	<1.5306	D	<1.5202	D	<1.5431	D	<1.572	D	<1.5396	D	<1.5626	D
2,4-Dimethylphenol	1,230	(1)	5,380	(5)	6.45	(8)	<0.8623	D	<0.8565	D	<0.8694	D	<0.8857	D	<0.8674	D	<0.8804	D
2,4-Dinitrophenol	123	(1)	538	(5)	0.669	(8)	<1.151	D	<1.1431	D	<1.1604	D	<1.1821	D	<1.1577	D	<1.175	D
2,4-Dinitrotoluene	17.1	(1)	82.3	(4)	0.0492	(8)	<1.8112	D	<1.7989	D	<1.826	D	<1.8602	D	<1.8219	D	<1.8491	D
2,6-Dinitrotoluene	3.56	(1)	17.2	(4)	0.0102	(8)	<1.7048	D	<1.6933	D	<1.7188	D	<1.751	D	<1.7149	D	<1.7405	D
2-Chloronaphthalene	6,260	(1)	28,300	(5)	57	(8)	<1.7382	D	<1.7264	D	<1.7524	D	<1.7852	D	<1.7484	D	<1.7746	D
2-Chlorophenol	391	(1)	1,770	(5)	1.15	(8)	<1.4033	D	<1.3938	D	<1.4148	D	<1.4413	D	<1.4116	D	<1.4327	D
2-Methylnaphthalene	232	(1)	1,000	(5)	2.76	(8)	<1.6287	D	<1.6177	D	<1.6421	D	<1.6728	D	<1.6383	D	<1.6628	D
'2-Methylphenol (cresol,o-)	3,200	(2)	41,000	(6)	15	(9)	<1.435	D	<1.4253	D	<1.4468	D	<1.4738	D	<1.4434	D	<1.465	D
2-Nitroaniline	630	(2)	8,000	(6)	1.6	(9)	<1.7812	D	<1.7692	D	<1.7958	D	<1.8294	D	<1.7917	D	<1.8185	D
2-Nitrophenol	-	-	-	-	-	-	<1.825	D	<1.8126	D	<1.84	D	<1.8744	D	<1.8358	D	<1.8632	D
3,3´-Dichlorobenzidine	11.8	(1)	57	(4)	0.124	(8)	<1.4282	D	<1.4185	D	<1.4399	D	<1.4668	D	<1.4366	D	<1.458	D
3+4-Methylphenol	-	-	-	-	-	-	<1.3067	D	<1.2978	D	<1.3174	D	<1.3421	D	<1.3144	D	<1.334	D
3-Nitroaniline	-	-	-	-	-	-	<1.732	D	<1.7203	D	<1.7462	D	<1.7789	D	<1.7422	D	<1.7682	D
4,6-Dinitro-2-methylphenol	4.93	(1)	21.5	(5)	0.0398	(8)	<1.4689	D	<1.459	D	<1.481	D	<1.5087	D	<1.4776	D	<1.4997	D
4-Bromophenyl phenyl ether	-	-	-	-	-	-	<1.5825	D	<1.5717	D	<1.5954	D	<1.6253	D	<1.5918	D	<1.6156	D
4-Chloro-3-methylphenol	-	-	-	-	-	-	<1.7609	D	<1.749	D	<1.7754	D	<1.8086	D	<1.7713	D	<1.7978	D
4-Chloroaniline	27	(3)	110	(7)	0.0032	(9)	<1.5054	D	<1.4952	D	<1.5177	D	<1.5461	D	<1.5143	D	<1.5369	D
4-Chlorophenyl phenyl ether	-	-	-	-	-	-	<1.5113	D	<1.5011	D	<1.5237	D	<1.5522	D	<1.5202	D	<1.5429	D
4-Nitroaniline	270	(3)	1,100	(7)	0.032	(9)	<1.6472	D	<1.636	D	<1.6607	D	<1.6917	D	<1.6569	D	<1.6816	D
4-Nitrophenol	-	-	-	-	-	-	<1.5055	D	<1.4953	D	<1.5179	D	<1.5463	D	<1.5144	D	<1.537	D
Acenaphthene	3,480	(1)	15,100	(5)	0.0309	(8)	<1.5915	D	<1.5807	D	<1.6046	D	<1.6346	D	<1.6009	D	<1.6248	D
Acenaphthylene	-	-	-	-	-	-	<1.786	D	<1.7739	D	<1.8006	D	<1.8343	D	<1.7965	D	<1.8234	D
Aniline	950	(3)	4,000	(7)	0.092	(9)	<1.0952	D	<1.0878	D	<1.1042	D	<1.1249	D	<1.1017	D	<1.1181	D
Anthracene	17,400	(1)	75,300	(5)	851	(8)	<1.771	D	<1.759	D	<1.7855	D	<1.8189	D	<1.7814	D	<1.808	D
Azobenzene	56	(3)	260	(7)	1,860,000	(9)	<1.7871	D	<1.775	D	<1.8018	D	<1.8355	D	<1.7977	D	<1.8245	D
Benz(a)anthracene	1.53	(1)	32.3	(4)	0.637	(8)	<1.6644	D	<1.6531	D	<1.6781	D	<1.7094	D	<1.6742	D	<1.6992	D

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	Residential Soil Screening Level	Source	Non-Residential Soil Screening Level	Source	Leachate DAF (20) (mg/kg) SoilGW	Source	T-35-1		T-35-2		T-35-3		T-35-4		T-35-5		T-35-6	
							1708H80-001		1708H80-002		1708H80-003		1708H80-004		1708H80-005		1708H80-006	
							8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017	
Benzo(a)pyrene	1.12	(1)	23.6	(4)	3.53	(8)	<1.5312	D	<1.5208	D	<1.5437	D	<1.5726	D	<1.5402	D	<1.5632	D
Benzo(b)fluoranthene	1.53	(1)	32.3	(4)	6.17	(8)	<1.8481	D	<1.8355	D	<1.8632	D	<1.8981	D	<1.8589	D	<1.8867	D
Benzo(g,h,i)perylene	-	-	-	-	-	-	<1.5803	D	<1.5696	D	<1.5932	D	<1.623	D	<1.5896	D	<1.6133	D
Benzo(k)fluoranthene	15.3	(1)	323	(4)	60.5	(8)	<1.4591	D	<1.4492	D	<1.471	D	<1.4985	D	<1.4677	D	<1.4896	D
Benzoic acid	250,000	(2)	3,300,000	(6)	300	(9)	<1.467	D	<1.457	D	<1.479	D	<1.5067	D	<1.4756	D	<1.4977	D
Benzyl alcohol	6,300	(2)	82,000	(6)	9.6	(9)	<1.6262	D	<1.6152	D	<1.6396	D	<1.6702	D	<1.6358	D	<1.6602	D
Bis(2-chloroethoxy)methane	190	(2)	2,500	(6)	0.26	(9)	<1.7527	D	<1.7408	D	<1.7671	D	<1.8001	D	<1.763	D	<1.7894	D
Bis(2-chloroethyl)ether	3.1	(1)	1.93	(5)	0.000605	(8)	<1.2457	D	<1.2372	D	<1.2559	D	<1.2794	D	<1.253	D	<1.2717	D
Bis(2-chloroisopropyl)ether	99.3	(1)	519	(4)	0.0475	(8)	<1.9344	D	<1.9213	D	<1.9503	D	<1.9868	D	<1.9458	D	<1.9749	D
Bis(2-ethylhexyl)phthalate	380	(1)	1,830	(4)	21.5	(8)	<1.8767	D	<1.864	D	<1.8921	D	<1.9275	D	<1.8877	D	<1.9159	D
Butyl benzyl phthalate	2,900	(3)	12,000	(7)	4.6	(9)	<1.6094	D	<1.5985	D	<1.6226	D	<1.6529	D	<1.6189	D	<1.6431	D
Carbazole	-	-	-	-	-	-	<1.5394	D	<1.5289	D	<1.552	D	<1.581	D	<1.5484	D	<1.5716	D
Chrysene	153	(1)	3,230	(4)	186	(8)	<1.4614	D	<1.4515	D	<1.4734	D	<1.5009	D	<1.47	D	<1.492	D
Dibenz(a,h)anthracene	0.153	(1)	3.23	(4)	1.97	(8)	<1.5583	D	<1.5477	D	<1.5711	D	<1.6005	D	<1.5675	D	<1.5909	D
Dibenzofuran	-	-	-	-	-	-	<1.6743	D	<1.6629	D	<1.688	D	<1.7196	D	<1.6841	D	<1.7093	D
Diethyl phthalate	49,300	(1)	215,000	(5)	97.9	(8)	<1.6499	D	<1.6387	D	<1.6634	D	<1.6945	D	<1.6596	D	<1.6844	D
Dimethyl phthalate	61,600	(1)	269,000	(5)	3.57	(8)	<1.8144	D	<1.8021	D	<1.8292	D	<1.8635	D	<1.8251	D	<1.8523	D
Di-n-butyl phthalate	6,160	(1)	26,900	(5)	33.8	(8)	<1.1014	D	<1.0939	D	<1.1104	D	<1.1312	D	<1.1078	D	<1.1244	D
Di-n-octyl phthalate	-	-	-	-	-	-	<1.4558	D	<1.4459	D	<1.4677	D	<1.4951	D	<1.4643	D	<1.4862	D
Fluoranthene	2,320	(1)	10,000	(5)	1,340	(8)	<1.6162	D	<1.6053	D	<1.6295	D	<1.6599	D	<1.6257	D	<1.65	D
Fluorene	2,320	(1)	10,000	(5)	80	(8)	<1.4842	D	<1.4742	D	<1.4964	D	<1.5244	D	<1.493	D	<1.5153	D
Hexachlorobenzene	3.33	(1)	16	(4)	0.189	(8)	<1.7884	D	<1.7762	D	<1.803	D	<1.8367	D	<1.7989	D	<1.8258	D
Hexachlorobutadiene	61.6	(1)	51.7	(4)	0.0413	(8)	<1.654	D	<1.6427	D	<1.6675	D	<1.6987	D	<1.6637	D	<1.6886	D
Hexachlorocyclopentadiene	2.28	(1)	867	(5)	2.4	(8)	<1.547	D	<1.5365	D	<1.5597	D	<1.5889	D	<1.5561	D	<1.5794	D
Hexachloroethane	43.1	(1)	188	(5)	0.032	(8)	<1.4	D	<1.3905	D	<1.4115	D	<1.4379	D	<1.4082	D	<1.4293	D
Indeno(1,2,3-cd)pyrene	1.53	(1)	32.3	(4)	20.1	(8)	<1.6018	D	<1.5909	D	<1.6149	D	<1.6451	D	<1.6112	D	<1.6353	D
Isophorone							<1.8577	D	<1.8451	D	<1.8729	D	<1.908	D	<1.8686	D	<1.8966	D
Naphthalene	1,160	(1)	5,020	(5)	0.0823	(8)	<1.8021	D	<1.7898	D	<1.8168	D	<1.8508	D	<1.8127	D	<1.8397	D
Nitrobenzene	59.9	(1)	291	(4)	0.0144	(8)	<1.6149	D	<1.6039	D	<1.6281	D	<1.6586	D	<1.6244	D	<1.6487	D
N-Nitrosodi-n-propylamine	0.78	(3)	3.3	(7)	0.000162	(9)	<1.7174	D	<1.7057	D	<1.7314	D	<1.7638	D	<1.7275	D	<1.7533	D
N-Nitrosodiphenylamine	1,090	(1)	5,240	(4)	10	(8)	<1.8635	D	<1.8509	D	<1.8788	D	<1.9139	D	<1.8745	D	<1.9025	D
Pentachlorophenol	9.85	(1)	44.5	(4)	0.152	(8)	<1.6647	D	<1.6534	D	<1.6783	D	<1.7097	D	<1.6745	D	<1.6995	D
Phenanthrene	1,740	(1)	7,530	(5)	85.9	(8)	<1.7148	D	<1.7032	D	<1.7289	D	<1.7612	D	<1.7249	D	<1.7507	D
Phenol	18,500	(1)	77,400	(5)	52.3	(8)	<1.3427	D	<1.3336	D	<1.3537	D	<1.379	D	<1.3506	D	<1.3708	D
Pyrene	1,740	(1)	7,530	(5)	192	(8)	<1.4583	D	<1.4484	D	<1.4702	D	<1.4977	D	<1.4669	D	<1.4888	D
Pyridine	78	(2)	1,200	(6)	0.136	(9)	<1.2907	D	<1.2819	D	<1.3012	D	<1.3256	D	<1.2982	D	<1.3176	D
Total Petroleum Hydrocarbons (mg/kg)																		
Gasoline Range Organics (GRO)	1,000	(11)	3,800	(11)	20,000	(11)	110	v	<0.5616	u	<0.6431	u	<0.72	u	<0.67	u	<0.67	u
Diesel Range Organics (DRO)	1,000	(11)	3,800	(11)	20,000	(11)	250	v	53	v	11	v	1300	v	46	v	2800	v
Motor Oil Range Organics (MRO)	1,000	(11)	3,800	(11)	20,000	(11)	190	v	69	v	80	v	570	v	380	v	1400	v

- No screening level or analytical result available

NMED - Risk Assessment Guidance for Site Investigations and Remediation (March 2017)

EPA - Regional Screening Levels (June 2017)

(1) NMED Residential Screening Level

(2) EPA Residential Screening Level

(3) EPA Residential - Screening Levels multiplied by 10 pursuant to Section IV.D.2 of the Oct. 31, 2013 RCRA P t Cl P it b th tit t i li t d i i

(4) NMED Industrial Occupational Screening Level

(5) NMED Construction Worker Screening Level

(6) EPA Industrial - Screening Levels

(7) EPA Industrial - Screening Levels multiplied by 10 pursuant to Section IV.D.2 of the Oct. 31, 2013 RCRA (8) C

Table 1. Soil Analytical Results - August 30, 2017
Gallup Refinery
Gallup, New Mexico

	Residential Soil Screening Level	Source	Non-Residential Soil Screening Level	Source	Leachate DAF (20) (mg/kg) SoilGW	Source	T-35-1	T-35-2	T-35-3	T-35-4	T-35-5	T-35-6
							1708H80-001	1708H80-002	1708H80-003	1708H80-004	1708H80-005	1708H80-006
							8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017

SoilGW NMED Dilution Attenuation Factor (DAF) = 20 (9) SoilGW Risk-based EPA DAF = 20

(10) SoilGW MCL-based EPA DAF = 20

(11) NMED Table 6-4 TPH Soil Screening Levels "uknown oil" with DAF = 1.0 - see report Section 3 for use of screening levels

Bold represents value above Residential Screening Level

Yellow highlight represents value above Leachate (DAF) Screening Level

Bold with yellow highlight value exceeds Residential Screening Level and DAF

v = reportable detection above the Practical quantitation limit (PQL) u - result is not detected at method detection limit (MDL)

j - estimated result at concentration above MDL but less than PQL

Figures

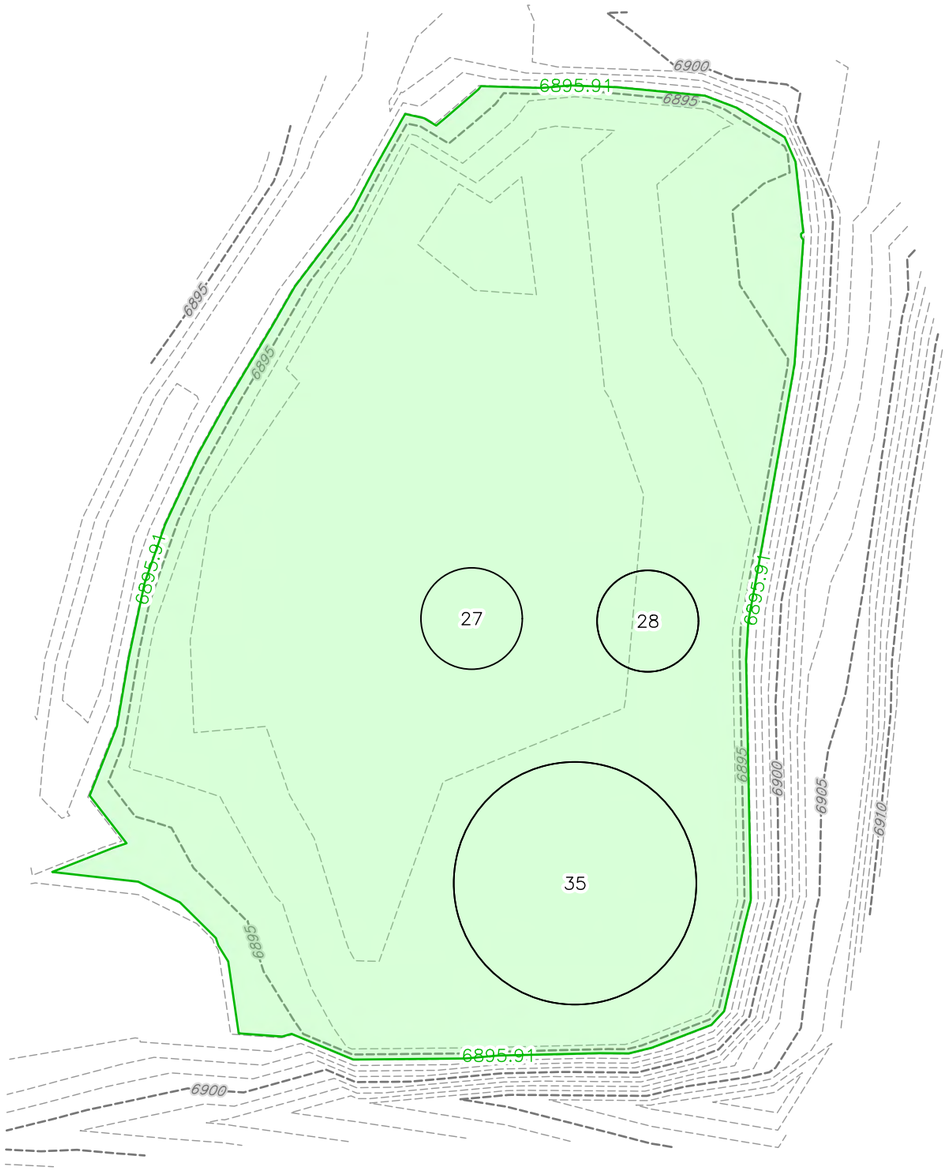

Image Cite: USDA /fsa – Aerial Photography Field Office, NAIP MrSID – Publication: 2014

2 TANK 35 SPILL AREA
SCALE: 1" = 50'

0 50'

N

EXPLANATION

6950 — EXISTING CONTAINMENT ELEVATION CONTOURS (INTERVAL = 1')

TANK

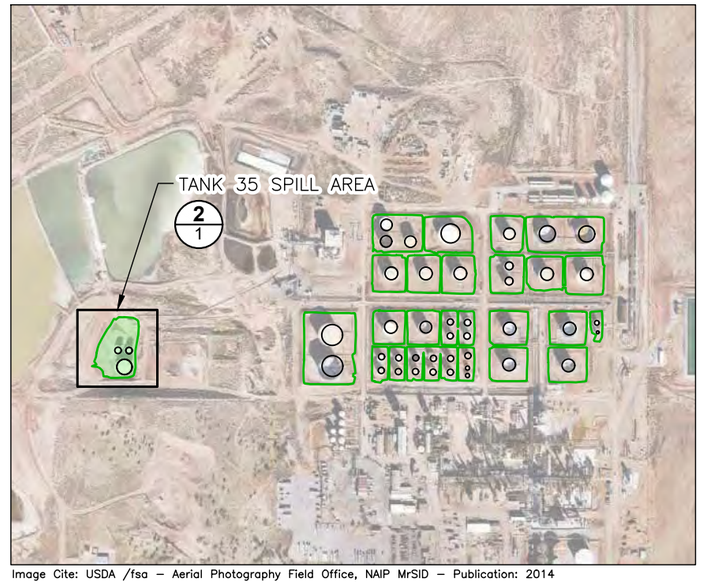

Image Cite: USDA /fsa – Aerial Photography Field Office, NAIP MrSID – Publication: 2014

1 KEY MAP
SCALE: 1" = 800'

0 800'

N

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 1

SITE LOCATION MAP

GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP	Checked By: TM	Scale: 1" = 50'	Date: 2/4/19	File: 697-TANK-35-RELEASE-201902

\\TRIHYDRO.COM\CLIENTS\WTOZ\WESTERNREFINING\CADD\GALLUP\RELEASES\TANK-35\697-TANK-35-RELEASE-201902

Image Cite: USDA /fsa – Aerial Photography Field Office, NAIP MrSID – Publication: 2014

2 TANK 35 RELEASE AREA
SCALE: 1" = 50'
0 50'

N

EXPLANATION

TANK

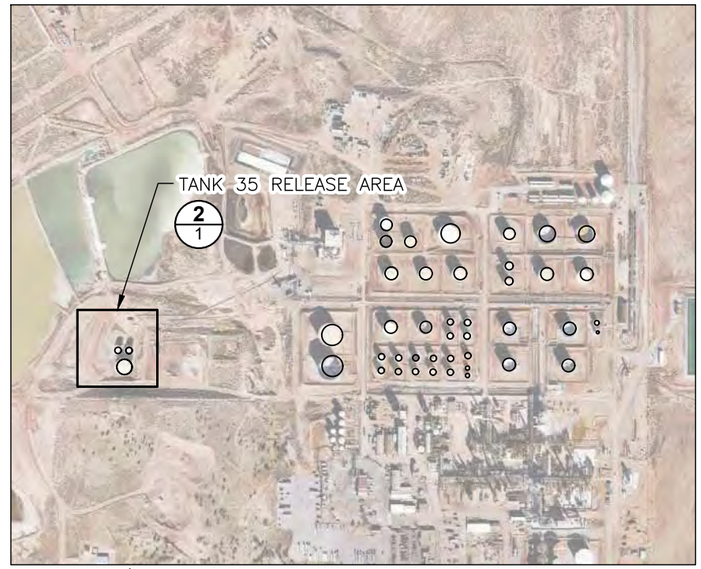

Image Cite: USDA /fsa – Aerial Photography Field Office, NAIP MrSID – Publication: 2014

1 KEY MAP
SCALE: 1" = 800'
0 800'

N

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FIGURE 2

TANK 35 AERIAL PHOTOGRAPHY

GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP	Checked By: TM	Scale: 1" = 50'	Date: 2/4/19	File: 697-TANK-35-RELEASE-201902

\\TRIHYDRO.COM\CLIENTS\WTOZ\WESTERNREFINING\CADD\GALLUP\RELEASES\TANK-35\697-TANK-35-RELEASE-201902

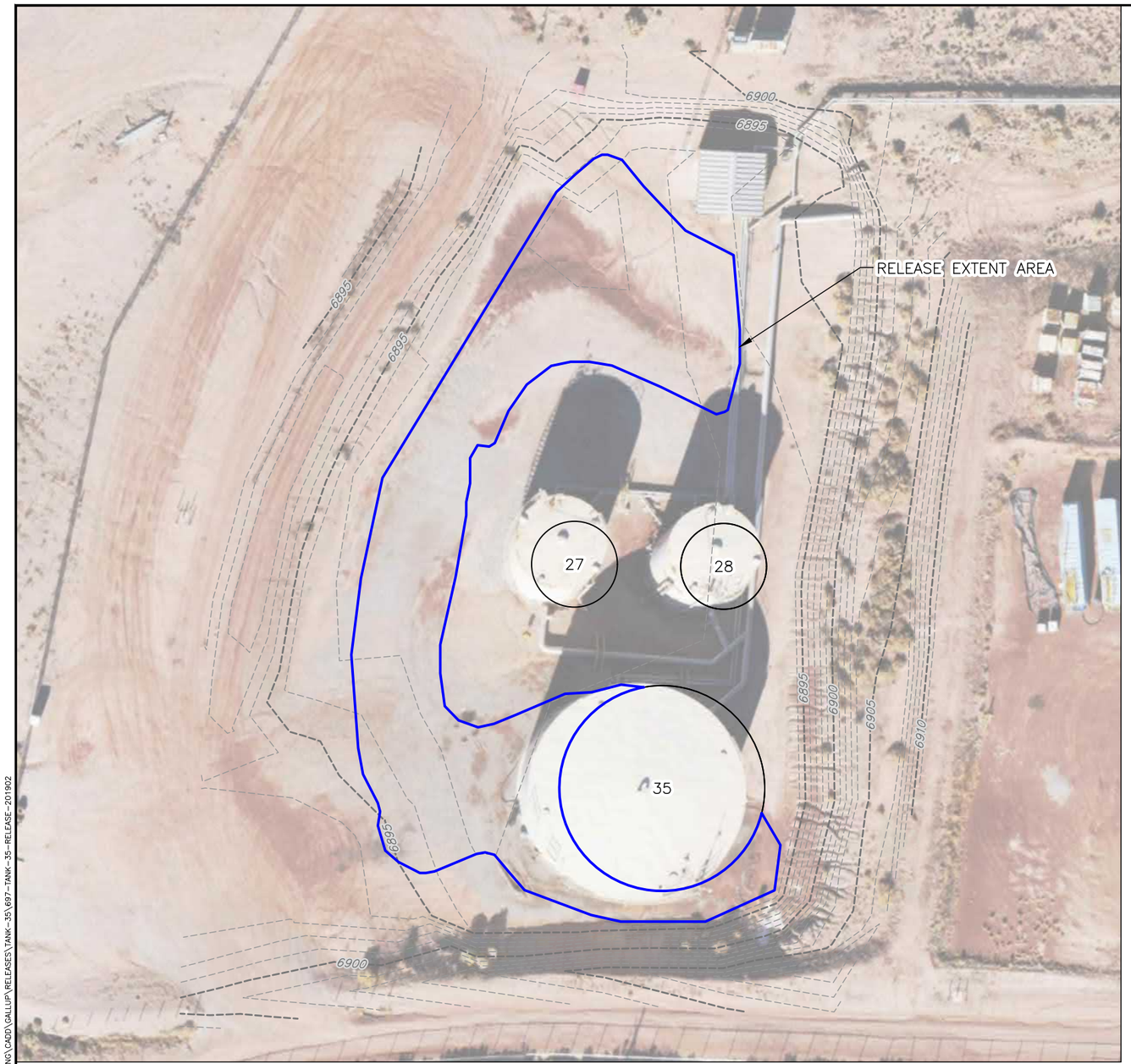

Image Cite: USDA /fsa – Aerial Photography Field Office, NAIP MrSID – Publication: 2014

2 **RELEASE EXTENT AREA**
SCALE: 1" = 50'
0 50'

N

EXPLANATION

6950 EXISTING CONTAINMENT ELEVATION CONTOURS (INTERVAL = 1')

TANK

RELEASE EXTENT AREA

Image Cite: USDA /fsa – Aerial Photography Field Office, NAIP MrSID – Publication: 2014

1 **KEY MAP**
SCALE: 1" = 800'
0 800'

N

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Laramie, Wyoming 82070
www.trihydro.com
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FIGURE 3

TANK 35 RELEASE EXTENT

GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP	Checked By: TM	Scale: 1" = 50'	Date: 2/4/19	File: 697-TANK-35-RELEASE-201902

\\TRIHYDRO.COM\CLIENTS\WTOZ\WESTERNREFINING\CADD\GALLUP\RELEASES\TANK-35\697-TANK-35-RELEASE-201902

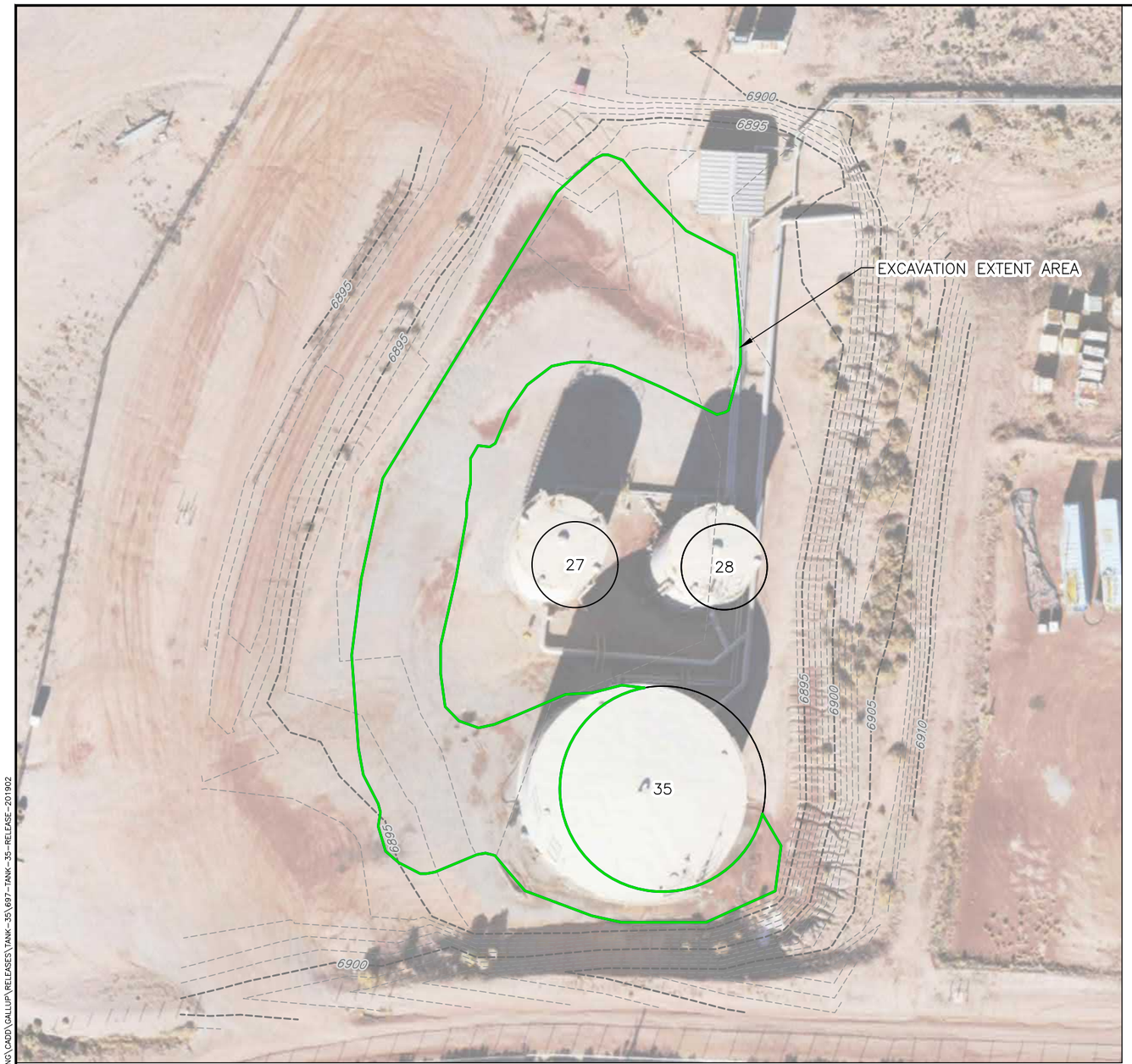

Image Cite: USDA /fsa – Aerial Photography Field Office, NAIP MrSID – Publication: 2014

2 EXCAVATION EXTENT AREA
SCALE: 1" = 50'

0 50'

N

EXPLANATION

6950 — EXISTING CONTAINMENT ELEVATION CONTOURS (INTERVAL = 1')

TANK

EXCAVATION EXTENT AREA

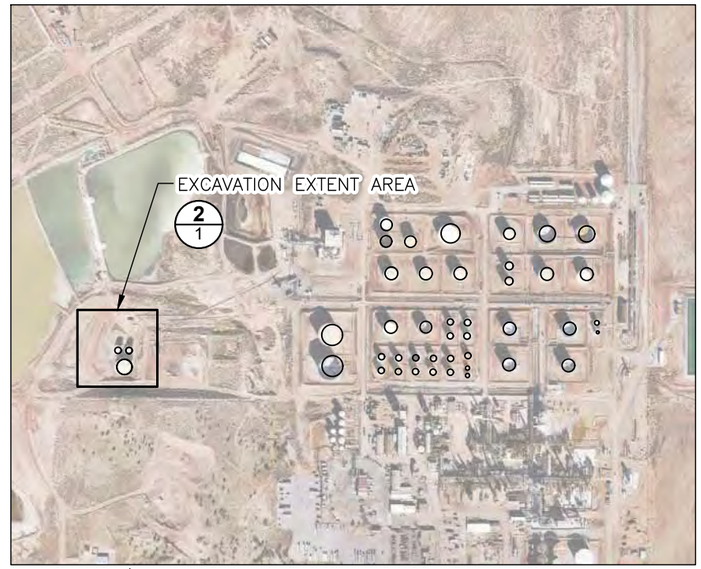

Image Cite: USDA /fsa – Aerial Photography Field Office, NAIP MrSID – Publication: 2014

1 KEY MAP
SCALE: 1" = 800'

0 800'

N

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FIGURE 4

TANK 35 EXCAVATION EXTENT

GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP	Checked By: TM	Scale: 1" = 50'	Date: 2/4/19	File: 697-TANK-35-RELEASE-201902

\\TRIHYDRO.COM\CLIENTS\WTOZ\WESTERNREFINING\CADD\GALLUP\RELEASES\TANK-35\697-TANK-35-RELEASE-201902

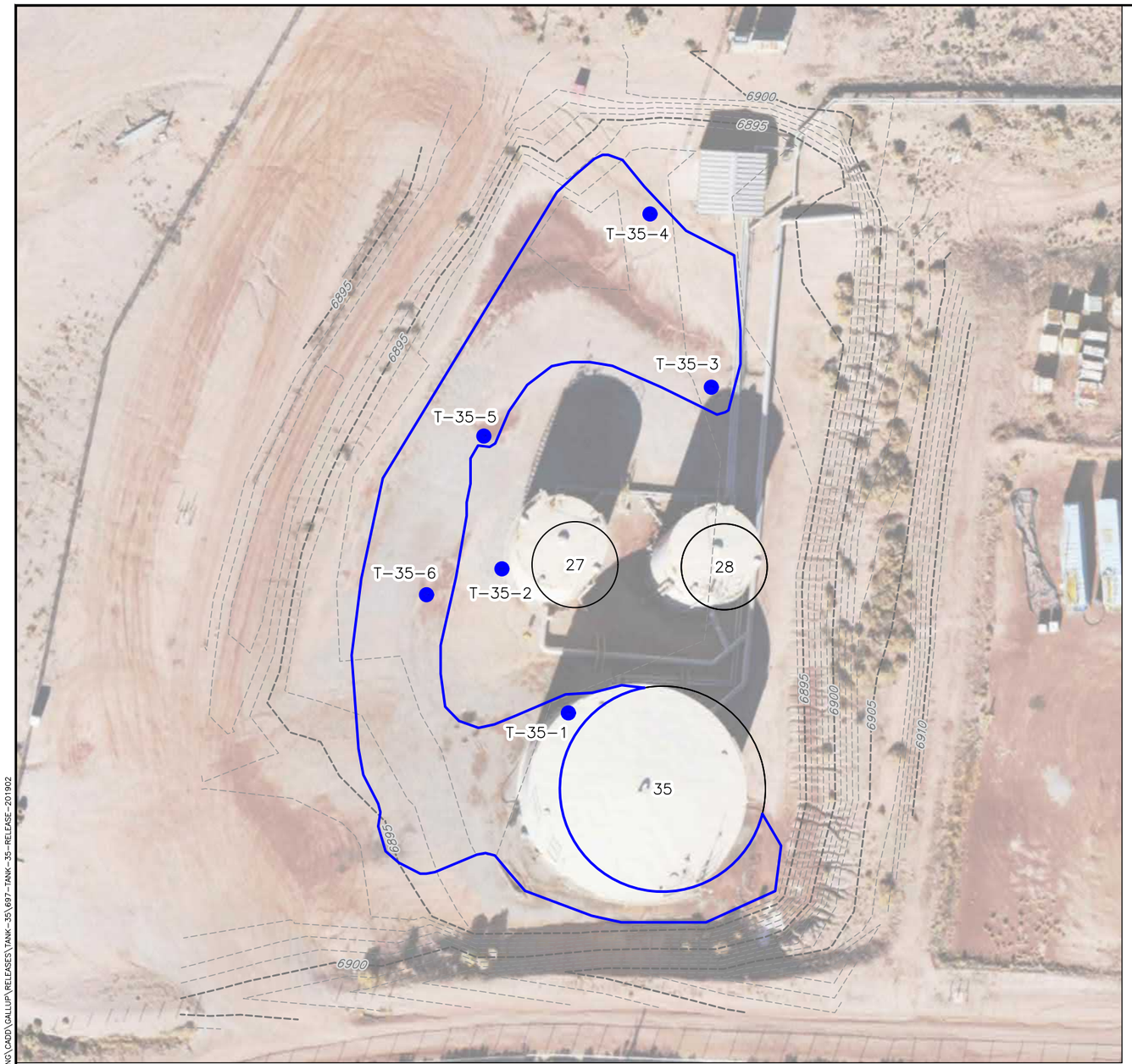

Image Cite: USDA /fsa – Aerial Photography Field Office, NAIP MrSID – Publication: 2014

2 SOIL SAMPLE LOCATIONS
SCALE: 1" = 50'
0 50'

N

EXPLANATION

6950 — EXISTING CONTAINMENT ELEVATION CONTOURS (INTERVAL = 1')

TANK

SOIL SAMPLE

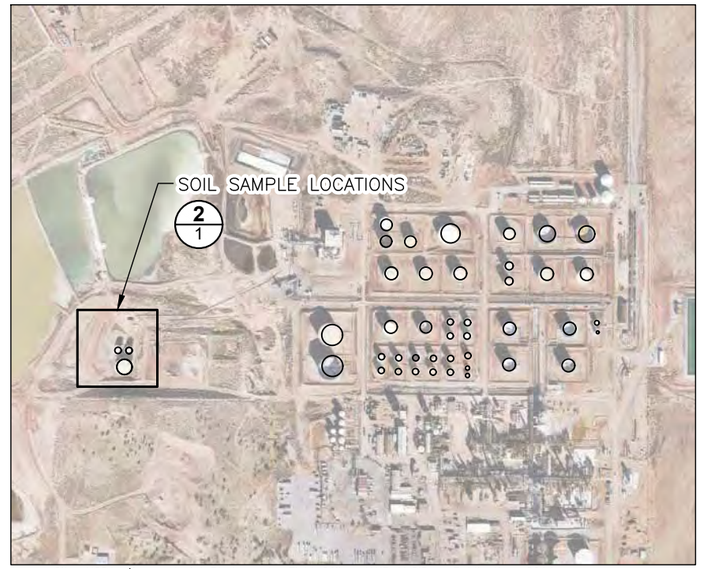

Image Cite: USDA /fsa – Aerial Photography Field Office, NAIP MrSID – Publication: 2014

1 KEY MAP
SCALE: 1" = 800'
0 800'

N

\\TRIHYDRO.COM\CLIENTS\WTOZ\WESTERNREFINING\CADD\GALLUP\RELEASES\TANK-35\697-TANK-35-RELEASE-201902

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FIGURE 5

TANK 35 SOIL SAMPLE LOCATIONS

GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP	Checked By: TM	Scale: 1" = 50'	Date: 2/4/19	File: 697-TANK-35-RELEASE-201902

APPENDIX A

FORM C-141 – JULY 30, 2017 OILY WATER RELEASE

August 3, 2017

Mr. Carl Chavez, CHMM
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Release Notification and Corrective Action Form C-141 for Tank 35 overflow – Western - Gallup Refinery, McKinley County, New Mexico.

Dear Mr. Chavez:

Enclosed is form C-141 prepared by Western for the Tank 35 overflow to ground surface which occurred on July 30, 2017 at the Gallup Refinery, I-40 Exit 39, Jamestown, NM (McKinley County). This report has also been submitted electronically (via e-mail) to all parties listed below.

If you have any questions, please do not hesitate to contact me or Mr. Bill Bailey – Environmental Supervisor at (505) 726-9743.

Sincerely,

Cheryl Johnson
Environmental Specialist
Attachment
cc: Brandon Powell, NM-OCD-Aztec
Kristen VanHorn, NM-HWB
Bill Bailey, WNR - GLP
Allen Haines, WNR-El Paso

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Western Refining	Contact: Cheryl Johnson
Address: I-40 Exit 39, Jamestown, NM 87347	Telephone No: 505 722 0231
Facility Name: Gallup Refinery	Facility Type: Petroleum Refinery

Surface Owner	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	28	15N	15W					McKinley

Latitude 35°29'.84"N Longitude 108°25'56.17"W NAD83

NATURE OF RELEASE

Type of Release: Oily Water Mixture w/hydrocarbons(Waste water)	Volume of Release: Estimated at 542 bbls of oily/water mixture	Volume Recovered: To date 18,000 gallons of oily/water mix recovered via vacuum truck – on going.
Source of Release: Tank 35	Date and Hour of Occurrence: 7/30/17 @ 0130 hours	Date and Hour of Discovery: 7/30/17 @ 0130 hours
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? C Chavez/OCD; K VanHorn/NMED-HWB; B Powell/OCD; C Smith/NMED	
By Whom? Alvin Dorsey	Date and Hour: 7/30/17 @ 0435 hrs	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

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

Describe Cause of Problem and Remedial Action Taken.*
Facility received heavy rains on 7/29/17 through 7/30/17 and also had a fire water line leak in the process area (Amine Unit). Running max flow of 260GPM, the Waste Water Treatment Plant was not able to keep up with the volume of water going to Tank 35 from the rainstorm and the fire water leak. Operator had switched rundown tanks to try to keep up with the influx of water filling up all the storage tanks (Tank 27, Tank 28 and Tank 35). At approximately 0130 hours Tank 35 overfilled through the vents at the top of the tank and flowed onto the ground surface pooling inside an earthen berm; the overflow stopped at 0245 hours. Operator closed the rundown line to Tank 35 to slow down the flow so the WWTP could process the excess flow and lower the level on Tank 35. On-site Kurtz Fire Department was notified and responded by applying a foam layer on the spill site to minimize vapor and fire hazards. Wind direction north at about 8 mph with a temperature of 70 degrees. No personnel injuries were reported and no fires occurred.

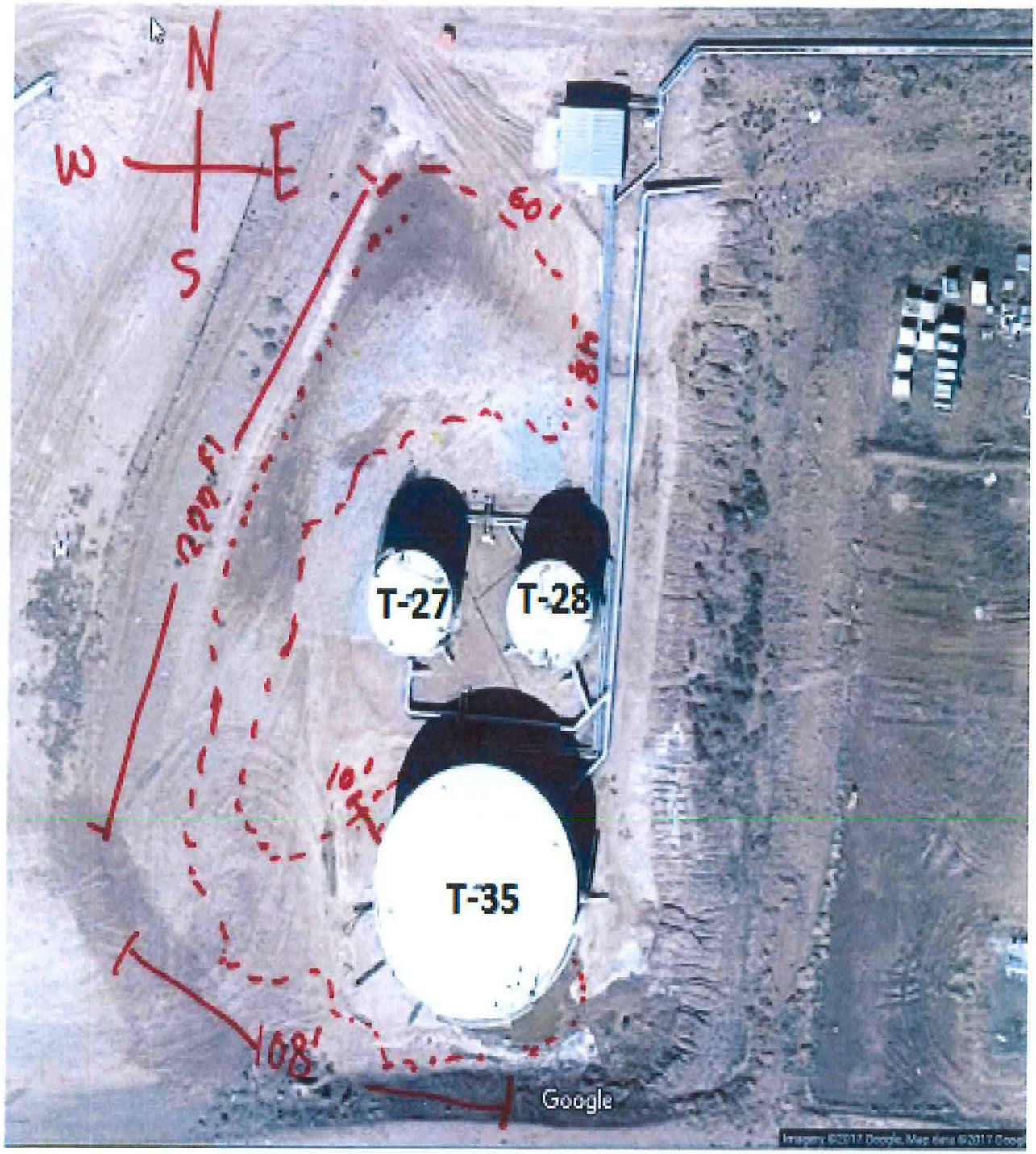
Describe Area Affected and Cleanup Action Taken.*
The overflow was contained inside an earthen berm (227ft x 60ft) with major pooling on the north section of the berm (see Attachment 1). A thin oily layer with a sheen was observed on the surface of the water. Clean up activities were not immediately initiated due to severe weather (lightning) and muddy conditions on 7/30/17 and 7/31/17. Clean up activities began on 8/1/17 with vacuuming of the oily/water mixture from within the berm. To date 8/3/17, an estimated 18,000 gals of oily/water mix has been vacuumed up from the area. Clean up operations continue.

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: Cheryl Johnson	Approved by Environmental Specialist:	
Title: Environmental Specialist	Approval Date:	Expiration Date:
E-mail Address: Cheryl.a.johnson@wnr.com	Conditions of Approval:	Attached ☐
Date: Phone:		

* Attach Additional Sheets If Necessary

ATTACHMENT 1



APPENDIX B

PHOTOGRAPHS OF RELEASE

T-35 Tank Dike - Looking Northeast

T-35 Tank Dike - Looking Southeast

T-35 Tank Dike - Looking Southwest

T-35 Tank Dike - Looking North

T-35 Tank Dike - Looking North-Northeast

T-35 Tank Dike with Foam - Looking North

T-35 Tank Dike with Foam - Looking Southeast

T-35 Tank Dike with Foam - Looking Southwest

APPENDIX C

CALCULATIONS

Western Refining

CALCULATIONS and DESIGN DATA

PREPARED BY	
SUBJECT	DATE
	SHEET OF

Tank 35

Tank Diameter: 78 ft.
Max Tank Fill Height: 28.16 ft

Tank Height
on 7/29/17 @ 10:00 PM H = 26'-6" = 26.5 ft
on 7/30/17 @ 12:00 AM H = 27'-4" = 27.33 ft

$\Delta H = 27.33 ft - 26.5 ft = 0.83 ft$
$\Delta T = 2 hrs$
$V_1 = 0.83 ft / 2 hr = 0.415 ft/hr$

on 7/29/17 @ 8:00 PM H = 25'-4" = 25.3 ft
on 7/29/17 @ 10:00 PM H = 26.5 ft
$\Delta H = 26.5 ft - 25.3 ft = 1.2 ft$
$\Delta T = 2 hrs$
$V_2 = 1.2 / 2 hr = 0.6 ft/hr$

Average $V = \frac{V_1 + V_2}{2} = 0.51 ft/hr$

Time of Overfill
Time Started: 1:30 AM
Time Ended: 2:45 AM
$\Delta T = 1.25 hrs$

Area of Tank = 4778.4 ft^2

Total volume = $\frac{0.51 ft}{hr} \mid 4778.4 ft^2 \mid 1.25 hr = 3046.23 ft^3$

$3046.23 ft^3 \mid \frac{7.48052 gal}{1 ft^3} = 22,764.9 gal$

$= 542 Barrels$

Western Refining

CALCULATIONS and DESIGN DATA

SUBJECT	PREPARED BY
	DATE
	SHEET OF

Lab Reports show 112.98 ppm of Benzene

1 ppm = 0.001 g/L

112.98 ppm = 0.11298 g/L

$$\frac{22{,}764.9 \text{ gal}}{1 \text{ gal}} \Big| \frac{3.78541 \text{ liters}}{} = 86{,}174.5 \text{ liters}$$

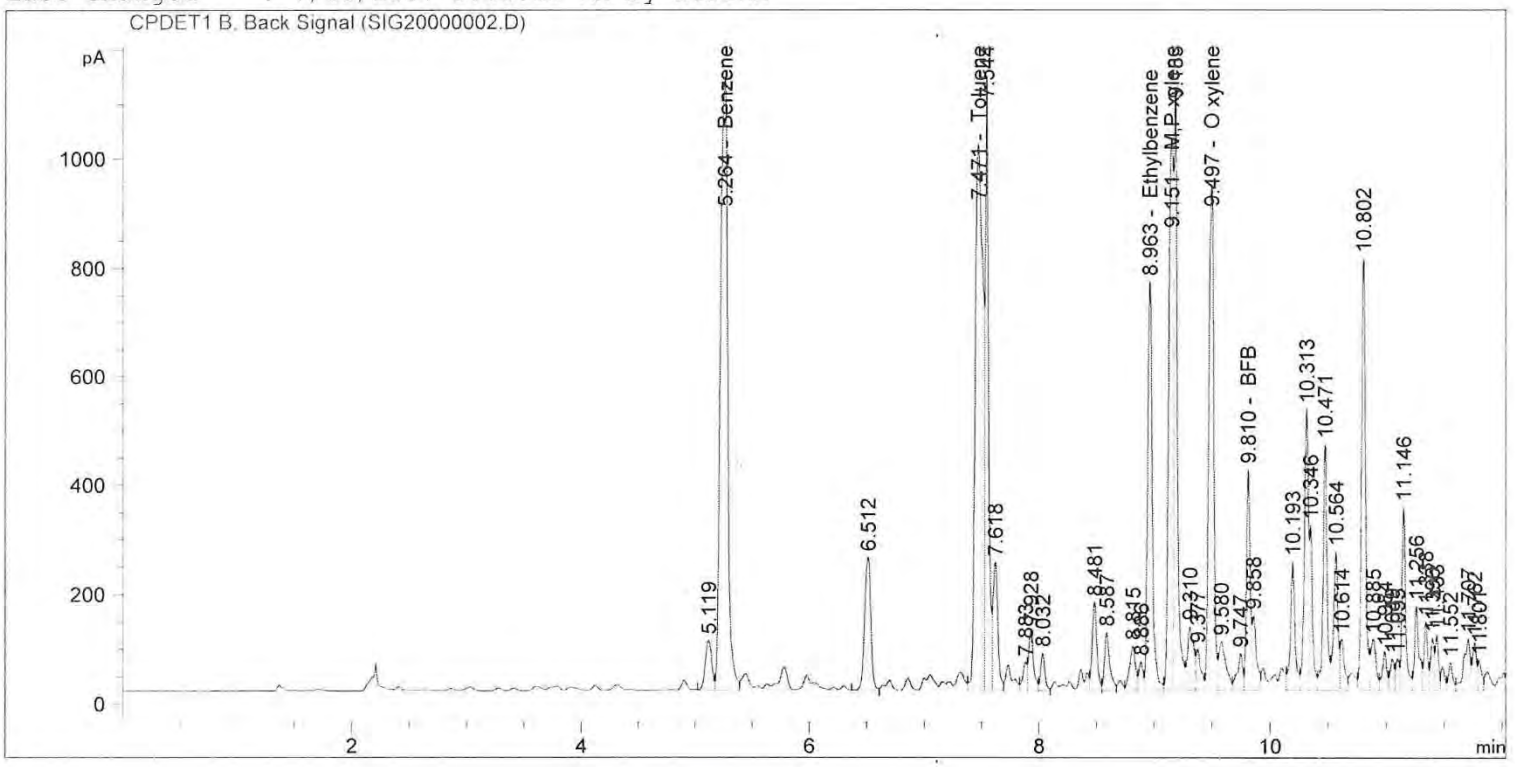
$$\frac{86{,}174.5 \text{ liters}}{1 \text{ L}} \Big| \frac{0.11298 \text{ g}}{} = 9736 \text{ g}$$

$$\frac{9736 \text{ g}}{1 \text{ g}} \Big| \frac{0.00221 \text{ lb}}{} = 21.41 \text{ lb of benzene}$$

Data File C:\CHEM32\1\DATA\B073017D\BTEX_DAILY 2017-07-30 09-30-11\SIG20000002.D
Sample Name: T-35

==========

Acq. Operator : SYSTEM Seq. Line : 2
Acq. Instrument : Purge and Trap Location : Vial 3
Injection Date : 7/30/2017 10:09:00 AM Inj : 1
Inj Volume : Manually
Sequence File : C:\Chem32\1\DATA\B073017D\BTEX_DAILY 2017-07-30 09-30-11\BTEX_DAILY.S
Method : C:\CHEM32\1\DATA\B073017D\BTEX_DAILY 2017-07-30 09-30-11\BTEX.M (Sequence Method)
Last changed : 7/30/2017 9:30:11 AM by SYSTEM



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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, June 21, 2017 12:46:53 PM
Multiplier : 50.0000
Dilution : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount [ppm]	Name
1	100.00000	BFB

Signal 1: CPDET1 B, Back Signal

RetTime [min]	Type	ISTD used	Area [pA*s]	Amt/Area ratio	Amount [ppm]	Grp	Name
5.264	VV	1	4994.88818	4.07536e-3	112.97983		Benzene
7.471	VV	1	4660.34131	4.33042e-3	112.01008		Toluene
8.963	VV	1	2130.45190	4.68447e-3	55.39123		Ethylbenzene
9.151	VV	1	2727.10840	2.19336e-3	33.19870		M,P xylene

Data File C:\CHEM32\1\DATA\B073017D\BTEX_DAILY 2017-07-30 09-30-11\SIG20000002.D
Sample Name: T-35

RetTime [min]	Type	ISTD used	Area [pA*s]	Amt/Area ratio	Amount [ppm]	Grp	Name
9.497	VV	1	2741.00586	4.55227e-3	69.25431		O xylene
9.810	VV I	1	900.86749	1.00000	100.00000		BFB

Totals without ISTD(s) : 382.83415

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Tsosie, Alexandria

From: Gallegos, Patrick
Sent: Sunday, July 30, 2017 1:33 PM
To: Tsosie, Alexandria
Subject: T-35 gauges

On 7/29/17 the following tank gauges were taken for T-35:

5:30pm- 18' 6"
6:00pm- 25'
8:00pm- 25' 4"
10:00pm- 26' 6"
12:00am- 27' 4"
2:00am- 28' 1"
4:00am- 27' 10"

APPENDIX D

ANALYTICAL DATA REPORTS

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

August 30, 2017

Cheryl Johnson

Western Refining Southwest, Gallup
Rt. 3 Box 7
Gallup, NM 87301
TEL:
FAX

RE: Soil T-35 Drill Cuttings OrderNo.: 1708D66

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/23/2017 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 #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35 Soil Clean Up
Project: Soil T-35 Drill Cuttings
Collection Date: 8/23/2017 9:50:00 AM
Lab ID: 1708D66-001
Matrix: SLUDGE
Received Date: 8/23/2017 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**	
Diesel Range Organics (DRO)	10000	31	190		mg/Kg	20	8/28/2017 2:56:47 PM	33552
Motor Oil Range Organics (MRO)	4400	960	960		mg/Kg	20	8/28/2017 2:56:47 PM	33552
Surr: DNOP	0	0	70-130	S	%Rec	20	8/28/2017 2:56:47 PM	33552
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	1.1	5.0		mg/Kg	1	8/25/2017 11:01:22 AM	33543
Surr: BFB	77.3	0	54-150		%Rec	1	8/25/2017 11:01:22 AM	33543
MERCURY, TCLP							Analyst: **pmf**	
Mercury	ND	0.00075	0.020		mg/L	1	8/28/2017 1:59:07 PM	33583
EPA METHOD 6010B: TCLP METALS							Analyst: **MED**	
Arsenic	0.040	0.013	5.0	J	mg/L	1	8/28/2017 1:57:50 PM	33562
Barium	0.68	0.00062	100	J	mg/L	1	8/28/2017 1:57:50 PM	33562
Cadmium	ND	0.00063	1.0		mg/L	1	8/28/2017 1:57:50 PM	33562
Chromium	ND	0.0017	5.0		mg/L	1	8/28/2017 1:57:50 PM	33562
Lead	ND	0.0053	5.0		mg/L	1	8/28/2017 1:57:50 PM	33562
Selenium	ND	0.032	1.0		mg/L	1	8/28/2017 1:57:50 PM	33562
Silver	ND	0.0018	5.0		mg/L	1	8/28/2017 1:57:50 PM	33562
EPA METHOD 8260B: TCLP COMPOUNDS							Analyst: **DJF**	
Benzene	ND	0.049	0.50		ppm	10	8/25/2017 11:59:53 AM	33543
Toluene	ND	0.040	0.50		ppm	10	8/25/2017 11:59:53 AM	33543
Ethylbenzene	ND	0.035	0.50		ppm	10	8/25/2017 11:59:53 AM	33543
1,2-Dichloroethane (EDC)	ND	0.052	0.50		ppm	10	8/25/2017 11:59:53 AM	33543
2-Butanone	ND	0.30	200		ppm	10	8/25/2017 11:59:53 AM	33543
Carbon tetrachloride	ND	0.049	0.50		ppm	10	8/25/2017 11:59:53 AM	33543
Chlorobenzene	ND	0.030	100		ppm	10	8/25/2017 11:59:53 AM	33543
Chloroform	ND	0.030	6.0		ppm	10	8/25/2017 11:59:53 AM	33543
1,4-Dichlorobenzene	ND	0.056	7.5		ppm	10	8/25/2017 11:59:53 AM	33543
1,1-Dichloroethene	ND	0.20	0.70		ppm	10	8/25/2017 11:59:53 AM	33543
Tetrachloroethene (PCE)	ND	0.040	0.70		ppm	10	8/25/2017 11:59:53 AM	33543
Trichloroethene (TCE)	ND	0.061	0.50		ppm	10	8/25/2017 11:59:53 AM	33543
Vinyl chloride	ND	0.042	0.20		ppm	10	8/25/2017 11:59:53 AM	33543
Xylenes, Total	ND	0.16	0.50		ppm	10	8/25/2017 11:59:53 AM	33543
Surr: 1,2-Dichloroethane-d4	106		70-130		%Rec	10	8/25/2017 11:59:53 AM	33543
Surr: 4-Bromofluorobenzene	94.6		70-130		%Rec	10	8/25/2017 11:59:53 AM	33543
Surr: Dibromofluoromethane	104		70-130		%Rec	10	8/25/2017 11:59:53 AM	33543
Surr: Toluene-d8	96.0		70-130		%Rec	10	8/25/2017 11:59:53 AM	33543

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Drill Cuttings
Project: Soil T-35 Drill Cuttings
Collection Date: 8/23/2017 10:32:00 AM
Lab ID: 1708D66-002
Matrix: SLUDGE
Received Date: 8/23/2017 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.3	1.6	10	J	mg/Kg	1	8/28/2017 3:41:24 PM	33552
Motor Oil Range Organics (MRO)	ND	50	50		mg/Kg	1	8/28/2017 3:41:24 PM	33552
Surr: DNOP	93.6	0	70-130		%Rec	1	8/28/2017 3:41:24 PM	33552
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	1.1	5.0		mg/Kg	1	8/25/2017 10:37:23 AM	33543
Surr: BFB	77.5	0	54-150		%Rec	1	8/25/2017 10:37:23 AM	33543
MERCURY, TCLP							Analyst: **pmf**	
Mercury	ND	0.00075	0.020		mg/L	1	8/28/2017 2:00:51 PM	33583
EPA METHOD 6010B: TCLP METALS							Analyst: **MED**	
Arsenic	0.031	0.013	5.0	J	mg/L	1	8/28/2017 1:59:04 PM	33562
Barium	1.9	0.00062	100	J	mg/L	1	8/28/2017 1:59:04 PM	33562
Cadmium	ND	0.00063	1.0		mg/L	1	8/28/2017 1:59:04 PM	33562
Chromium	ND	0.0017	5.0		mg/L	1	8/28/2017 1:59:04 PM	33562
Lead	ND	0.0053	5.0		mg/L	1	8/28/2017 1:59:04 PM	33562
Selenium	ND	0.032	1.0		mg/L	1	8/28/2017 1:59:04 PM	33562
Silver	ND	0.0018	5.0		mg/L	1	8/28/2017 1:59:04 PM	33562
EPA METHOD 8260B: TCLP COMPOUNDS							Analyst: **DJF**	
Benzene	ND	0.049	0.50		ppm	10	8/25/2017 12:28:45 PM	33543
Toluene	ND	0.040	0.50		ppm	10	8/25/2017 12:28:45 PM	33543
Ethylbenzene	ND	0.035	0.50		ppm	10	8/25/2017 12:28:45 PM	33543
1,2-Dichloroethane (EDC)	ND	0.052	0.50		ppm	10	8/25/2017 12:28:45 PM	33543
2-Butanone	ND	0.30	200		ppm	10	8/25/2017 12:28:45 PM	33543
Carbon tetrachloride	ND	0.049	0.50		ppm	10	8/25/2017 12:28:45 PM	33543
Chlorobenzene	ND	0.030	100		ppm	10	8/25/2017 12:28:45 PM	33543
Chloroform	ND	0.030	6.0		ppm	10	8/25/2017 12:28:45 PM	33543
1,4-Dichlorobenzene	ND	0.055	7.5		ppm	10	8/25/2017 12:28:45 PM	33543
1,1-Dichloroethene	ND	0.20	0.70		ppm	10	8/25/2017 12:28:45 PM	33543
Tetrachloroethene (PCE)	ND	0.040	0.70		ppm	10	8/25/2017 12:28:45 PM	33543
Trichloroethene (TCE)	ND	0.060	0.50		ppm	10	8/25/2017 12:28:45 PM	33543
Vinyl chloride	ND	0.042	0.20		ppm	10	8/25/2017 12:28:45 PM	33543
Xylenes, Total	ND	0.16	0.50		ppm	10	8/25/2017 12:28:45 PM	33543
Surr: 1,2-Dichloroethane-d4	106		70-130		%Rec	10	8/25/2017 12:28:45 PM	33543
Surr: 4-Bromofluorobenzene	91.1		70-130		%Rec	10	8/25/2017 12:28:45 PM	33543
Surr: Dibromofluoromethane	104		70-130		%Rec	10	8/25/2017 12:28:45 PM	33543
Surr: Toluene-d8	97.5		70-130		%Rec	10	8/25/2017 12:28:45 PM	33543

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

Qualifiers:

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

Wet Chemistry by Method 9012 B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Reactive Cyanide	ND		0.250	1	08/25/2017 22:23	WG1013530

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Reactive Sulfide	ND		25.0	1	08/25/2017 16:05	WG1013568

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
Corrosivity by pH	8.51	T8	1	08/29/2017 10:37	WG1014298

Sample Narrative:

L931847-01 WG1014298: 8.51 at 20.5c

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	Deg. F			date / time	
Ignitability	DNI at 170		1	08/28/2017 13:00	WG1014260

Wet Chemistry by Method 9012 B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Reactive Cyanide	ND		0.250	1	08/25/2017 22:26	WG1013530

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Reactive Sulfide	ND		25.0	1	08/25/2017 16:05	WG1013568

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
Corrosivity by pH	10.0	T8	1	08/29/2017 10:37	WG1014298

Sample Narrative:

L931847-02 WG1014298: 10.03 at 20.1c

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	Deg. F			date / time	
Ignitability	DNI at 170		1	08/28/2017 13:00	WG1014260

Method Blank (MB)

(MB) R3244658-1 08/25/17 22:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Reactive Cyanide	U		0.039	0.250

L931815-01 Original Sample (OS) • Duplicate (DUP)

(OS) L931815-01 08/25/17 22:20 • (DUP) R3244658-6 08/25/17 22:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/kg	mg/kg		%		%
Reactive Cyanide	ND	0.0532	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3244658-2 08/25/17 22:02 • (LCSD) R3244658-3 08/25/17 22:03

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Reactive Cyanide	2.50	2.57	2.47	103	99	50-150			4	20

L931767-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L931767-05 08/25/17 22:16 • (MS) R3244658-4 08/25/17 22:17 • (MSD) R3244658-5 08/25/17 22:18

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Reactive Cyanide	1.67	ND	1.55	1.57	89	90	1	75-125			1	20

Method Blank (MB)

(MB) WG1013568-1 08/25/17 16:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Reactive Sulfide	U		7.63	25.0

L931847-01 Original Sample (OS) • Duplicate (DUP)

(OS) L931847-01 08/25/17 16:05 • (DUP) WG1013568-4 08/25/17 16:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/kg	mg/kg		%		%
Reactive Sulfide	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG1013568-2 08/25/17 16:05 • (LCSD) WG1013568-3 08/25/17 16:05

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Reactive Sulfide	100	73.1	73.1	73.1	73.1	70.0-130			0.000	20

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

L931847-02 Original Sample (OS) • Duplicate (DUP)

(OS) L931847-02 08/29/17 10:37 • (DUP) WG1014298-3 08/29/17 10:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	10.0	10.0	1	0.399	T8	1

Sample Narrative:

OS: 10.03 at 20.1c

DUP: 10.04 at 20.2c

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG1014298-1 08/29/17 10:37 • (LCSD) WG1014298-2 08/29/17 10:37

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
Corrosivity by pH	10.0	10.1	10.1	101	101	98.4-102			0.000	1

Sample Narrative:

LCS: 10.06 at 20.0c

LCSD: 10.06 at 20.1c

L931842-01 Original Sample (OS) • Duplicate (DUP)

(OS) L931842-01 08/28/17 13:00 • (DUP) R3244961-3 08/28/17 13:00

Analyte	Original Result Deg. F	DUP Result Deg. F	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ignitability	131	135	1	3.00		10

L931859-01 Original Sample (OS) • Duplicate (DUP)

(OS) L931859-01 08/28/17 13:00 • (DUP) R3244961-4 08/28/17 13:00

Analyte	Original Result Deg. F	DUP Result Deg. F	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ignitability	148	142	1	4.00		10

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3244961-1 08/28/17 13:00 • (LCSD) R3244961-2 08/28/17 13:00

Analyte	Spike Amount Deg. F	LCS Result Deg. F	LCSD Result Deg. F	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ignitability	82.0	79.9	80.3	97.0	98.0	96.0-104			0.000	10

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Rec.	Recovery.

Qualifier	Description
T8	Sample(s) received past/too close to holding time expiration.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708D66**

30-Aug-17

Client: Western Refining Southwest, Gallup

Project: Soil T-35 Drill Cuttings

Sample ID	**LCS-33552**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**33552**		RunNo:	**45247**				
Prep Date:	**8/25/2017**	Analysis Date:	**8/28/2017**		SeqNo:	**1432934**	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	96.0	73.2	114			
Surr: DNOP	4.8		5.000		95.7	70	130			

Sample ID	**MB-33552**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**33552**		RunNo:	**45247**				
Prep Date:	**8/25/2017**	Analysis Date:	**8/28/2017**		SeqNo:	**1432935**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	3.4	10								J
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.8		10.00		97.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708D66**

30-Aug-17

Client: Western Refining Southwest, Gallup

Project: Soil T-35 Drill Cuttings

Sample ID	**MB-33543**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**33543**	RunNo:	**45235**					
Prep Date:	**8/24/2017**	Analysis Date:	**8/25/2017**	SeqNo:	**1432593**	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	790		1000		78.6	54	150			

Sample ID	**LCS-33543**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**33543**	RunNo:	**45235**					
Prep Date:	**8/24/2017**	Analysis Date:	**8/25/2017**	SeqNo:	**1432594**	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	95.0	76.4	125			
Surr: BFB	880		1000		88.1	54	150			

Sample ID	**1708D66-001AMS**	SampType:	**MS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**T-35 Soil Clean Up**	Batch ID:	**33543**	RunNo:	**45235**					
Prep Date:	**8/24/2017**	Analysis Date:	**8/25/2017**	SeqNo:	**1432598**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	24.95	0	95.0	77.8	128			
Surr: BFB	930		998.0		92.9	54	150			

Sample ID	**1708D66-001AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**T-35 Soil Clean Up**	Batch ID:	**33543**	RunNo:	**45235**					
Prep Date:	**8/24/2017**	Analysis Date:	**8/25/2017**	SeqNo:	**1432599**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	24.90	0	94.9	77.8	128	0.326	20	
Surr: BFB	940		996.0		94.7	54	150	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708D66**

30-Aug-17

Client: Western Refining Southwest, Gallup

Project: Soil T-35 Drill Cuttings

Sample ID **mb-33543**	SampType: **MBLK**	TestCode: **EPA Method 8260B: TCLP Compounds**
Client ID: **PBS**	Batch ID: **33543**	RunNo: **45237**
Prep Date: **8/24/2017**	Analysis Date: **8/25/2017**	SeqNo: **1432746** Units: **ppm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
2-Butanone	ND	20								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	10								
Chloroform	ND	0.60								
1,4-Dichlorobenzene	ND	0.75								
1,1-Dichloroethene	ND	0.070								
Tetrachloroethene (PCE)	ND	0.070								
Trichloroethene (TCE)	ND	0.050								
Vinyl chloride	ND	0.020								
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.8	70	130			
Surr: Dibromofluoromethane	0.50		0.5000		101	70	130			
Surr: Toluene-d8	0.48		0.5000		96.3	70	130			

Sample ID **lcs-33543**	SampType: **LCS**	TestCode: **EPA Method 8260B: TCLP Compounds**
Client ID: **LCSS**	Batch ID: **33543**	RunNo: **45237**
Prep Date: **8/24/2017**	Analysis Date: **8/25/2017**	SeqNo: **1432747** Units: **ppm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	111	70	130			
Chlorobenzene	0.94	0.050	1.000	0	93.9	70	130			
1,1-Dichloroethene	1.2	0.050	1.000	0	120	68.8	161			
Trichloroethene (TCE)	1.0	0.050	1.000	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	0.55		0.5000		109	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.2	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.49		0.5000		98.3	70	130			

Sample ID **1708d66-002ams**	SampType: **MS**	TestCode: **EPA Method 8260B: TCLP Compounds**
Client ID: **Drill Cuttings**	Batch ID: **33543**	RunNo: **45237**
Prep Date: **8/24/2017**	Analysis Date: **8/25/2017**	SeqNo: **1432750** Units: **ppm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.3	0.50	0.9990	0	127	61.9	146			
Chlorobenzene	1.0	0.50	0.9990	0	103	70	130			
1,1-Dichloroethene	1.3	0.50	0.9990	0	125	37.1	170			
Trichloroethene (TCE)	1.2	0.50	0.9990	0	116	49.8	150			
Surr: 1,2-Dichloroethane-d4	5.5		4.995		109	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708D66**

30-Aug-17

Client: Western Refining Southwest, Gallup

Project: Soil T-35 Drill Cuttings

Sample ID	**1708d66-002ams**	SampType:	**MS**		TestCode:	**EPA Method 8260B: TCLP Compounds**				
Client ID:	**Drill Cuttings**	Batch ID:	**33543**		RunNo:	**45237**				
Prep Date:	**8/24/2017**	Analysis Date:	**8/25/2017**		SeqNo:	**1432750**	Units:	**ppm**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	4.8		4.995		95.8	70	130			
Surr: Dibromofluoromethane	5.3		4.995		106	70	130			
Surr: Toluene-d8	4.9		4.995		98.0	70	130			

Sample ID	**1708d66-002amsd**	SampType:	**MSD**		TestCode:	**EPA Method 8260B: TCLP Compounds**				
Client ID:	**Drill Cuttings**	Batch ID:	**33543**		RunNo:	**45237**				
Prep Date:	**8/24/2017**	Analysis Date:	**8/25/2017**		SeqNo:	**1432751**	Units:	**ppm**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.50	0.9980	0	115	61.9	146	10.2	20	
Chlorobenzene	0.95	0.50	0.9980	0	94.8	70	130	8.41	20	
1,1-Dichloroethene	1.2	0.50	0.9980	0	119	37.1	170	5.29	20	
Trichloroethene (TCE)	1.1	0.50	0.9980	0	106	49.8	150	8.97	20	
Surr: 1,2-Dichloroethane-d4	5.6		4.990		111	70	130	0	0	
Surr: 4-Bromofluorobenzene	4.7		4.990		95.1	70	130	0	0	
Surr: Dibromofluoromethane	5.3		4.990		105	70	130	0	0	
Surr: Toluene-d8	4.9		4.990		98.4	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708D66**

30-Aug-17

Client: Western Refining Southwest, Gallup

Project: Soil T-35 Drill Cuttings

Sample ID	**MB-33583**	SampType:	**MBLK**	TestCode:	**MERCURY, TCLP**					
Client ID:	**PBW**	Batch ID:	**33583**	RunNo:	**45252**					
Prep Date:	**8/28/2017**	Analysis Date:	**8/28/2017**	SeqNo:	**1433185**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020								

Sample ID	**LCS-33583**	SampType:	**LCS**	TestCode:	**MERCURY, TCLP**					
Client ID:	**LCSW**	Batch ID:	**33583**	RunNo:	**45252**					
Prep Date:	**8/28/2017**	Analysis Date:	**8/28/2017**	SeqNo:	**1433186**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.020	0.005000	0	101	80	120			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708D66**

30-Aug-17

Client: Western Refining Southwest, Gallup

Project: Soil T-35 Drill Cuttings

Sample ID	**MB-33562**	SampType:	**MBLK**	TestCode:	**EPA Method 6010B: TCLP Metals**
Client ID:	**PBW**	Batch ID:	**33562**	RunNo:	**45251**
Prep Date:	**8/25/2017**	Analysis Date:	**8/28/2017**	SeqNo:	**1433165** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0								
Barium	ND	100								
Cadmium	ND	1.0								
Chromium	ND	5.0								
Lead	ND	5.0								
Selenium	ND	1.0								
Silver	ND	5.0								

Sample ID	**LCS-33562**	SampType:	**LCS**	TestCode:	**EPA Method 6010B: TCLP Metals**
Client ID:	**LCSW**	Batch ID:	**33562**	RunNo:	**45251**
Prep Date:	**8/25/2017**	Analysis Date:	**8/28/2017**	SeqNo:	**1433166** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.56	5.0	0.5000	0	112	80	120			J
Barium	0.49	100	0.5000	0	97.6	80	120			J
Cadmium	0.50	1.0	0.5000	0	100	80	120			J
Chromium	0.50	5.0	0.5000	0	99.4	80	120			J
Lead	0.48	5.0	0.5000	0	95.1	80	120			J
Selenium	0.55	1.0	0.5000	0	111	80	120			J
Silver	0.10	5.0	0.1000	0	103	80	120			J

Qualifiers:

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

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: **Western Refining Gallup** Work Order Number: **1708D66** RcptNo: **1**

Received By: **Isaiah Ortiz** **8/23/2017 3:55:00 PM** IO

Completed By: **Ashley Gallegos** **8/23/2017 4:40:39 PM** AG

Reviewed By: SRC 08/24/17

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. 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: _____

Special Handling (if applicable)

16. 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: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	Yes			

Chain-of-Custody Record

Client:	WESTERN REFINING
	GALLUP REFINERY
Mailing Address:	92 Giant Crossing Road
	Gallup, NM 87301
Phone #:	505-722-3833
Email or Fax#:	505-863-0930
QA/QC Package:	X Standard ☐ Level 4 (Full Validation)
Accreditation:	☐ NELAP ☐ Other
☐ EDD (Type)	

Turn-Around Time: Standard Rush x

Project Name: Soil - T-35/Drill Cuttings

Project #:

Project Manager: CherylJohnson@wnr.com

Sampler: C JOHNSON

On Ice: X Yes ☐ No

Sample Temperature: 4.4°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 Request ID	Container Type and #	Preservative Type	HEAL No. 1708D066	8015D (GRO/DRO/MRO)		8260B - (BTEX) TCLP		RCRA 8 METALS - TCLP	RCI									Air Bubbles (Y or N)
8-23-17	9:50	SOLID	T-35 soil clean up	2-8oz jar	None	-001	X		X		X	X									
8-23-17	10:32	SOLID	DRILL CUTINGS -	2-8oz jar	None	-002	X		X		X	X									

Date:	Time:	Relinquished by:	Received by:	Date:	Time:
Date:	Time:	Relinquished by:	Received by:	Date:	Time:
8-23-17	1555			8/23/17	1555

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 11, 2017

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: T-35 Soil Clean Up Confirmation OrderNo.: 1708H80

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/31/2017 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-1
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:05:00 PM
Lab ID: 1708H80-001
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**	
Diesel Range Organics (DRO)	250	1.5	9.6		mg/Kg	1	9/6/2017 8:40:56 AM	33675
Motor Oil Range Organics (MRO)	190	48	48		mg/Kg	1	9/6/2017 8:40:56 AM	33675
Surr: DNOP	109	0	70-130		%Rec	1	9/6/2017 8:40:56 AM	33675
EPA METHOD 7471: MERCURY							Analyst: **ELS**	
Mercury	0.013	0.0064	0.032	J	mg/Kg	1	9/7/2017 9:44:14 AM	33741
EPA METHOD 6010B: SOIL METALS							Analyst: **MED**	
Arsenic	ND	4.3	12		mg/Kg	5	9/7/2017 8:59:53 AM	33667
Barium	450	0.35	0.49		mg/Kg	5	9/6/2017 2:12:07 PM	33667
Cadmium	ND	0.062	0.097		mg/Kg	1	9/5/2017 1:11:30 PM	33667
Chromium	7.1	0.092	0.29		mg/Kg	1	9/5/2017 1:11:30 PM	33667
Lead	3.5	0.17	0.24		mg/Kg	1	9/5/2017 1:11:30 PM	33667
Selenium	ND	1.8	2.4		mg/Kg	1	9/5/2017 1:11:30 PM	33667
Silver	ND	0.061	0.24		mg/Kg	1	9/5/2017 1:11:30 PM	33667
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Acenaphthylene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Aniline	ND	1.1	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Anthracene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Azobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Benz(a)anthracene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Benzo(a)pyrene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Benzo(b)fluoranthene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Benzo(g,h,i)perylene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Benzo(k)fluoranthene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Benzoic acid	ND	1.5	4.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Benzyl alcohol	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Bis(2-chloroethoxy)methane	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Bis(2-chloroethyl)ether	ND	1.2	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Bis(2-chloroisopropyl)ether	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Bis(2-ethylhexyl)phthalate	ND	1.9	4.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
4-Bromophenyl phenyl ether	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Butyl benzyl phthalate	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Carbazole	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
4-Chloro-3-methylphenol	ND	1.8	4.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
4-Chloroaniline	ND	1.5	4.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2-Chloronaphthalene	ND	1.7	2.4	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2-Chlorophenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
4-Chlorophenyl phenyl ether	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-1
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:05:00 PM
Lab ID: 1708H80-001
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Chrysene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Di-n-butyl phthalate	ND	1.1	3.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Di-n-octyl phthalate	ND	1.5	3.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Dibenz(a,h)anthracene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Dibenzofuran	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
1,2-Dichlorobenzene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
1,3-Dichlorobenzene	ND	1.3	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
1,4-Dichlorobenzene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
3,3´-Dichlorobenzidine	ND	1.4	2.4	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Diethyl phthalate	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Dimethyl phthalate	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2,4-Dichlorophenol	ND	1.5	3.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2,4-Dimethylphenol	ND	0.86	2.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
4,6-Dinitro-2-methylphenol	ND	1.5	3.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2,4-Dinitrophenol	ND	1.2	4.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2,4-Dinitrotoluene	ND	1.8	4.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2,6-Dinitrotoluene	ND	1.7	4.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Fluoranthene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Fluorene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Hexachlorobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Hexachlorobutadiene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Hexachlorocyclopentadiene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Hexachloroethane	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Indeno(1,2,3-cd)pyrene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Isophorone	ND	1.9	3.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
1-Methylnaphthalene	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2-Methylnaphthalene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2-Methylphenol	ND	1.4	3.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
3+4-Methylphenol	ND	1.3	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
N-Nitrosodi-n-propylamine	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
N-Nitrosodiphenylamine	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Naphthalene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2-Nitroaniline	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
3-Nitroaniline	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
4-Nitroaniline	ND	1.6	3.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Nitrobenzene	ND	1.6	3.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2-Nitrophenol	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
4-Nitrophenol	ND	1.5	2.4	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Pentachlorophenol	ND	1.7	3.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-1
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:05:00 PM
Lab ID: 1708H80-001
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenanthrene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Phenol	ND	1.3	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Pyrene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Pyridine	ND	1.3	3.9	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
1,2,4-Trichlorobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2,4,5-Trichlorophenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
2,4,6-Trichlorophenol	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 12:05:22 PM	33676
Surr: 2-Fluorophenol	0	0	23.3-81	SD	%Rec	1	9/7/2017 12:05:22 PM	33676
Surr: Phenol-d5	0	0	19.4-93.6	SD	%Rec	1	9/7/2017 12:05:22 PM	33676
Surr: 2,4,6-Tribromophenol	0	0	31.1-88.7	SD	%Rec	1	9/7/2017 12:05:22 PM	33676
Surr: Nitrobenzene-d5	0		23.7-106	SD	%Rec	1	9/7/2017 12:05:22 PM	33676
Surr: 2-Fluorobiphenyl	0		26.3-107	SD	%Rec	1	9/7/2017 12:05:22 PM	33676
Surr: 4-Terphenyl-d14	0		32.5-80.1	SD	%Rec	1	9/7/2017 12:05:22 PM	33676
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.0038	0.020		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Toluene	0.0092	0.0032	0.039	J	mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Ethylbenzene	ND	0.0027	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Methyl tert-butyl ether (MTBE)	ND	0.0060	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,2,4-Trimethylbenzene	0.86	0.0034	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,3,5-Trimethylbenzene	0.60	0.0025	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,2-Dichloroethane (EDC)	ND	0.0041	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,2-Dibromoethane (EDB)	ND	0.0050	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Naphthalene	ND	0.0040	0.078		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1-Methylnaphthalene	ND	0.0028	0.16		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
2-Methylnaphthalene	ND	0.0032	0.16		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Acetone	ND	0.043	0.59		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Bromobenzene	ND	0.0029	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Bromodichloromethane	ND	0.0051	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Bromoform	ND	0.0096	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Bromomethane	0.025	0.0068	0.12	J	mg/Kg	1	9/1/2017 11:05:03 AM	B45397
2-Butanone	ND	0.023	0.39		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Carbon disulfide	ND	0.0047	0.39		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Carbon tetrachloride	ND	0.0039	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Chlorobenzene	ND	0.0023	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Chloroethane	ND	0.013	0.078		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Chloroform	ND	0.0024	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Chloromethane	ND	0.0082	0.12		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
2-Chlorotoluene	ND	0.0030	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
4-Chlorotoluene	ND	0.0035	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-1
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:05:00 PM
Lab ID: 1708H80-001
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,2-DCE	ND	0.0050	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
cis-1,3-Dichloropropene	ND	0.0030	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,2-Dibromo-3-chloropropane	ND	0.0054	0.078		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Dibromochloromethane	ND	0.0033	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Dibromomethane	ND	0.0019	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,2-Dichlorobenzene	ND	0.0020	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,3-Dichlorobenzene	ND	0.0034	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,4-Dichlorobenzene	ND	0.0044	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Dichlorodifluoromethane	ND	0.016	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,1-Dichloroethane	ND	0.016	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,1-Dichloroethene	ND	0.016	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,2-Dichloropropane	ND	0.0024	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,3-Dichloropropane	ND	0.0097	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
2,2-Dichloropropane	ND	0.0044	0.078		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,1-Dichloropropene	ND	0.0044	0.078		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Hexachlorobutadiene	ND	0.0097	0.078		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
2-Hexanone	ND	0.0076	0.39		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Isopropylbenzene	ND	0.0026	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
4-Isopropyltoluene	0.056	0.0030	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
4-Methyl-2-pentanone	ND	0.0084	0.39		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Methylene chloride	ND	0.016	0.12		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
n-Butylbenzene	ND	0.0035	0.12		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
n-Propylbenzene	ND	0.0024	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
sec-Butylbenzene	0.016	0.0040	0.039	J	mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Styrene	ND	0.0068	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
tert-Butylbenzene	ND	0.0032	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,1,1,2-Tetrachloroethane	ND	0.0044	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,1,2,2-Tetrachloroethane	ND	0.011	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Tetrachloroethene (PCE)	ND	0.0031	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
trans-1,2-DCE	ND	0.016	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
trans-1,3-Dichloropropene	ND	0.0047	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,2,3-Trichlorobenzene	ND	0.0036	0.078		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,2,4-Trichlorobenzene	ND	0.0040	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,1,1-Trichloroethane	ND	0.0051	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,1,2-Trichloroethane	ND	0.0042	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Trichloroethene (TCE)	ND	0.0047	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Trichlorofluoromethane	ND	0.0059	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
1,2,3-Trichloropropane	ND	0.020	0.078		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Vinyl chloride	ND	0.0033	0.039		mg/Kg	1	9/1/2017 11:05:03 AM	B45397

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-1
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:05:00 PM
Lab ID: 1708H80-001
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Xylenes, Total	4.8	0.012	0.078		mg/Kg	1	9/1/2017 11:05:03 AM	B45397
Surr: Dibromofluoromethane	97.0		70-130		%Rec	1	9/1/2017 11:05:03 AM	B45397
Surr: 1,2-Dichloroethane-d4	99.6		70-130		%Rec	1	9/1/2017 11:05:03 AM	B45397
Surr: Toluene-d8	98.1		70-130		%Rec	1	9/1/2017 11:05:03 AM	B45397
Surr: 4-Bromofluorobenzene	101		70-130		%Rec	1	9/1/2017 11:05:03 AM	B45397
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	110	0.74	3.9		mg/Kg	1	9/1/2017 11:05:03 AM	C45397
Surr: BFB	100	0	70-130		%Rec	1	9/1/2017 11:05:03 AM	C45397

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Qualifiers:

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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 Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-2
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:10:00 PM
Lab ID: 1708H80-002
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**	
Diesel Range Organics (DRO)	53	1.6	9.8		mg/Kg	1	9/6/2017 9:05:27 AM	33675
Motor Oil Range Organics (MRO)	69	49	49		mg/Kg	1	9/6/2017 9:05:27 AM	33675
Surr: DNOP	108	0	70-130		%Rec	1	9/6/2017 9:05:27 AM	33675
EPA METHOD 7471: MERCURY							Analyst: **ELS**	
Mercury	0.0073	0.0064	0.032	J	mg/Kg	1	9/7/2017 9:45:57 AM	33741
EPA METHOD 6010B: SOIL METALS							Analyst: **MED**	
Arsenic	ND	2.5	2.5		mg/Kg	1	9/6/2017 10:48:44 AM	33667
Barium	500	0.35	0.50		mg/Kg	5	9/6/2017 2:13:23 PM	33667
Cadmium	ND	0.063	0.10		mg/Kg	1	9/5/2017 1:13:14 PM	33667
Chromium	4.5	0.094	0.30		mg/Kg	1	9/5/2017 1:13:14 PM	33667
Lead	1.7	0.17	0.25		mg/Kg	1	9/5/2017 1:13:14 PM	33667
Selenium	ND	1.8	2.5		mg/Kg	1	9/5/2017 1:13:14 PM	33667
Silver	ND	0.062	0.25		mg/Kg	1	9/5/2017 1:13:14 PM	33667
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	1.6	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Acenaphthylene	ND	1.8	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Aniline	ND	1.1	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Anthracene	ND	1.8	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Azobenzene	ND	1.8	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Benz(a)anthracene	ND	1.7	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Benzo(a)pyrene	ND	1.5	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Benzo(b)fluoranthene	ND	1.8	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Benzo(g,h,i)perylene	ND	1.6	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Benzo(k)fluoranthene	ND	1.4	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Benzoic acid	ND	1.5	4.8	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Benzyl alcohol	ND	1.6	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Bis(2-chloroethoxy)methane	ND	1.7	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Bis(2-chloroethyl)ether	ND	1.2	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Bis(2-chloroisopropyl)ether	ND	1.9	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Bis(2-ethylhexyl)phthalate	ND	1.9	4.8	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
4-Bromophenyl phenyl ether	ND	1.6	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Butyl benzyl phthalate	ND	1.6	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Carbazole	ND	1.5	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
4-Chloro-3-methylphenol	ND	1.7	4.8	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
4-Chloroaniline	ND	1.5	4.8	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2-Chloronaphthalene	ND	1.7	2.4	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2-Chlorophenol	ND	1.4	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
4-Chlorophenyl phenyl ether	ND	1.5	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-2
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:10:00 PM
Lab ID: 1708H80-002
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Chrysene	ND	1.5	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Di-n-butyl phthalate	ND	1.1	3.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Di-n-octyl phthalate	ND	1.4	3.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Dibenz(a,h)anthracene	ND	1.5	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Dibenzofuran	ND	1.7	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
1,2-Dichlorobenzene	ND	1.4	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
1,3-Dichlorobenzene	ND	1.3	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
1,4-Dichlorobenzene	ND	1.6	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
3,3´-Dichlorobenzidine	ND	1.4	2.4	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Diethyl phthalate	ND	1.6	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Dimethyl phthalate	ND	1.8	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2,4-Dichlorophenol	ND	1.5	3.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2,4-Dimethylphenol	ND	0.86	2.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
4,6-Dinitro-2-methylphenol	ND	1.5	3.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2,4-Dinitrophenol	ND	1.1	4.8	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2,4-Dinitrotoluene	ND	1.8	4.8	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2,6-Dinitrotoluene	ND	1.7	4.8	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Fluoranthene	ND	1.6	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Fluorene	ND	1.5	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Hexachlorobenzene	ND	1.8	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Hexachlorobutadiene	ND	1.6	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Hexachlorocyclopentadiene	ND	1.5	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Hexachloroethane	ND	1.4	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Indeno(1,2,3-cd)pyrene	ND	1.6	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Isophorone	ND	1.8	3.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
1-Methylnaphthalene	ND	1.9	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2-Methylnaphthalene	ND	1.6	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2-Methylphenol	ND	1.4	3.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
3+4-Methylphenol	ND	1.3	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
N-Nitrosodi-n-propylamine	ND	1.7	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
N-Nitrosodiphenylamine	ND	1.9	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Naphthalene	ND	1.8	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2-Nitroaniline	ND	1.8	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
3-Nitroaniline	ND	1.7	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
4-Nitroaniline	ND	1.6	3.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Nitrobenzene	ND	1.6	3.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2-Nitrophenol	ND	1.8	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
4-Nitrophenol	ND	1.5	2.4	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Pentachlorophenol	ND	1.7	3.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-2
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:10:00 PM
Lab ID: 1708H80-002
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenanthrene	ND	1.7	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Phenol	ND	1.3	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Pyrene	ND	1.4	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Pyridine	ND	1.3	3.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
1,2,4-Trichlorobenzene	ND	1.8	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2,4,5-Trichlorophenol	ND	1.4	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
2,4,6-Trichlorophenol	ND	1.5	1.9	D	mg/Kg	1	9/7/2017 12:33:20 PM	33676
Surr: 2-Fluorophenol	0	0	23.3-81	SD	%Rec	1	9/7/2017 12:33:20 PM	33676
Surr: Phenol-d5	0	0	19.4-93.6	SD	%Rec	1	9/7/2017 12:33:20 PM	33676
Surr: 2,4,6-Tribromophenol	0	0	31.1-88.7	SD	%Rec	1	9/7/2017 12:33:20 PM	33676
Surr: Nitrobenzene-d5	0		23.7-106	SD	%Rec	1	9/7/2017 12:33:20 PM	33676
Surr: 2-Fluorobiphenyl	0		26.3-107	SD	%Rec	1	9/7/2017 12:33:20 PM	33676
Surr: 4-Terphenyl-d14	0		32.5-80.1	SD	%Rec	1	9/7/2017 12:33:20 PM	33676
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.0029	0.015		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Toluene	ND	0.0024	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Ethylbenzene	ND	0.0021	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Methyl tert-butyl ether (MTBE)	ND	0.0046	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,2,4-Trimethylbenzene	ND	0.0026	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,3,5-Trimethylbenzene	ND	0.0019	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,2-Dichloroethane (EDC)	ND	0.0031	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,2-Dibromoethane (EDB)	ND	0.0038	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Naphthalene	ND	0.0030	0.059		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1-Methylnaphthalene	ND	0.0021	0.12		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
2-Methylnaphthalene	ND	0.0024	0.12		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Acetone	ND	0.032	0.45		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Bromobenzene	ND	0.0022	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Bromodichloromethane	ND	0.0039	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Bromoform	ND	0.0073	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Bromomethane	ND	0.0051	0.089		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
2-Butanone	ND	0.018	0.30		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Carbon disulfide	ND	0.0035	0.30		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Carbon tetrachloride	ND	0.0029	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Chlorobenzene	ND	0.0018	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Chloroethane	ND	0.0098	0.059		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Chloroform	ND	0.0018	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Chloromethane	ND	0.0062	0.089		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
2-Chlorotoluene	ND	0.0023	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
4-Chlorotoluene	ND	0.0027	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-2
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:10:00 PM
Lab ID: 1708H80-002
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,2-DCE	ND	0.0038	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
cis-1,3-Dichloropropene	ND	0.0023	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,2-Dibromo-3-chloropropane	ND	0.0041	0.059		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Dibromochloromethane	ND	0.0025	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Dibromomethane	ND	0.0015	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,2-Dichlorobenzene	ND	0.0015	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,3-Dichlorobenzene	ND	0.0026	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,4-Dichlorobenzene	ND	0.0033	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Dichlorodifluoromethane	ND	0.012	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,1-Dichloroethane	ND	0.012	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,1-Dichloroethene	ND	0.012	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,2-Dichloropropane	ND	0.0018	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,3-Dichloropropane	ND	0.0073	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
2,2-Dichloropropane	ND	0.0034	0.059		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,1-Dichloropropene	ND	0.0034	0.059		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Hexachlorobutadiene	ND	0.0074	0.059		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
2-Hexanone	ND	0.0058	0.30		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Isopropylbenzene	ND	0.0020	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
4-Isopropyltoluene	ND	0.0023	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
4-Methyl-2-pentanone	ND	0.0064	0.30		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Methylene chloride	ND	0.012	0.089		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
n-Butylbenzene	ND	0.0027	0.089		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
n-Propylbenzene	ND	0.0018	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
sec-Butylbenzene	ND	0.0031	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Styrene	ND	0.0052	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
tert-Butylbenzene	ND	0.0024	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,1,1,2-Tetrachloroethane	ND	0.0033	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,1,2,2-Tetrachloroethane	ND	0.0085	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Tetrachloroethene (PCE)	ND	0.0024	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
trans-1,2-DCE	ND	0.012	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
trans-1,3-Dichloropropene	ND	0.0035	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,2,3-Trichlorobenzene	ND	0.0027	0.059		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,2,4-Trichlorobenzene	ND	0.0030	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,1,1-Trichloroethane	ND	0.0039	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,1,2-Trichloroethane	ND	0.0032	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Trichloroethene (TCE)	ND	0.0036	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Trichlorofluoromethane	ND	0.0045	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
1,2,3-Trichloropropane	ND	0.015	0.059		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Vinyl chloride	ND	0.0025	0.030		mg/Kg	1	9/1/2017 11:33:41 AM	B45397

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-2
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:10:00 PM
Lab ID: 1708H80-002
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Xylenes, Total	ND	0.0093	0.059		mg/Kg	1	9/1/2017 11:33:41 AM	B45397
Surr: Dibromofluoromethane	111		70-130		%Rec	1	9/1/2017 11:33:41 AM	B45397
Surr: 1,2-Dichloroethane-d4	113		70-130		%Rec	1	9/1/2017 11:33:41 AM	B45397
Surr: Toluene-d8	94.7		70-130		%Rec	1	9/1/2017 11:33:41 AM	B45397
Surr: 4-Bromofluorobenzene	92.7		70-130		%Rec	1	9/1/2017 11:33:41 AM	B45397
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.56	3.0		mg/Kg	1	9/1/2017 11:33:41 AM	C45397
Surr: BFB	96.5	0	70-130		%Rec	1	9/1/2017 11:33:41 AM	C45397

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-3
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:15:00 PM
Lab ID: 1708H80-003
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**	
Diesel Range Organics (DRO)	11	1.5	9.1		mg/Kg	1	9/6/2017 9:29:53 AM	33675
Motor Oil Range Organics (MRO)	80	46	46		mg/Kg	1	9/6/2017 9:29:53 AM	33675
Surr: DNOP	103	0	70-130		%Rec	1	9/6/2017 9:29:53 AM	33675
EPA METHOD 7471: MERCURY							Analyst: **ELS**	
Mercury	0.011	0.0065	0.032	J	mg/Kg	1	9/7/2017 9:47:39 AM	33741
EPA METHOD 6010B: SOIL METALS							Analyst: **MED**	
Arsenic	ND	12	12		mg/Kg	5	9/7/2017 9:01:06 AM	33667
Barium	220	0.070	0.098		mg/Kg	1	9/5/2017 1:26:12 PM	33667
Cadmium	ND	0.062	0.098		mg/Kg	1	9/5/2017 1:26:12 PM	33667
Chromium	13	0.093	0.29		mg/Kg	1	9/5/2017 1:26:12 PM	33667
Lead	3.9	0.17	0.24		mg/Kg	1	9/5/2017 1:26:12 PM	33667
Selenium	ND	1.8	2.4		mg/Kg	1	9/5/2017 1:26:12 PM	33667
Silver	ND	0.061	0.24		mg/Kg	1	9/5/2017 1:26:12 PM	33667
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Acenaphthylene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Aniline	ND	1.1	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Anthracene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Azobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Benz(a)anthracene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Benzo(a)pyrene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Benzo(b)fluoranthene	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Benzo(g,h,i)perylene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Benzo(k)fluoranthene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Benzoic acid	ND	1.5	4.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Benzyl alcohol	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Bis(2-chloroethoxy)methane	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Bis(2-chloroethyl)ether	ND	1.3	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Bis(2-chloroisopropyl)ether	ND	2.0	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Bis(2-ethylhexyl)phthalate	ND	1.9	4.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
4-Bromophenyl phenyl ether	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Butyl benzyl phthalate	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Carbazole	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
4-Chloro-3-methylphenol	ND	1.8	4.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
4-Chloroaniline	ND	1.5	4.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2-Chloronaphthalene	ND	1.8	2.5	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2-Chlorophenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
4-Chlorophenyl phenyl ether	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-3
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:15:00 PM
Lab ID: 1708H80-003
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Chrysene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Di-n-butyl phthalate	ND	1.1	3.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Di-n-octyl phthalate	ND	1.5	3.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Dibenz(a,h)anthracene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Dibenzofuran	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
1,2-Dichlorobenzene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
1,3-Dichlorobenzene	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
1,4-Dichlorobenzene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
3,3´-Dichlorobenzidine	ND	1.4	2.5	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Diethyl phthalate	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Dimethyl phthalate	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2,4-Dichlorophenol	ND	1.5	3.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2,4-Dimethylphenol	ND	0.87	3.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
4,6-Dinitro-2-methylphenol	ND	1.5	3.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2,4-Dinitrophenol	ND	1.2	4.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2,4-Dinitrotoluene	ND	1.8	4.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2,6-Dinitrotoluene	ND	1.7	4.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Fluoranthene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Fluorene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Hexachlorobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Hexachlorobutadiene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Hexachlorocyclopentadiene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Hexachloroethane	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Indeno(1,2,3-cd)pyrene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Isophorone	ND	1.9	3.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
1-Methylnaphthalene	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2-Methylnaphthalene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2-Methylphenol	ND	1.4	3.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
3+4-Methylphenol	ND	1.3	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
N-Nitrosodi-n-propylamine	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
N-Nitrosodiphenylamine	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Naphthalene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2-Nitroaniline	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
3-Nitroaniline	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
4-Nitroaniline	ND	1.7	3.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Nitrobenzene	ND	1.6	3.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2-Nitrophenol	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
4-Nitrophenol	ND	1.5	2.5	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Pentachlorophenol	ND	1.7	3.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-3
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:15:00 PM
Lab ID: 1708H80-003
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenanthrene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Phenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Pyrene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Pyridine	ND	1.3	3.9	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
1,2,4-Trichlorobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2,4,5-Trichlorophenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
2,4,6-Trichlorophenol	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:01:15 PM	33676
Surr: 2-Fluorophenol	0	0	23.3-81	SD	%Rec	1	9/7/2017 1:01:15 PM	33676
Surr: Phenol-d5	0	0	19.4-93.6	SD	%Rec	1	9/7/2017 1:01:15 PM	33676
Surr: 2,4,6-Tribromophenol	0	0	31.1-88.7	SD	%Rec	1	9/7/2017 1:01:15 PM	33676
Surr: Nitrobenzene-d5	0		23.7-106	SD	%Rec	1	9/7/2017 1:01:15 PM	33676
Surr: 2-Fluorobiphenyl	0		26.3-107	SD	%Rec	1	9/7/2017 1:01:15 PM	33676
Surr: 4-Terphenyl-d14	0		32.5-80.1	SD	%Rec	1	9/7/2017 1:01:15 PM	33676
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.0033	0.017		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Toluene	ND	0.0028	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Ethylbenzene	ND	0.0024	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Methyl tert-butyl ether (MTBE)	ND	0.0052	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,2,4-Trimethylbenzene	ND	0.0030	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,3,5-Trimethylbenzene	ND	0.0022	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,2-Dichloroethane (EDC)	ND	0.0035	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,2-Dibromoethane (EDB)	ND	0.0043	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Naphthalene	ND	0.0034	0.068		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1-Methylnaphthalene	ND	0.0024	0.14		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
2-Methylnaphthalene	ND	0.0028	0.14		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Acetone	ND	0.037	0.51		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Bromobenzene	ND	0.0025	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Bromodichloromethane	ND	0.0044	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Bromoform	ND	0.0084	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Bromomethane	0.017	0.0059	0.10	J	mg/Kg	1	9/1/2017 12:02:26 PM	B45397
2-Butanone	ND	0.020	0.34		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Carbon disulfide	ND	0.0040	0.34		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Carbon tetrachloride	ND	0.0034	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Chlorobenzene	ND	0.0020	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Chloroethane	ND	0.011	0.068		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Chloroform	ND	0.0021	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Chloromethane	ND	0.0071	0.10		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
2-Chlorotoluene	ND	0.0026	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
4-Chlorotoluene	ND	0.0031	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-3
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:15:00 PM
Lab ID: 1708H80-003
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,2-DCE	ND	0.0043	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
cis-1,3-Dichloropropene	ND	0.0026	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,2-Dibromo-3-chloropropane	ND	0.0047	0.068		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Dibromochloromethane	ND	0.0029	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Dibromomethane	ND	0.0017	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,2-Dichlorobenzene	ND	0.0017	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,3-Dichlorobenzene	ND	0.0030	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,4-Dichlorobenzene	ND	0.0038	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Dichlorodifluoromethane	ND	0.014	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,1-Dichloroethane	ND	0.014	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,1-Dichloroethene	ND	0.014	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,2-Dichloropropane	ND	0.0021	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,3-Dichloropropane	ND	0.0084	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
2,2-Dichloropropane	ND	0.0039	0.068		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,1-Dichloropropene	ND	0.0038	0.068		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Hexachlorobutadiene	ND	0.0085	0.068		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
2-Hexanone	ND	0.0066	0.34		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Isopropylbenzene	ND	0.0023	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
4-Isopropyltoluene	ND	0.0026	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
4-Methyl-2-pentanone	ND	0.0073	0.34		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Methylene chloride	ND	0.014	0.10		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
n-Butylbenzene	ND	0.0030	0.10		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
n-Propylbenzene	ND	0.0021	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
sec-Butylbenzene	ND	0.0035	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Styrene	ND	0.0059	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
tert-Butylbenzene	ND	0.0028	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,1,1,2-Tetrachloroethane	ND	0.0038	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,1,2,2-Tetrachloroethane	ND	0.0098	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Tetrachloroethene (PCE)	ND	0.0027	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
trans-1,2-DCE	ND	0.014	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
trans-1,3-Dichloropropene	ND	0.0041	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,2,3-Trichlorobenzene	ND	0.0031	0.068		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,2,4-Trichlorobenzene	ND	0.0034	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,1,1-Trichloroethane	ND	0.0044	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,1,2-Trichloroethane	ND	0.0036	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Trichloroethene (TCE)	ND	0.0041	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Trichlorofluoromethane	ND	0.0051	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
1,2,3-Trichloropropane	ND	0.017	0.068		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Vinyl chloride	ND	0.0028	0.034		mg/Kg	1	9/1/2017 12:02:26 PM	B45397

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-3
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:15:00 PM
Lab ID: 1708H80-003
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Xylenes, Total	ND	0.011	0.068		mg/Kg	1	9/1/2017 12:02:26 PM	B45397
Surr: Dibromofluoromethane	114		70-130		%Rec	1	9/1/2017 12:02:26 PM	B45397
Surr: 1,2-Dichloroethane-d4	115		70-130		%Rec	1	9/1/2017 12:02:26 PM	B45397
Surr: Toluene-d8	95.4		70-130		%Rec	1	9/1/2017 12:02:26 PM	B45397
Surr: 4-Bromofluorobenzene	93.2		70-130		%Rec	1	9/1/2017 12:02:26 PM	B45397
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.64	3.4		mg/Kg	1	9/1/2017 12:02:26 PM	C45397
Surr: BFB	96.7	0	70-130		%Rec	1	9/1/2017 12:02:26 PM	C45397

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-4
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:20:00 PM
Lab ID: 1708H80-004
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**	
Diesel Range Organics (DRO)	1300	15	96		mg/Kg	10	9/5/2017 5:09:27 PM	33675
Motor Oil Range Organics (MRO)	570	480	480		mg/Kg	10	9/5/2017 5:09:27 PM	33675
Surr: DNOP	0	0	70-130	S	%Rec	10	9/5/2017 5:09:27 PM	33675
EPA METHOD 7471: MERCURY							Analyst: **ELS**	
Mercury	0.066	0.0066	0.033		mg/Kg	1	9/7/2017 9:49:22 AM	33741
EPA METHOD 6010B: SOIL METALS							Analyst: **MED**	
Arsenic	ND	4.3	12		mg/Kg	5	9/7/2017 9:02:21 AM	33667
Barium	400	0.34	0.48		mg/Kg	5	9/6/2017 2:14:39 PM	33667
Cadmium	ND	0.061	0.096		mg/Kg	1	9/5/2017 1:27:58 PM	33667
Chromium	10	0.091	0.29		mg/Kg	1	9/5/2017 1:27:58 PM	33667
Lead	4.0	0.17	0.24		mg/Kg	1	9/5/2017 1:27:58 PM	33667
Selenium	ND	1.7	2.4		mg/Kg	1	9/5/2017 1:27:58 PM	33667
Silver	ND	0.060	0.24		mg/Kg	1	9/5/2017 1:27:58 PM	33667
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Acenaphthylene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Aniline	ND	1.1	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Anthracene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Azobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Benz(a)anthracene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Benzo(a)pyrene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Benzo(b)fluoranthene	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Benzo(g,h,i)perylene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Benzo(k)fluoranthene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Benzoic acid	ND	1.5	5.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Benzyl alcohol	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Bis(2-chloroethoxy)methane	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Bis(2-chloroethyl)ether	ND	1.3	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Bis(2-chloroisopropyl)ether	ND	2.0	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Bis(2-ethylhexyl)phthalate	ND	1.9	5.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
4-Bromophenyl phenyl ether	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Butyl benzyl phthalate	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Carbazole	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
4-Chloro-3-methylphenol	ND	1.8	5.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
4-Chloroaniline	ND	1.5	5.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2-Chloronaphthalene	ND	1.8	2.5	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2-Chlorophenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
4-Chlorophenyl phenyl ether	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676

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

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-4
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:20:00 PM
Lab ID: 1708H80-004
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Chrysene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Di-n-butyl phthalate	ND	1.1	4.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Di-n-octyl phthalate	ND	1.5	4.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Dibenz(a,h)anthracene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Dibenzofuran	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
1,2-Dichlorobenzene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
1,3-Dichlorobenzene	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
1,4-Dichlorobenzene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
3,3´-Dichlorobenzidine	ND	1.5	2.5	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Diethyl phthalate	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Dimethyl phthalate	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2,4-Dichlorophenol	ND	1.6	4.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2,4-Dimethylphenol	ND	0.89	3.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
4,6-Dinitro-2-methylphenol	ND	1.5	4.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2,4-Dinitrophenol	ND	1.2	5.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2,4-Dinitrotoluene	ND	1.9	5.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2,6-Dinitrotoluene	ND	1.8	5.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Fluoranthene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Fluorene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Hexachlorobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Hexachlorobutadiene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Hexachlorocyclopentadiene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Hexachloroethane	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Indeno(1,2,3-cd)pyrene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Isophorone	ND	1.9	4.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
1-Methylnaphthalene	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2-Methylnaphthalene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2-Methylphenol	ND	1.5	4.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
3+4-Methylphenol	ND	1.3	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
N-Nitrosodi-n-propylamine	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
N-Nitrosodiphenylamine	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Naphthalene	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2-Nitroaniline	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
3-Nitroaniline	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
4-Nitroaniline	ND	1.7	4.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Nitrobenzene	ND	1.7	4.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2-Nitrophenol	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
4-Nitrophenol	ND	1.5	2.5	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Pentachlorophenol	ND	1.7	4.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-4
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:20:00 PM
Lab ID: 1708H80-004
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenanthrene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Phenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Pyrene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Pyridine	ND	1.3	4.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
1,2,4-Trichlorobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2,4,5-Trichlorophenol	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
2,4,6-Trichlorophenol	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:29:13 PM	33676
Surr: 2-Fluorophenol	0	0	23.3-81	SD	%Rec	1	9/7/2017 1:29:13 PM	33676
Surr: Phenol-d5	0	0	19.4-93.6	SD	%Rec	1	9/7/2017 1:29:13 PM	33676
Surr: 2,4,6-Tribromophenol	0	0	31.1-88.7	SD	%Rec	1	9/7/2017 1:29:13 PM	33676
Surr: Nitrobenzene-d5	0		23.7-106	SD	%Rec	1	9/7/2017 1:29:13 PM	33676
Surr: 2-Fluorobiphenyl	0		26.3-107	SD	%Rec	1	9/7/2017 1:29:13 PM	33676
Surr: 4-Terphenyl-d14	0		32.5-80.1	SD	%Rec	1	9/7/2017 1:29:13 PM	33676
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.0037	0.019		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Toluene	ND	0.0031	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Ethylbenzene	ND	0.0027	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Methyl tert-butyl ether (MTBE)	ND	0.0058	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,2,4-Trimethylbenzene	ND	0.0033	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,3,5-Trimethylbenzene	ND	0.0024	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,2-Dichloroethane (EDC)	ND	0.0040	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,2-Dibromoethane (EDB)	ND	0.0048	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Naphthalene	ND	0.0039	0.076		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1-Methylnaphthalene	ND	0.0027	0.15		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
2-Methylnaphthalene	ND	0.0031	0.15		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Acetone	ND	0.041	0.57		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Bromobenzene	ND	0.0028	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Bromodichloromethane	ND	0.0050	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Bromoform	ND	0.0093	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Bromomethane	ND	0.0066	0.11		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
2-Butanone	ND	0.023	0.38		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Carbon disulfide	0.011	0.0045	0.38	J	mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Carbon tetrachloride	ND	0.0038	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Chlorobenzene	ND	0.0023	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Chloroethane	ND	0.013	0.076		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Chloroform	ND	0.0023	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Chloromethane	ND	0.0080	0.11		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
2-Chlorotoluene	ND	0.0030	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
4-Chlorotoluene	ND	0.0034	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-4
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:20:00 PM
Lab ID: 1708H80-004
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,2-DCE	ND	0.0049	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
cis-1,3-Dichloropropene	ND	0.0029	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,2-Dibromo-3-chloropropane	ND	0.0052	0.076		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Dibromochloromethane	ND	0.0032	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Dibromomethane	ND	0.0019	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,2-Dichlorobenzene	ND	0.0019	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,3-Dichlorobenzene	ND	0.0034	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,4-Dichlorobenzene	ND	0.0042	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Dichlorodifluoromethane	ND	0.016	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,1-Dichloroethane	ND	0.015	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,1-Dichloroethene	ND	0.015	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,2-Dichloropropane	ND	0.0024	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,3-Dichloropropane	ND	0.0094	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
2,2-Dichloropropane	ND	0.0043	0.076		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,1-Dichloropropene	ND	0.0043	0.076		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Hexachlorobutadiene	ND	0.0095	0.076		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
2-Hexanone	ND	0.0074	0.38		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Isopropylbenzene	ND	0.0026	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
4-Isopropyltoluene	ND	0.0029	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
4-Methyl-2-pentanone	ND	0.0081	0.38		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Methylene chloride	ND	0.015	0.11		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
n-Butylbenzene	ND	0.0034	0.11		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
n-Propylbenzene	ND	0.0024	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
sec-Butylbenzene	ND	0.0039	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Styrene	ND	0.0066	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
tert-Butylbenzene	ND	0.0031	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,1,1,2-Tetrachloroethane	ND	0.0043	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,1,2,2-Tetrachloroethane	ND	0.011	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Tetrachloroethene (PCE)	ND	0.0030	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
trans-1,2-DCE	ND	0.015	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
trans-1,3-Dichloropropene	ND	0.0045	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,2,3-Trichlorobenzene	ND	0.0035	0.076		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,2,4-Trichlorobenzene	ND	0.0039	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,1,1-Trichloroethane	ND	0.0049	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,1,2-Trichloroethane	ND	0.0040	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Trichloroethene (TCE)	ND	0.0046	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Trichlorofluoromethane	ND	0.0057	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
1,2,3-Trichloropropane	ND	0.019	0.076		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Vinyl chloride	ND	0.0032	0.038		mg/Kg	1	9/1/2017 12:31:17 PM	B45397

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-4
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:20:00 PM
Lab ID: 1708H80-004
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Xylenes, Total	ND	0.012	0.076		mg/Kg	1	9/1/2017 12:31:17 PM	B45397
Surr: Dibromofluoromethane	115		70-130		%Rec	1	9/1/2017 12:31:17 PM	B45397
Surr: 1,2-Dichloroethane-d4	117		70-130		%Rec	1	9/1/2017 12:31:17 PM	B45397
Surr: Toluene-d8	95.2		70-130		%Rec	1	9/1/2017 12:31:17 PM	B45397
Surr: 4-Bromofluorobenzene	89.5		70-130		%Rec	1	9/1/2017 12:31:17 PM	B45397
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.72	3.8		mg/Kg	1	9/1/2017 12:31:17 PM	C45397
Surr: BFB	95.5	0	70-130		%Rec	1	9/1/2017 12:31:17 PM	C45397

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-5
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:25:00 PM
Lab ID: 1708H80-005
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**	
Diesel Range Organics (DRO)	46	1.6	10		mg/Kg	1	9/6/2017 10:18:59 AM	33675
Motor Oil Range Organics (MRO)	380	50	50		mg/Kg	1	9/6/2017 10:18:59 AM	33675
Surr: DNOP	111	0	70-130		%Rec	1	9/6/2017 10:18:59 AM	33675
EPA METHOD 7471: MERCURY							Analyst: **ELS**	
Mercury	0.0071	0.0064	0.032	J	mg/Kg	1	9/7/2017 9:51:05 AM	33741
EPA METHOD 6010B: SOIL METALS							Analyst: **MED**	
Arsenic	ND	12	12		mg/Kg	5	9/7/2017 9:03:34 AM	33667
Barium	170	0.071	0.099		mg/Kg	1	9/5/2017 1:29:42 PM	33667
Cadmium	ND	0.063	0.099		mg/Kg	1	9/5/2017 1:29:42 PM	33667
Chromium	6.4	0.094	0.30		mg/Kg	1	9/5/2017 1:29:42 PM	33667
Lead	14	0.17	0.25		mg/Kg	1	9/5/2017 1:29:42 PM	33667
Selenium	ND	1.8	2.5		mg/Kg	1	9/5/2017 1:29:42 PM	33667
Silver	ND	0.062	0.25		mg/Kg	1	9/5/2017 1:29:42 PM	33667
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Acenaphthylene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Aniline	ND	1.1	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Anthracene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Azobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Benz(a)anthracene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Benzo(a)pyrene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Benzo(b)fluoranthene	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Benzo(g,h,i)perylene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Benzo(k)fluoranthene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Benzoic acid	ND	1.5	4.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Benzyl alcohol	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Bis(2-chloroethoxy)methane	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Bis(2-chloroethyl)ether	ND	1.3	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Bis(2-chloroisopropyl)ether	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Bis(2-ethylhexyl)phthalate	ND	1.9	4.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
4-Bromophenyl phenyl ether	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Butyl benzyl phthalate	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Carbazole	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
4-Chloro-3-methylphenol	ND	1.8	4.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
4-Chloroaniline	ND	1.5	4.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2-Chloronaphthalene	ND	1.7	2.5	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2-Chlorophenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
4-Chlorophenyl phenyl ether	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-5
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:25:00 PM
Lab ID: 1708H80-005
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Chrysene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Di-n-butyl phthalate	ND	1.1	3.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Di-n-octyl phthalate	ND	1.5	3.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Dibenz(a,h)anthracene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Dibenzofuran	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
1,2-Dichlorobenzene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
1,3-Dichlorobenzene	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
1,4-Dichlorobenzene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
3,3´-Dichlorobenzidine	ND	1.4	2.5	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Diethyl phthalate	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Dimethyl phthalate	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2,4-Dichlorophenol	ND	1.5	3.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2,4-Dimethylphenol	ND	0.87	2.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
4,6-Dinitro-2-methylphenol	ND	1.5	3.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2,4-Dinitrophenol	ND	1.2	4.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2,4-Dinitrotoluene	ND	1.8	4.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2,6-Dinitrotoluene	ND	1.7	4.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Fluoranthene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Fluorene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Hexachlorobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Hexachlorobutadiene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Hexachlorocyclopentadiene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Hexachloroethane	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Indeno(1,2,3-cd)pyrene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Isophorone	ND	1.9	3.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
1-Methylnaphthalene	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2-Methylnaphthalene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2-Methylphenol	ND	1.4	3.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
3+4-Methylphenol	ND	1.3	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
N-Nitrosodi-n-propylamine	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
N-Nitrosodiphenylamine	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Naphthalene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2-Nitroaniline	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
3-Nitroaniline	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
4-Nitroaniline	ND	1.7	3.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Nitrobenzene	ND	1.6	3.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2-Nitrophenol	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
4-Nitrophenol	ND	1.5	2.5	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Pentachlorophenol	ND	1.7	3.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-5
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:25:00 PM
Lab ID: 1708H80-005
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenanthrene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Phenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Pyrene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Pyridine	ND	1.3	3.9	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
1,2,4-Trichlorobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2,4,5-Trichlorophenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
2,4,6-Trichlorophenol	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 1:57:11 PM	33676
Surr: 2-Fluorophenol	0	0	23.3-81	SD	%Rec	1	9/7/2017 1:57:11 PM	33676
Surr: Phenol-d5	0	0	19.4-93.6	SD	%Rec	1	9/7/2017 1:57:11 PM	33676
Surr: 2,4,6-Tribromophenol	0	0	31.1-88.7	SD	%Rec	1	9/7/2017 1:57:11 PM	33676
Surr: Nitrobenzene-d5	0		23.7-106	SD	%Rec	1	9/7/2017 1:57:11 PM	33676
Surr: 2-Fluorobiphenyl	0		26.3-107	SD	%Rec	1	9/7/2017 1:57:11 PM	33676
Surr: 4-Terphenyl-d14	0		32.5-80.1	SD	%Rec	1	9/7/2017 1:57:11 PM	33676
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.0035	0.018		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Toluene	ND	0.0029	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Ethylbenzene	ND	0.0025	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Methyl tert-butyl ether (MTBE)	ND	0.0054	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,2,4-Trimethylbenzene	ND	0.0031	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,3,5-Trimethylbenzene	ND	0.0022	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,2-Dichloroethane (EDC)	ND	0.0037	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,2-Dibromoethane (EDB)	ND	0.0045	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Naphthalene	ND	0.0036	0.071		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1-Methylnaphthalene	ND	0.0025	0.14		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
2-Methylnaphthalene	ND	0.0029	0.14		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Acetone	ND	0.039	0.53		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Bromobenzene	ND	0.0026	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Bromodichloromethane	ND	0.0046	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Bromoform	ND	0.0087	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Bromomethane	ND	0.0061	0.11		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
2-Butanone	ND	0.021	0.36		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Carbon disulfide	ND	0.0042	0.36		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Carbon tetrachloride	ND	0.0035	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Chlorobenzene	ND	0.0021	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Chloroethane	ND	0.012	0.071		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Chloroform	ND	0.0021	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Chloromethane	ND	0.0075	0.11		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
2-Chlorotoluene	ND	0.0028	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
4-Chlorotoluene	ND	0.0032	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-5
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:25:00 PM
Lab ID: 1708H80-005
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,2-DCE	ND	0.0045	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
cis-1,3-Dichloropropene	ND	0.0027	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,2-Dibromo-3-chloropropane	ND	0.0049	0.071		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Dibromochloromethane	ND	0.0030	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Dibromomethane	ND	0.0017	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,2-Dichlorobenzene	ND	0.0018	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,3-Dichlorobenzene	ND	0.0031	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,4-Dichlorobenzene	ND	0.0039	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Dichlorodifluoromethane	ND	0.015	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,1-Dichloroethane	ND	0.014	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,1-Dichloroethene	ND	0.014	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,2-Dichloropropane	ND	0.0022	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,3-Dichloropropane	ND	0.0088	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
2,2-Dichloropropane	ND	0.0040	0.071		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,1-Dichloropropene	ND	0.0040	0.071		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Hexachlorobutadiene	ND	0.0088	0.071		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
2-Hexanone	ND	0.0069	0.36		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Isopropylbenzene	ND	0.0024	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
4-Isopropyltoluene	ND	0.0027	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
4-Methyl-2-pentanone	ND	0.0076	0.36		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Methylene chloride	ND	0.014	0.11		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
n-Butylbenzene	ND	0.0032	0.11		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
n-Propylbenzene	ND	0.0022	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
sec-Butylbenzene	ND	0.0037	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Styrene	ND	0.0062	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
tert-Butylbenzene	ND	0.0029	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,1,1,2-Tetrachloroethane	ND	0.0040	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,1,2,2-Tetrachloroethane	ND	0.010	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Tetrachloroethene (PCE)	ND	0.0028	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
trans-1,2-DCE	ND	0.014	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
trans-1,3-Dichloropropene	ND	0.0042	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,2,3-Trichlorobenzene	ND	0.0032	0.071		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,2,4-Trichlorobenzene	ND	0.0036	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,1,1-Trichloroethane	ND	0.0046	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,1,2-Trichloroethane	ND	0.0038	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Trichloroethene (TCE)	ND	0.0043	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Trichlorofluoromethane	ND	0.0053	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
1,2,3-Trichloropropane	ND	0.018	0.071		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Vinyl chloride	ND	0.0030	0.036		mg/Kg	1	9/1/2017 1:00:07 PM	B45397

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-5
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:25:00 PM
Lab ID: 1708H80-005
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Xylenes, Total	ND	0.011	0.071		mg/Kg	1	9/1/2017 1:00:07 PM	B45397
Surr: Dibromofluoromethane	111		70-130		%Rec	1	9/1/2017 1:00:07 PM	B45397
Surr: 1,2-Dichloroethane-d4	111		70-130		%Rec	1	9/1/2017 1:00:07 PM	B45397
Surr: Toluene-d8	91.7		70-130		%Rec	1	9/1/2017 1:00:07 PM	B45397
Surr: 4-Bromofluorobenzene	88.2		70-130		%Rec	1	9/1/2017 1:00:07 PM	B45397
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.67	3.6		mg/Kg	1	9/1/2017 1:00:07 PM	C45397
Surr: BFB	91.0	0	70-130		%Rec	1	9/1/2017 1:00:07 PM	C45397

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-6
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:30:00 PM
Lab ID: 1708H80-006
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**	
Diesel Range Organics (DRO)	2800	16	98		mg/Kg	10	9/5/2017 5:59:43 PM	33675
Motor Oil Range Organics (MRO)	1400	490	490		mg/Kg	10	9/5/2017 5:59:43 PM	33675
Surr: DNOP	0	0	70-130	S	%Rec	10	9/5/2017 5:59:43 PM	33675
EPA METHOD 7471: MERCURY							Analyst: **ELS**	
Mercury	ND	0.0065	0.032		mg/Kg	1	9/7/2017 9:52:49 AM	33741
EPA METHOD 6010B: SOIL METALS							Analyst: **MED**	
Arsenic	ND	12	12		mg/Kg	5	9/7/2017 9:04:47 AM	33667
Barium	72	0.070	0.098		mg/Kg	1	9/5/2017 1:31:33 PM	33667
Cadmium	ND	0.062	0.098		mg/Kg	1	9/5/2017 1:31:33 PM	33667
Chromium	4.8	0.093	0.29		mg/Kg	1	9/5/2017 1:31:33 PM	33667
Lead	0.51	0.17	0.25		mg/Kg	1	9/5/2017 1:31:33 PM	33667
Selenium	ND	1.8	2.5		mg/Kg	1	9/5/2017 1:31:33 PM	33667
Silver	ND	0.061	0.25		mg/Kg	1	9/5/2017 1:31:33 PM	33667
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Acenaphthylene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Aniline	ND	1.1	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Anthracene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Azobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Benz(a)anthracene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Benzo(a)pyrene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Benzo(b)fluoranthene	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Benzo(g,h,i)perylene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Benzo(k)fluoranthene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Benzoic acid	ND	1.5	5.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Benzyl alcohol	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Bis(2-chloroethoxy)methane	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Bis(2-chloroethyl)ether	ND	1.3	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Bis(2-chloroisopropyl)ether	ND	2.0	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Bis(2-ethylhexyl)phthalate	ND	1.9	5.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
4-Bromophenyl phenyl ether	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Butyl benzyl phthalate	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Carbazole	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
4-Chloro-3-methylphenol	ND	1.8	5.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
4-Chloroaniline	ND	1.5	5.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2-Chloronaphthalene	ND	1.8	2.5	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2-Chlorophenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
4-Chlorophenyl phenyl ether	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-6
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:30:00 PM
Lab ID: 1708H80-006
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Chrysene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Di-n-butyl phthalate	ND	1.1	4.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Di-n-octyl phthalate	ND	1.5	4.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Dibenz(a,h)anthracene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Dibenzofuran	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
1,2-Dichlorobenzene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
1,3-Dichlorobenzene	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
1,4-Dichlorobenzene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
3,3´-Dichlorobenzidine	ND	1.5	2.5	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Diethyl phthalate	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Dimethyl phthalate	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2,4-Dichlorophenol	ND	1.6	4.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2,4-Dimethylphenol	ND	0.88	3.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
4,6-Dinitro-2-methylphenol	ND	1.5	4.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2,4-Dinitrophenol	ND	1.2	5.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2,4-Dinitrotoluene	ND	1.8	5.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2,6-Dinitrotoluene	ND	1.7	5.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Fluoranthene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Fluorene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Hexachlorobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Hexachlorobutadiene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Hexachlorocyclopentadiene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Hexachloroethane	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Indeno(1,2,3-cd)pyrene	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Isophorone	ND	1.9	4.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
1-Methylnaphthalene	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2-Methylnaphthalene	ND	1.7	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2-Methylphenol	ND	1.5	4.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
3+4-Methylphenol	ND	1.3	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
N-Nitrosodi-n-propylamine	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
N-Nitrosodiphenylamine	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Naphthalene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2-Nitroaniline	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
3-Nitroaniline	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
4-Nitroaniline	ND	1.7	4.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Nitrobenzene	ND	1.6	4.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2-Nitrophenol	ND	1.9	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
4-Nitrophenol	ND	1.5	2.5	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Pentachlorophenol	ND	1.7	4.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-6
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:30:00 PM
Lab ID: 1708H80-006
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenanthrene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Phenol	ND	1.4	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Pyrene	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Pyridine	ND	1.3	4.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
1,2,4-Trichlorobenzene	ND	1.8	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2,4,5-Trichlorophenol	ND	1.5	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
2,4,6-Trichlorophenol	ND	1.6	2.0	D	mg/Kg	1	9/7/2017 2:25:28 PM	33676
Surr: 2-Fluorophenol	0	0	23.3-81	SD	%Rec	1	9/7/2017 2:25:28 PM	33676
Surr: Phenol-d5	0	0	19.4-93.6	SD	%Rec	1	9/7/2017 2:25:28 PM	33676
Surr: 2,4,6-Tribromophenol	0	0	31.1-88.7	SD	%Rec	1	9/7/2017 2:25:28 PM	33676
Surr: Nitrobenzene-d5	0		23.7-106	SD	%Rec	1	9/7/2017 2:25:28 PM	33676
Surr: 2-Fluorobiphenyl	0		26.3-107	SD	%Rec	1	9/7/2017 2:25:28 PM	33676
Surr: 4-Terphenyl-d14	0		32.5-80.1	SD	%Rec	1	9/7/2017 2:25:28 PM	33676
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.0035	0.018		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Toluene	ND	0.0028	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Ethylbenzene	ND	0.0025	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Methyl tert-butyl ether (MTBE)	ND	0.0054	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,2,4-Trimethylbenzene	ND	0.0031	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,3,5-Trimethylbenzene	ND	0.0022	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,2-Dichloroethane (EDC)	ND	0.0037	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,2-Dibromoethane (EDB)	ND	0.0045	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Naphthalene	ND	0.0036	0.070		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1-Methylnaphthalene	ND	0.0025	0.14		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
2-Methylnaphthalene	ND	0.0029	0.14		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Acetone	ND	0.038	0.53		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Bromobenzene	ND	0.0026	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Bromodichloromethane	ND	0.0046	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Bromoform	ND	0.0086	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Bromomethane	ND	0.0061	0.11		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
2-Butanone	ND	0.021	0.35		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Carbon disulfide	ND	0.0042	0.35		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Carbon tetrachloride	ND	0.0035	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Chlorobenzene	ND	0.0021	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Chloroethane	ND	0.012	0.070		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Chloroform	ND	0.0021	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Chloromethane	ND	0.0074	0.11		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
2-Chlorotoluene	ND	0.0027	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
4-Chlorotoluene	ND	0.0032	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397

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Qualifiers:

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PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-6
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:30:00 PM
Lab ID: 1708H80-006
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,2-DCE	ND	0.0045	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
cis-1,3-Dichloropropene	ND	0.0027	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,2-Dibromo-3-chloropropane	ND	0.0048	0.070		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Dibromochloromethane	ND	0.0030	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Dibromomethane	ND	0.0017	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,2-Dichlorobenzene	ND	0.0018	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,3-Dichlorobenzene	ND	0.0031	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,4-Dichlorobenzene	ND	0.0039	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Dichlorodifluoromethane	ND	0.014	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,1-Dichloroethane	ND	0.014	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,1-Dichloroethene	ND	0.014	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,2-Dichloropropane	ND	0.0022	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,3-Dichloropropane	ND	0.0087	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
2,2-Dichloropropane	ND	0.0040	0.070		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,1-Dichloropropene	ND	0.0040	0.070		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Hexachlorobutadiene	ND	0.0087	0.070		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
2-Hexanone	ND	0.0069	0.35		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Isopropylbenzene	ND	0.0024	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
4-Isopropyltoluene	ND	0.0027	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
4-Methyl-2-pentanone	ND	0.0075	0.35		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Methylene chloride	ND	0.014	0.11		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
n-Butylbenzene	ND	0.0031	0.11		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
n-Propylbenzene	ND	0.0022	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
sec-Butylbenzene	ND	0.0036	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Styrene	ND	0.0061	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
tert-Butylbenzene	ND	0.0028	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,1,1,2-Tetrachloroethane	ND	0.0040	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,1,2,2-Tetrachloroethane	ND	0.010	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Tetrachloroethene (PCE)	ND	0.0028	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
trans-1,2-DCE	ND	0.014	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
trans-1,3-Dichloropropene	ND	0.0042	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,2,3-Trichlorobenzene	ND	0.0032	0.070		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,2,4-Trichlorobenzene	ND	0.0036	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,1,1-Trichloroethane	ND	0.0046	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,1,2-Trichloroethane	ND	0.0037	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Trichloroethene (TCE)	ND	0.0043	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Trichlorofluoromethane	ND	0.0053	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
1,2,3-Trichloropropane	ND	0.018	0.070		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Vinyl chloride	ND	0.0029	0.035		mg/Kg	1	9/1/2017 1:29:13 PM	B45397

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: T-35-6
Project: T-35 Soil Clean Up Confirmation
Collection Date: 8/30/2017 1:30:00 PM
Lab ID: 1708H80-006
Matrix: MEOH (SOIL)
Received Date: 8/31/2017 2:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Xylenes, Total	ND	0.011	0.070		mg/Kg	1	9/1/2017 1:29:13 PM	B45397
Surr: Dibromofluoromethane	114		70-130		%Rec	1	9/1/2017 1:29:13 PM	B45397
Surr: 1,2-Dichloroethane-d4	116		70-130		%Rec	1	9/1/2017 1:29:13 PM	B45397
Surr: Toluene-d8	92.8		70-130		%Rec	1	9/1/2017 1:29:13 PM	B45397
Surr: 4-Bromofluorobenzene	89.3		70-130		%Rec	1	9/1/2017 1:29:13 PM	B45397
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.66	3.5		mg/Kg	1	9/1/2017 1:29:13 PM	C45397
Surr: BFB	93.8	0	70-130		%Rec	1	9/1/2017 1:29:13 PM	C45397

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708H80**

11-Sep-17

Client: Western Refining Southwest, Gallup

Project: T-35 Soil Clean Up Confirmation

Sample ID **LCS-33693**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **33693**	RunNo: **45403**
Prep Date: **9/5/2017**	Analysis Date: **9/5/2017**	SeqNo: **1438552** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		99.3	70	130			

Sample ID **MB-33693**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **33693**	RunNo: **45403**
Prep Date: **9/5/2017**	Analysis Date: **9/5/2017**	SeqNo: **1438553** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		108	70	130			

Sample ID **LCS-33675**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **33675**	RunNo: **45404**
Prep Date: **9/1/2017**	Analysis Date: **9/5/2017**	SeqNo: **1438556** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.4	73.2	114			
Surr: DNOP	3.5		5.000		70.5	70	130			

Sample ID **MB-33675**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **33675**	RunNo: **45404**
Prep Date: **9/1/2017**	Analysis Date: **9/5/2017**	SeqNo: **1438557** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	3.4	10								J
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.5		10.00		75.3	70	130			

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708H80**

11-Sep-17

Client: Western Refining Southwest, Gallup

Project: T-35 Soil Clean Up Confirmation

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **PBS**	Batch ID: **B45397**	RunNo: **45397**
Prep Date:	Analysis Date: **9/1/2017**	SeqNo: **1438275** 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								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	ND	0.15								
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								

Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708H80**

11-Sep-17

Client: Western Refining Southwest, Gallup

Project: T-35 Soil Clean Up Confirmation

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **PBS**	Batch ID: **B45397**	RunNo: **45397**
Prep Date:	Analysis Date: **9/1/2017**	SeqNo: **1438275** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	ND	0.15								
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.55		0.5000		110	70	130			
Surr: 1,2-Dichloroethane-d4	0.57		0.5000		113	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.3	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **LCSS**	Batch ID: **B45397**	RunNo: **45397**
Prep Date:	Analysis Date: **9/1/2017**	SeqNo: **1438276** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	113	70	130			
Toluene	0.97	0.050	1.000	0	96.9	70	130			
Chlorobenzene	0.93	0.050	1.000	0	93.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708H80**

11-Sep-17

Client: Western Refining Southwest, Gallup

Project: T-35 Soil Clean Up Confirmation

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **LCSS**	Batch ID: **B45397**	RunNo: **45397**
Prep Date:	Analysis Date: **9/1/2017**	SeqNo: **1438276** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	1.1	0.050	1.000	0	110	68.8	161			
Trichloroethene (TCE)	0.98	0.050	1.000	0	97.9	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		103	70	130			
Surr: 1,2-Dichloroethane-d4	0.53		0.5000		106	70	130			
Surr: Toluene-d8	0.48		0.5000		96.5	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.6	70	130			

Sample ID **1708h80-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **T-35-1**	Batch ID: **B45397**	RunNo: **45397**
Prep Date:	Analysis Date: **9/1/2017**	SeqNo: **1438278** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.020	0.7831	0	110	61.9	146			
Toluene	0.79	0.039	0.7831	0.009225	100	70	130			
Chlorobenzene	0.78	0.039	0.7831	0	99.4	70	130			
1,1-Dichloroethene	0.90	0.039	0.7831	0	114	37.1	170			
Trichloroethene (TCE)	0.78	0.039	0.7831	0	100	49.8	150			
Surr: Dibromofluoromethane	0.40		0.3916		101	70	130			
Surr: 1,2-Dichloroethane-d4	0.39		0.3916		99.6	70	130			
Surr: Toluene-d8	0.38		0.3916		97.9	70	130			
Surr: 4-Bromofluorobenzene	0.39		0.3916		98.5	70	130			

Sample ID **1708h80-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **T-35-1**	Batch ID: **B45397**	RunNo: **45397**
Prep Date:	Analysis Date: **9/1/2017**	SeqNo: **1438279** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.020	0.7831	0	106	61.9	146	3.96	20	
Toluene	0.75	0.039	0.7831	0.009225	94.8	70	130	5.30	20	
Chlorobenzene	0.75	0.039	0.7831	0	95.8	70	130	3.70	20	
1,1-Dichloroethene	0.86	0.039	0.7831	0	110	37.1	170	4.28	20	
Trichloroethene (TCE)	0.78	0.039	0.7831	0	100	49.8	150	0.0660	20	
Surr: Dibromofluoromethane	0.39		0.3916		101	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	0.40		0.3916		102	70	130	0	0	
Surr: Toluene-d8	0.38		0.3916		96.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.39		0.3916		99.0	70	130	0	0	

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708H80**

11-Sep-17

Client: Western Refining Southwest, Gallup

Project: T-35 Soil Clean Up Confirmation

Sample ID **lcs-33676**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS**	Batch ID: **33676**	RunNo: **45491**
Prep Date: **9/1/2017**	Analysis Date: **9/7/2017**	SeqNo: **1441765** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	1.0	0.20	1.670	0	61.8	39.4	110			
4-Chloro-3-methylphenol	1.9	0.50	3.330	0	56.2	41.6	108			
2-Chlorophenol	2.0	0.20	3.330	0	58.6	35	107			
1,4-Dichlorobenzene	1.0	0.20	1.670	0	61.2	31	105			
2,4-Dinitrotoluene	0.87	0.50	1.670	0	52.2	35.6	101			
N-Nitrosodi-n-propylamine	0.75	0.20	1.670	0	44.8	26	100			
4-Nitrophenol	2.1	0.25	3.330	0	61.9	34.1	106			
Pentachlorophenol	1.7	0.40	3.330	0	51.2	35.3	95.4			
Phenol	1.8	0.20	3.330	0	55.4	39.3	96.5			
Pyrene	1.2	0.20	1.670	0	72.2	47.8	95.7			
1,2,4-Trichlorobenzene	1.2	0.20	1.670	0	69.4	36.6	117			
Surr: 2-Fluorophenol	1.8		3.330		54.0	23.3	81			
Surr: Phenol-d5	2.0		3.330		58.9	19.4	93.6			
Surr: 2,4,6-Tribromophenol	2.0		3.330		61.5	31.1	88.7			
Surr: Nitrobenzene-d5	1.2		1.670		71.7	23.7	106			
Surr: 2-Fluorobiphenyl	1.2		1.670		72.8	26.3	107			
Surr: 4-Terphenyl-d14	1.0		1.670		60.3	32.5	80.1			

Sample ID **mb-33676**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBS**	Batch ID: **33676**	RunNo: **45491**
Prep Date: **9/1/2017**	Analysis Date: **9/7/2017**	SeqNo: **1441766** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Aniline	ND	0.20								
Anthracene	ND	0.20								
Azobenzene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(g,h,i)perylene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Benzoic acid	ND	0.50								
Benzyl alcohol	ND	0.20								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.50								

Qualifiers:

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1708H80**
11-Sep-17

Client: Western Refining Southwest, Gallup
Project: T-35 Soil Clean Up Confirmation

Sample ID **mb-33676**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBS**	Batch ID: **33676**	RunNo: **45491**
Prep Date: **9/1/2017**	Analysis Date: **9/7/2017**	SeqNo: **1441766** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Carbazole	ND	0.20								
4-Chloro-3-methylphenol	ND	0.50								
4-Chloroaniline	ND	0.50								
2-Chloronaphthalene	ND	0.25								
2-Chlorophenol	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
Chrysene	ND	0.20								
Di-n-butyl phthalate	ND	0.40								
Di-n-octyl phthalate	ND	0.40								
Dibenz(a,h)anthracene	ND	0.20								
Dibenzofuran	ND	0.20								
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
3,3´-Dichlorobenzidine	ND	0.25								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
2,4-Dichlorophenol	ND	0.40								
2,4-Dimethylphenol	ND	0.30								
4,6-Dinitro-2-methylphenol	ND	0.40								
2,4-Dinitrophenol	ND	0.50								
2,4-Dinitrotoluene	ND	0.50								
2,6-Dinitrotoluene	ND	0.50								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Hexachlorobenzene	ND	0.20								
Hexachlorobutadiene	ND	0.20								
Hexachlorocyclopentadiene	ND	0.20								
Hexachloroethane	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Isophorone	ND	0.40								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.40								
3+4-Methylphenol	ND	0.20								
N-Nitrosodi-n-propylamine	ND	0.20								
N-Nitrosodiphenylamine	ND	0.20								

Qualifiers:

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1708H80**
11-Sep-17

Client: Western Refining Southwest, Gallup
Project: T-35 Soil Clean Up Confirmation

Sample ID **mb-33676**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBS**	Batch ID: **33676**	RunNo: **45491**
Prep Date: **9/1/2017**	Analysis Date: **9/7/2017**	SeqNo: **1441766** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.20								
2-Nitroaniline	ND	0.20								
3-Nitroaniline	ND	0.20								
4-Nitroaniline	ND	0.40								
Nitrobenzene	ND	0.40								
2-Nitrophenol	ND	0.20								
4-Nitrophenol	ND	0.25								
Pentachlorophenol	ND	0.40								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	0.40								
1,2,4-Trichlorobenzene	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
Surr: 2-Fluorophenol	1.7		3.330		49.8	23.3	81			
Surr: Phenol-d5	1.6		3.330		48.8	19.4	93.6			
Surr: 2,4,6-Tribromophenol	1.9		3.330		58.4	31.1	88.7			
Surr: Nitrobenzene-d5	1.0		1.670		62.9	23.7	106			
Surr: 2-Fluorobiphenyl	0.96		1.670		57.5	26.3	107			
Surr: 4-Terphenyl-d14	0.85		1.670		50.8	32.5	80.1			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708H80**

11-Sep-17

Client: Western Refining Southwest, Gallup

Project: T-35 Soil Clean Up Confirmation

Sample ID	**MB-33741**	SampType:	**MBLK**	TestCode:	**EPA Method 7471: Mercury**					
Client ID:	**PBS**	Batch ID:	**33741**	RunNo:	**45473**					
Prep Date:	**9/7/2017**	Analysis Date:	**9/7/2017**	SeqNo:	**1441230**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	**LCS-33741**	SampType:	**LCS**	TestCode:	**EPA Method 7471: Mercury**					
Client ID:	**LCSS**	Batch ID:	**33741**	RunNo:	**45473**					
Prep Date:	**9/7/2017**	Analysis Date:	**9/7/2017**	SeqNo:	**1441245**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	101	80	120			

Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708H80**

11-Sep-17

Client: Western Refining Southwest, Gallup

Project: T-35 Soil Clean Up Confirmation

Sample ID **MB-33667**	SampType: **MBLK**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **PBS**	Batch ID: **33667**	RunNo: **45407**
Prep Date:	Analysis Date: **9/5/2017**	SeqNo: **1438708** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Lead	ND	0.25								
Selenium	ND	2.5								
Silver	ND	0.25								

Sample ID **LCS-33667**	SampType: **LCS**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS**	Batch ID: **33667**	RunNo: **45407**
Prep Date: **9/1/2017**	Analysis Date: **9/5/2017**	SeqNo: **1438709** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0	100	80	120			
Barium	26	0.10	25.00	0	102	80	120			
Cadmium	26	0.10	25.00	0	103	80	120			
Chromium	26	0.30	25.00	0	103	80	120			
Lead	24	0.25	25.00	0	98.0	80	120			
Selenium	23	2.5	25.00	0	92.6	80	120			
Silver	5.2	0.25	5.000	0	104	80	120			

Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708H80**

11-Sep-17

Client: Western Refining Southwest, Gallup

Project: T-35 Soil Clean Up Confirmation

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **C45397**	RunNo: **45397**
Prep Date:	Analysis Date: **9/1/2017**	SeqNo: **1438286** 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	480		500.0		96.2	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **C45397**	RunNo: **45397**
Prep Date:	Analysis Date: **9/1/2017**	SeqNo: **1438287** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	106	70	130			
Surr: BFB	480		500.0		96.5	70	130			

Sample ID **1708h80-002ams**	SampType: **MS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **T-35-2**	Batch ID: **C45397**	RunNo: **45397**
Prep Date:	Analysis Date: **9/1/2017**	SeqNo: **1438290** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	15	3.0	14.86	0	100	63.2	128			
Surr: BFB	290		297.2		97.4	70	130			

Sample ID **1708h80-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **T-35-2**	Batch ID: **C45397**	RunNo: **45397**
Prep Date:	Analysis Date: **9/1/2017**	SeqNo: **1438291** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	15	3.0	14.86	0	102	63.2	128	2.05	20	
Surr: BFB	290		297.2		99.0	70	130	0	0	

Qualifiers:

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

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: **Western Refining Gallup** Work Order Number: **1708H80** RcptNo: 1

Received By: **Sophia Campuzano** **8/31/2017 2:15:00 PM** Sophia Campuzano

Completed By: **Ashley Gallegos** **8/31/2017 2:38:26 PM**

Reviewed By: IMO 8/31/17

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. 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: _____

Special Handling (if applicable)

16. 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: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good	Yes			

Chain-of-Custody Record

Client:	WESTERN REFINING
	GALLUP REFINERY
Mailing Address:	92 Giant Crossing Road
	Gallup, NM 87301
Phone #:	505-722-3833
Email or Fax#:	505-863-0930
QA/QC Package:	
X Standard	☐ Level 4 (Full Validation)
Accreditation:	
☐ NELAP	☐ Other
☐ EDD (Type)	

Turn-Around Time:	
Standard	Rush X
Project Name:	
T-35 soil clean up - Confirmation	
Project #:	
T-35 Overfill	
Project Manager:	
Cheryl.johnson@wnr.com	
Sampler: G VIGIL / C JOHNSON	
On Ice: ☑ Yes ☐ No	
Sample Temperature: 5.4	

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1708H80	Analysis Request: 8015D (GRO/DRO/MRO)	8260B	RCRA 8 METALS	8270	RCRA 8 METALS - TCLP	RCI	Air Bubbles (Y or N)
8/30/2017	1305	SOLID	T35-1	2-9oz jar	None	-001	X		X	X			
8/30/2017	1305	SOLID	T35-1	2 SETS (2-VIALS)	MEOH/SOBI	-001		X					
8/30/2017	1310	SOLID	T35-2	2-9oz jar	None	-002	X		X	X			
8/30/2017	1310	SOLID	T35-2	2 SETS (2-VIALS)	MEOH/SOBI	-002		X					
8/30/2017	1315	SOLID	T35-3	2-9oz jar	None	-003	X		X	X			
8/30/2017	1315	SOLID	T35-3	2 SETS (2-VIALS)	MEOH/SOBI	-003		X					
8/30/2017	1320	SOLID	T35-4	2-9oz jar	None	-004	X		X	X			
8/30/2017	1320	SOLID	T35-4	2 SETS (2-VIALS)	MEOH/SOBI	-004		X					
8/30/2017	1325	SOLID	T35-5	2-9oz jar	None	-005	X		X	X			
8/30/2017	1325	SOLID	T35-5	2 SETS (2-VIALS)	MEOH/SOBI	-005		X					
8/30/2017	1330	SOLID	T-35-6	2-9oz jar	None	-006	X		X	X			
8/30/2017	1330	SOLID	T-35-6	2 SETS (2-VIALS)	MEOH/SOBI	-006		X					

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/17	1100		Eugene Vigil	8/31/17	1200
Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/17	1415		Sophia Cruz	08/31/17	1415

Remarks:

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.

client

APPENDIX E

WASTE PROFILE SHEET AND WASTE MANIFESTS

US ecology

WASTE/MATERIAL PROFILE FORM

☑ US Ecology Nevada(Beatty)	800-239-3943	
☐ US Ecology Idaho (GrandView)	800-274-1516	Ref. ID #: 7-TXOK
☐ US Ecology Texas (Robstown)	800-242-3209	
☐ US Ecology Michigan (Detroit)	800-396-3265	PROFILE #:

A. GENERATOR INFORMATION

1. Generator: WESTERN REFINING COMPANY - GALLUP	☐ Billing Information is same. ☐ P.O required
2. Facility Address: 1-40@ EXIT 39	11. Customer ADVANCED CHEMICAL TRANSPORT, INC. -
JAMESTOWN, NM 87347	12. Billing Company: ADVANCED CHEMICAL TRANSPORT, INC. -
3. Mailing Address: 92 GIANT CROSSING RD	13. Billing Address: 1210 ELKO DR
4. City/State/Zip: GALLUP, NM,87301	14. City/State/Zip: SUNNYVALE, CA,940892210
5. Technical Contact: CHERYL JOHNSON	15. Billing Contact: JEANNIE CLAYTON
6. Phone: (505) 722-0231 7. Fax:	16. Phone: (480) 297-3224 17. Fax (623) 872-6105
8. Generator Status: ☐ VSQG/CESQG ☐ SQG ☑ LQG ☐ N/A	18. Email:
9. EPA ID#: NMD000333211	19. State ID#:

10. NAICS/SIC Codes:	324110					

B. SHIPPING INFORMATION

1. DOT Shipping Name: NA3077, Hazardous waste, solid, n.o.s., 9, PG-III

Not Otherwise Specified (Waste or Chemical): F037, F038

2. Primary / Secondary Haz Class : 9 /	3. UN/NA # : NA3077	4. Packaging Group : III	5. RQ :

6. Container Type: ☑ Bulk ☐ Totes ☐ Pallet ☐ Boxes ☐ Drums ☐ Other, Desc

7. Frequency: ☑ Year ☐ Quarterly ☐ Monthly ☐ 1 Time ☐ Other, Desc

8. Shipment: Size: 20 CY Quantity: 5

9. Waste Import: ☐ Yes ☑ No

(If Yes, Complete Waste Import Supplement)

C. GENERAL MATERIAL & REGULATORY INFORMATION

1. Common name : SOIL CONTAMINATED WITH PROCESS WASTE WATER

2. Process generating : SPILL

3. Describe physical appearance : BROWN SOLID / SOIL

4. Odor : ☐ None ☑ Slight ☐ Strong

5. Physical State ☐ Liquid ☐ Sludge/Slurrry ☑ Solid

6. Describe Color BROWN

7. Liquid Phases: ☐ Single ☐ Double Layer ☐ Multi-Layer

8. Knowledge is from: ☑ Lab Analysis ☐ MSDS ☑ Process/Generator Knowledge

9. Waste/Material Type (US Ecology Texas Customers Only): ☑ N/A ☐ Industrial ☐ Non-Industrial

10. Restricted under EPA and Land disposal Restrictions (§268) ? ☑ Yes ☐ No

11. If LDR "Yes" : ☐ Wastewater ☑ Nonwastewater ☐ Debris

12. Alt. Standards for soil ☐ Yes ☑ No

13. Is the material RCRA hazardous waste containing benzene and originating at a Petroleum Refinery (SIC 2911), Chemical Manufacturing Plant (SIC 2800 thru 2899) or Coke by-Product Recovery Plant(SIC 2322)? *(If Yes complete Benzene Waste/Material Operations Supplement form and Thermal Supplement form):* ☐ Yes ☑ No

14. VO Conc (§264.1083): ☑ <500ppmw ☐ ≥ 500ppmw

15. Has it been treated after point of generation? ☐ Yes ☑ No

16. CERCLA Regulated (Superfund) Waste: ☐ Yes ☑ No

17. Butadiene waste regulated by §63 Subpart xx: ☐ Yes ☑ No

18. Waste contains UHC constituent(s) (§268.48) , above a treatment standard, other than those for which the waste exhibits a characteristic. (If yes, list all UHC's in Section D): ☐ Yes ☑ No

19. Waste exempt from definition of "solid waste" or "hazardous waste" (if Yes,list reference 40 CFR): ☐ Yes ☑ No

20. State Waste Codes:	NONE					
21. RCRA Waste Codes:	F037	F038	K048	K049	K051	

22. Source code: G32 23. Form Code: W301

D. COMPOSITION *(use additional form if necessary)*

Values are: ☐ TCLP ☑ Totals

Constituents	Test Method	Units	Range Total>=100% Typical	Min	Max
SOIL CONTAMINATED WITH PROCESS WASTE	Totals	%	100.00	100.00	0.00

E. CHARACTERISTICS

1. Oxidizer	☐ Yes	☑ No	9. Reactive Sulfides	ppm	☐ Yes	☑ No
2. Explosive	☐ Yes	☑ No	10. Reactive Cyanides	ppm	☐ Yes	☑ No
3. Organic Peroxide	☐ Yes	☑ No	11. Water/Air Reactive		☐ Yes	☑ No
4. Shock Sensitive	☐ Yes	☑ No	12. Thermally Unstable		☐ Yes	☑ No
5. Tires	☐ Yes	☑ No	13. TSCA regulated PCB waste *(Control sheet required with shipment)*		☐ Yes	☑ No
6. Pyrophoric	☐ Yes	☑ No	14. Medical/Infectious waste		☐ Yes	☑ No
7. Compressed Gas	☐ Yes	☑ No	15. Radioactive *(If yes, complete profile Supplement for Radioactive waste)*		☐ Yes	☑ No
8. Halogenated Organics	☐ Yes	☑ No				

16. Hazardous Secondary Material (HSM) ? ☐ Yes ☑ no

17. Possibility of incidental liquids from transportation ? ☐ Yes ☑ No

18. Is waste/material a solid using the paint filter test ? ☑ Yes ☐ No

19. **pH:** (If solid, what is pH if mixed with water?) *Range* ____ *To* ____ *Typical* ____

☐ ≤ 2 ☑ 2 < 12.5 ☐ ≥ 12.5

20. Flash Point : >200 °F ☐ <140°F

21. Is the waste/material oil bearing from Petroleum Refining, Production or Transportation practices? ☐ N/A ☐ Yes ☑ No

F. GENERATOR'S CERTIFICATION

☐ Yes ☑ No **I certify this waste/material may be disposed without further treatment.**

☐ Yes ☑ N/A **I certify this waste/material meets all requirements of legitimate recycling of Hazardous Secondary Materials under 40 CFR 260.43 and/or I am complying with the conditions for generators using the verified recycler exclusion.**

I authorize US Ecology to correct inconsistencies on the waste/material profile form that impact management decisions with my oral or written authorization. US Ecology will require re-submittal of the waste/material profile information if substantial changes are determined necessary. I understand waste/material that does not conform to specifications described in this profile may be rejected by US Ecology unless other contractual arrangements have been agreed to by both parties. I certify, under penalty of law, that I am familiar with this waste/material stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, that all known or suspected hazards have been disclosed, and that this form was completed in accordance with the instructions provided.

Print Name	Signature	Title	Date
Cheryl Johnson		Envm. Specialist	09/22/2017

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, August 30, 2019 2:19 PM
To: Vestal, Janelle
Subject: RE: Initial C-141 LCO overfill at RRR

Janelle:

Received.

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

From: Vestal, Janelle <JVestal1@Marathonpetroleum.com>
Sent: Friday, August 30, 2019 1:35 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: VanHorn, Kristen, NMENV <Kristen.VanHorn@state.nm.us>; Moore, John <JMoore5@Marathonpetroleum.com>
Subject: [EXT] Initial C-141 LCO overfill at RRR

Good Afternoon Carl,

Attached please find the Initial C-141 Release Notification for the release on 8/27/19 from a rail car being loaded with light cycle oil at the Railroad Rack.

Thank you for your attention to this matter,

Janelle Vestal | Environmental Engineer
Gallup Refinery
JVestal1@Marathonpetroleum.com

Marathon Petroleum Company
92 Giant Crossing Road
Gallup, NM 87301
o: 505 726 9721
m: 505 285 8193

www.marathonpetroleum.com

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Marathon – Gallup Refinery	OGRID
Contact Name: JOHN MOORE	Contact Telephone: 505-722-0205
Contact email: JMOORE5@MARATHONPETROLEUM.COM	Incident # *(assigned by OCD)*
Contact mailing address: 92 Giant Crossing Road, Gallup, NM 87301	

Location of Release Source

Latitude 35°29'29.70"N Longitude 108°25'25.00"W
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Gallup Refinery	Site Type: Refinery
Date Release Discovered: 8/27/19	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
SWNE	33	15N	15W	McKinley

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe) Light Cycle Oil (LCO)	Volume/Weight Released (provide units) Estimated 20 BBLS LCO to ground	Volume/Weight Recovered (provide units) 18 BBLS

Cause of Release
Overfill of Rail Car at Spot 10 of the Rail Road Rack allowed LCO to flow out of rail car to the East and into the ditch running next to the rail line. Overfill was noticed at approximately 6:30 pm. Rail car was blocked in and earthen berms created to prevent flow of LCO. Vacuum trucks were dispatched immediately to clean up free liquids. Contaminated dirt was then excavated.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

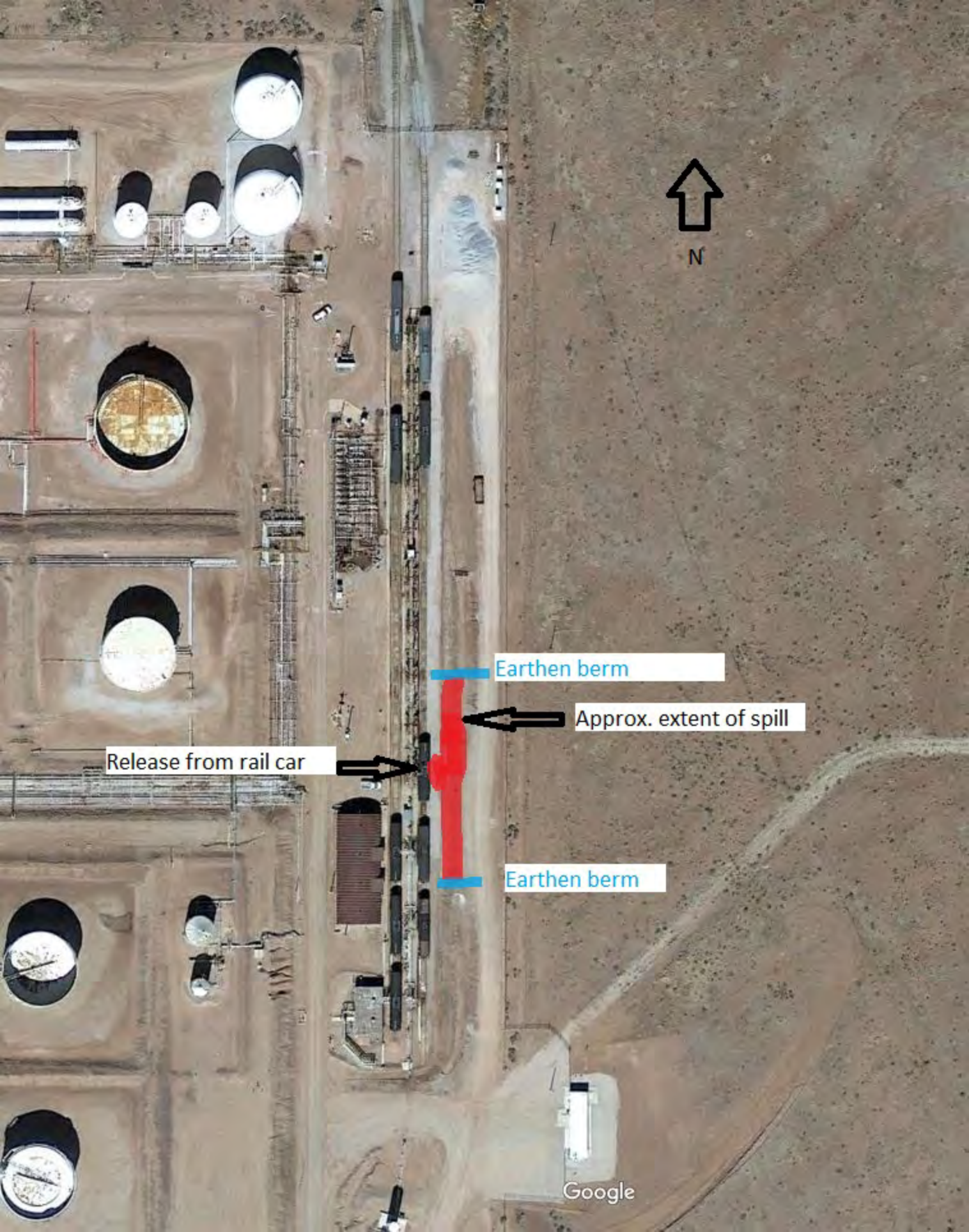
Printed Name: John Moore Title: Environmental Supervisor

Signature: [signature] Date: 8-30-19

email: jmoore5@marathonpetroleum.com Telephone: 307-337-7642

OCD Only

Received by: _____ Date: _____


N
Earthen berm
Approx. extent of spill
Release from rail car
Earthen berm
Google

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, March 14, 2019 8:49 AM
To: Chavez, Carl J, EMNRD
Cc: Griswold, Jim, EMNRD; Smith, Cory, EMNRD; Fields, Vanessa, EMNRD; Moore, John
Subject: Gallup Refinery (AP-111) McKinley Co.

FYI

Note to file:

- Carl on 3/13 at 11:05 a.m. received a voice mail notification about a "Diesel" release (> 25 bbls is known at time of call) that occurred at ~ 9:30 a.m. on same day at the Railroad Lagoon Loading Rack (E side of refinery). A C-141 with more details will soon be submitted. OCD SF office was closed due to inclement weather.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, February 28, 2019 2:07 PM
To: 'Vestal, Janelle'
Cc: VanHorn, Kristen, NMENV; Moore, John
Subject: RE: Initial C-141 Tank 582 Spill

Janelle:

Good afternoon. You may follow-up with OCD Santa Fe and NMED on Pages 3 – 4 in lieu of the reference to the OCD "District Office". It is not clear from the submittal if the tanks are lined, etc. or whether excavation to removed impacted soils was conducted.

Please contact me if you have questions.

Thank you.

From: Vestal, Janelle <JVestal1@Marathonpetroleum.com>
Sent: Thursday, February 28, 2019 1:15 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: VanHorn, Kristen, NMENV <Kristen.VanHorn@state.nm.us>; Moore, John <JMoore5@Marathonpetroleum.com>
Subject: [EXT] Initial C-141 Tank 582 Spill

Good Afternoon Carl,

Attached please find the Initial C-141 Release Notification for a release on 2/25/19 from Tank 582.

Thank you for your attention to this matter,

Janelle Vestal | Environmental Engineer
Gallup Refinery
JVestal1@Marathonpetroleum.com

Marathon Petroleum Company
92 Giant Crossing Road
Gallup, NM 87301
o: 505 726 9721
m: 505 285 8193

www.marathonpetroleum.com

Chavez, Carl J, EMNRD

From: Vestal, Janelle <JVestal1@Marathonpetroleum.com>
Sent: Thursday, February 28, 2019 1:15 PM
To: Chavez, Carl J, EMNRD
Cc: VanHorn, Kristen, NMENV; Moore, John
Subject: [EXT] Initial C-141 Tank 582 Spill
Attachments: 2019-02-25 c141 T582 Spill - INITIAL.pdf

Good Afternoon Carl,

Attached please find the Initial C-141 Release Notification for a release on 2/25/19 from Tank 582.

Thank you for your attention to this matter,

Janelle Vestal | Environmental Engineer
Gallup Refinery
JVestal1@Marathonpetroleum.com

Marathon Petroleum Company
92 Giant Crossing Road
Gallup, NM 87301
o: 505 726 9721
m: 505 285 8193

www.marathonpetroleum.com

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., 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 Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Gallup Refinery	OGRID
Contact Name Janelle Vestal	Contact Telephone 505-726-9721
Contact email JVestal1@marathonpetroleum.com	Incident # *(assigned by OCD)*
Contact mailing address 92 Giant Crossing Road, Gallup, NM 87301	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Gallup Refinery (T582)	Site Type Refinery
Date Release Discovered 02/25/2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
SWNE	33	15N	15W	McKinley

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* Western Refining, Southwest)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe) Gasoline	Volume/Weight Released (provide units) Approximately 10 bbls	Volume/Weight Recovered (provide units) Approximately 1 bbl

Cause of Release

An isolation valve was left cracked open and a bull plug missing on the water draw piping from T-582. An estimated 10 bbls of gasoline had spilled into the containment area of T-582. The open valve was closed and the missing bull plug was replaced. Free product was vacuumed up with a vacuum truck.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: Janelle Vestal Title: Environmental Engineer

Signature: Date: 2/28/2019

email: JVestal1@marathonpetroleum.com Telephone: 505-726-9721

OCD Only

Received by: Date:


Spill Area
Tank 582
N

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, August 30, 2019 2:19 PM
To: Vestal, Janelle
Subject: RE: Initial C-141 LCO overfill at RRR

Janelle:

Received.

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

From: Vestal, Janelle <JVestal1@Marathonpetroleum.com>
Sent: Friday, August 30, 2019 1:35 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: VanHorn, Kristen, NMENV <Kristen.VanHorn@state.nm.us>; Moore, John <JMoore5@Marathonpetroleum.com>
Subject: [EXT] Initial C-141 LCO overfill at RRR

Good Afternoon Carl,

Attached please find the Initial C-141 Release Notification for the release on 8/27/19 from a rail car being loaded with light cycle oil at the Railroad Rack.

Thank you for your attention to this matter,

Janelle Vestal | Environmental Engineer
Gallup Refinery
JVestal1@Marathonpetroleum.com

Marathon Petroleum Company
92 Giant Crossing Road
Gallup, NM 87301
o: 505 726 9721
m: 505 285 8193

www.marathonpetroleum.com

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Marathon – Gallup Refinery	OGRID
Contact Name: JOHN MOORE	Contact Telephone: 505-722-0205
Contact email: JMOORE5@MARATHONPETROLEUM.COM	Incident # *(assigned by OCD)*
Contact mailing address: 92 Giant Crossing Road, Gallup, NM 87301	

Location of Release Source

Latitude 35°29'29.70"N Longitude 108°25'25.00"W
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Gallup Refinery	Site Type: Refinery
Date Release Discovered: 8/27/19	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
SWNE	33	15N	15W	McKinley

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe) Light Cycle Oil (LCO)	Volume/Weight Released (provide units) Estimated 20 BBLS LCO to ground	Volume/Weight Recovered (provide units) 18 BBLS

Cause of Release
Overfill of Rail Car at Spot 10 of the Rail Road Rack allowed LCO to flow out of rail car to the East and into the ditch running next to the rail line. Overfill was noticed at approximately 6:30 pm. Rail car was blocked in and earthen berms created to prevent flow of LCO. Vacuum trucks were dispatched immediately to clean up free liquids. Contaminated dirt was then excavated.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

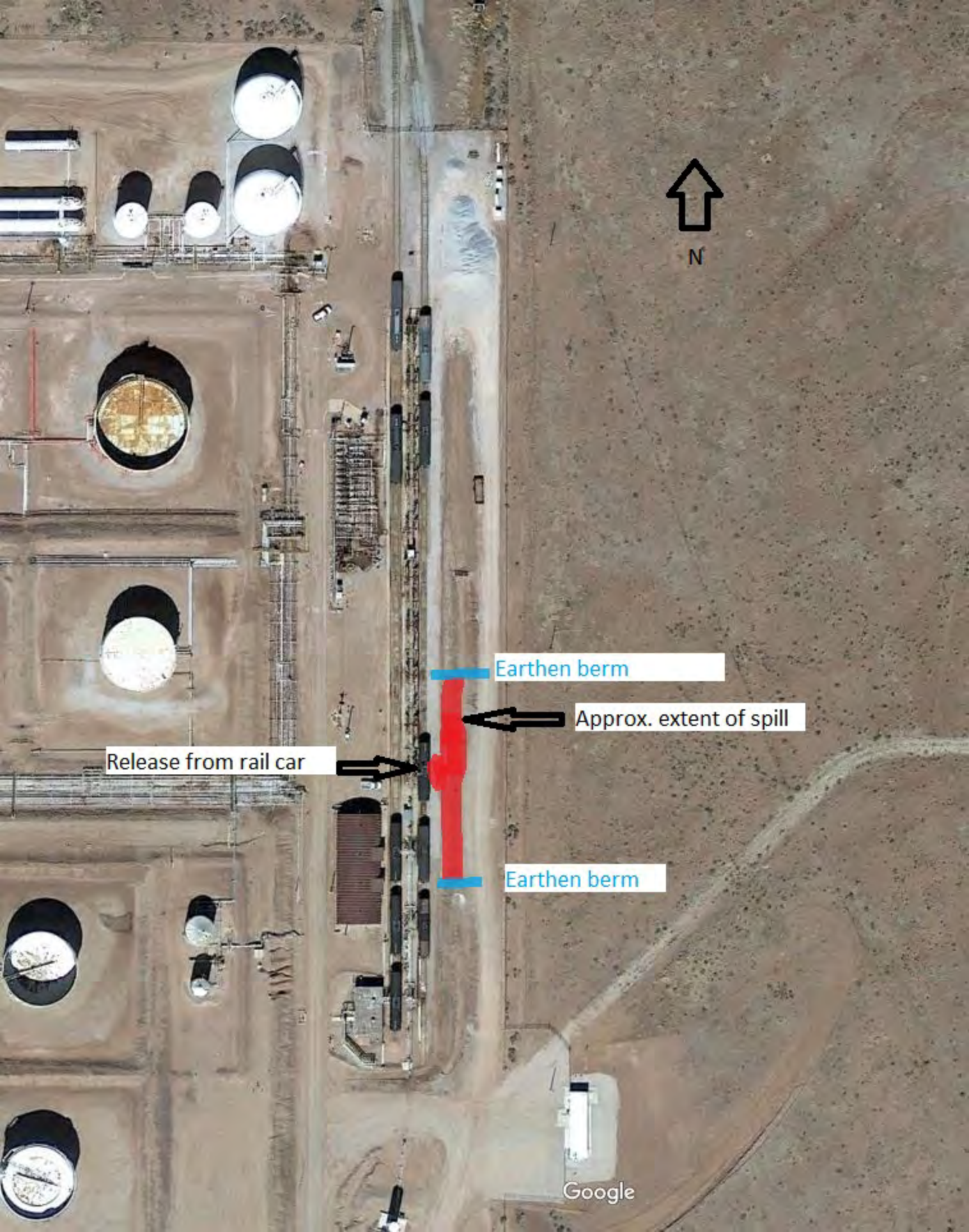
Printed Name: John Moore Title: Environmental Supervisor

Signature: [signature] Date: 8-30-19

email: jmoore5@marathonpetroleum.com Telephone: 307-337-7642

OCD Only

Received by: _____ Date: _____


N
Earthen berm
Approx. extent of spill
Release from rail car
Earthen berm
Google

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, March 14, 2019 8:49 AM
To: Chavez, Carl J, EMNRD
Cc: Griswold, Jim, EMNRD; Smith, Cory, EMNRD; Fields, Vanessa, EMNRD; Moore, John
Subject: Gallup Refinery (AP-111) McKinley Co.

FYI

Note to file:

- Carl on 3/13 at 11:05 a.m. received a voice mail notification about a "Diesel" release (> 25 bbls is known at time of call) that occurred at ~ 9:30 a.m. on same day at the Railroad Lagoon Loading Rack (E side of refinery). A C-141 with more details will soon be submitted. OCD SF office was closed due to inclement weather.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, February 28, 2019 2:07 PM
To: 'Vestal, Janelle'
Cc: VanHorn, Kristen, NMENV; Moore, John
Subject: RE: Initial C-141 Tank 582 Spill

Janelle:

Good afternoon. You may follow-up with OCD Santa Fe and NMED on Pages 3 – 4 in lieu of the reference to the OCD "District Office". It is not clear from the submittal if the tanks are lined, etc. or whether excavation to removed impacted soils was conducted.

Please contact me if you have questions.

Thank you.

From: Vestal, Janelle <JVestal1@Marathonpetroleum.com>
Sent: Thursday, February 28, 2019 1:15 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: VanHorn, Kristen, NMENV <Kristen.VanHorn@state.nm.us>; Moore, John <JMoore5@Marathonpetroleum.com>
Subject: [EXT] Initial C-141 Tank 582 Spill

Good Afternoon Carl,

Attached please find the Initial C-141 Release Notification for a release on 2/25/19 from Tank 582.

Thank you for your attention to this matter,

Janelle Vestal | Environmental Engineer
Gallup Refinery
JVestal1@Marathonpetroleum.com

Marathon Petroleum Company
92 Giant Crossing Road
Gallup, NM 87301
o: 505 726 9721
m: 505 285 8193

www.marathonpetroleum.com

Chavez, Carl J, EMNRD

From: Vestal, Janelle <JVestal1@Marathonpetroleum.com>
Sent: Thursday, February 28, 2019 1:15 PM
To: Chavez, Carl J, EMNRD
Cc: VanHorn, Kristen, NMENV; Moore, John
Subject: [EXT] Initial C-141 Tank 582 Spill
Attachments: 2019-02-25 c141 T582 Spill - INITIAL.pdf

Good Afternoon Carl,

Attached please find the Initial C-141 Release Notification for a release on 2/25/19 from Tank 582.

Thank you for your attention to this matter,

Janelle Vestal | Environmental Engineer
Gallup Refinery
JVestal1@Marathonpetroleum.com

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92 Giant Crossing Road
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State of New Mexico
Energy Minerals and Natural Resources Department

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1220 South St. Francis Dr.
Santa Fe, NM 87505

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Gallup Refinery	OGRID
Contact Name Janelle Vestal	Contact Telephone 505-726-9721
Contact email JVestal1@marathonpetroleum.com	Incident # *(assigned by OCD)*
Contact mailing address 92 Giant Crossing Road, Gallup, NM 87301	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Gallup Refinery (T582)	Site Type Refinery
Date Release Discovered 02/25/2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
SWNE	33	15N	15W	McKinley

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* Western Refining, Southwest)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe) Gasoline	Volume/Weight Released (provide units) Approximately 10 bbls	Volume/Weight Recovered (provide units) Approximately 1 bbl

Cause of Release

An isolation valve was left cracked open and a bull plug missing on the water draw piping from T-582. An estimated 10 bbls of gasoline had spilled into the containment area of T-582. The open valve was closed and the missing bull plug was replaced. Free product was vacuumed up with a vacuum truck.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
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Printed Name: Janelle Vestal Title: Environmental Engineer

Signature: Date: 2/28/2019

email: JVestal1@marathonpetroleum.com Telephone: 505-726-9721

OCD Only

Received by: Date:


Spill Area
Tank 582
N