

Hadaway Consulting & Engineering

JP White # 4

Delineation Report & Work Plan

**Section 18, Township 10S, Range 29E
Chaves County, New Mexico**

30-005-00411

April 03, 2019



**Prepared for:
Hadaway Consulting & Engineering
PO Box 188
Canadian, TX
By:**

**Safety & Environmental Solutions, Inc.
703 East Clinton Street
Hobbs, New Mexico 88240
(575) 397-0510**

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I. Company Contacts

Representative	Company	Telephone	E-mail
Alan Hadaway	Hadaway Consulting & Engineering	806-323-9811	hadaway@hadeng.com
Bob Allen	SESI	575-397-0510	ballen@sesi-nm.com

II. Background

Safety and Environmental Solutions, Inc., hereinafter referred to as (SESI) was engaged by Hadaway Consulting & Engineering, to assess a spill area with the open NMOCD permit of 2RP-5048.

According to the C-141: According to the C-141 the cause of release, was due to the Muirfield #2H (of the same section 18), having been frac stimulated, and after stimulation a leak from the offset well, described above was discovered on 11/8/2018. The offset well was drilled to a TD of 2875 ft. in 1948, with only 15' of 10 3/4" conductor in the hole. The well was then P&A'd with a 10 sx cement plug at 2400' and one 5 sx cement plug at the surface.

Representatives took proactive measures to dam up the spill run and prevent as much pasture area impact as possible. A Trimble Juno 3B handheld was used to map the spill area. The fluid traversed the West side of the lease road, crossing over and traversing the East side of lease road to pasture area (Figure 2). Approximately 2,769 square yards of surface area was impacted.

III. Surface and Ground Water

There is no record of groundwater in the immediate vicinity of the site location. Further research of the New Mexico Office of the State Engineer records indicates the average depth to groundwater for the area to be 70' bgs. Thereby, posing no eminent threat or danger to life forms in the area (Appendix B).

IV. Characterization

The target cleanup levels are determined using the NMAC 19.15.29 revisions dated July 24, 2018. The soil screening criteria presented below, and the applicable Recommended Remediation Action Levels (RRAL) are 10 parts per million (ppm) Benzene, 50 ppm combined Benzene, Toluene, Ethyl Benzene, and Total Xylenes (BTEX), and 2,500 ppm Total Petroleum Hydrocarbons (TPH). Characterization of vertical extent of chloride concentration to a level of 600 mg/kg (PPM) is also required for pasture impact. The soil in this area is characterized as a sandy Portales loam.

Table 1 Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l	Constituent	Method*	Limit**
TDS			
<50 feet	Chloride***	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015B	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
51 feet-100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015B	2,500 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
>100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015B	2,500 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg

V. Work Performed

On March 06, 2019 SESI personnel were on site to advance Auger Holes for purposes of soil delineation and field screening. The impacted surface area had been previously removed and stockpiled for disposal (*Manifests*). SESI field personnel contacted Gary Holeman regarding information of the spill event. Mr. Holeman described the path of the release. SESI personnel then walked out areas where clear visual Chloride staining remains. Pin Flags were installed for ease of mapping. Seven areas were allocated for Auger Hole installation in order to determine vertical and horizontal extent of impact. Auger Hole 1 was advanced, and field results at that depth were 10,000 mg/kg Cl. Further auger holes were advanced to depths of refusal, including auger hole seven to the depth of refusal at 2' bgs. A soil sample was grabbed and field tested for Chlorides. The results were 20,008 mg/kg. Field testing was halted due to the soil characterization and refusal at shallow depths. The area was flagged for future New Mexico One Call clearance.

On March 19, 2019 SESI personnel, together with personnel and equipment from Custom Welding of Hobbs, NM were onsite, in order to advance Test trenches and complete delineation efforts. Mr. Gary Hebbert, from L&E Ranches, as well as Mr. Alan Hadaway, representative of Hadaway Consulting & Engineering were also present.

Test trenches were located at Nine (9) sample point positions, and advanced according to previous allocated and flagged areas for field sampling. The mechanized equipment encountered refusal at depths of 6-8' bgs. Soil samples were grabbed at surface, and one foot increments, field tested, and packaged for laboratory confirmation. All samples were properly packaged, labeled, preserved, and transported to Hall Laboratories via Chain of Custody for analyses. The following constituencies were analyzed: Chloride (CI Method 300.0 Anions), Total Petroleum Hydrocarbons (TPH Method 8015), and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX Method 8021B). The table below is a recap and tabulation of the results from the Hall Laboratory analyses for ease of reference (*Appendix C*):

Sample ID	Chloride EPA Method 300 Anions	DRO EPA Method 8015	GRO EPA Method 8015	BTEX EPA Method 8021
TT-1 3ft	4900	220	ND	ND
TT-1 4ft	3800	190	ND	ND
TT-2 3ft	2600	ND	ND	ND
TT-3 6ft	24000	38	ND	ND
TT-3 7ft	14000	45	ND	ND
TT-4 Surface	160	16	ND	ND
TT-4 1ft	86	ND	ND	ND
TT-5 1ft	6300	ND	ND	ND
TT-5 2ft	8800			
TT-5 4ft	4500	ND	ND	ND
TT-5 6ft	970			
TT-5 8ft	250	ND	ND	ND
TT-6 1ft	7700	ND	ND	ND
TT-6 2ft	5600			
TT-6 4ft	3600	ND	ND	ND
TT-6 6ft	870			
TT-6 8ft	520	ND	ND	ND
TT-7 1ft	8900	ND	ND	ND
TT-7 2ft	8000			
TT-7 4ft	1800	ND	ND	ND
TT-7 6ft	480			
TT-7 8ft	120	ND	ND	ND
TT-8 1ft	10000	ND	ND	ND
TT-8 2ft	8600			
TT-8 4ft	7400	ND	ND	ND
TT-8 6ft	1700			
TT-8 8ft	750	ND	ND	ND
TT-9 1ft	14000	ND	ND	ND
TT-9 2ft	5700			
TT-9 4ft	5400	ND	ND	ND
TT-9 6ft	540			
TT-9 8ft	370	ND	ND	ND

VI. Action Plan

Based on the NMOCD soil screening levels and depth to groundwater for this area: Petroleum Hydrocarbons were not the constituency of concern in this spill. Therefore, and based upon remaining Chloride levels, SESI is proposing to excavate and remove soil to depths of 4' bgs., installing a 20mil. Liner, capped with topsoil. All impacted soils will be transported to an NMOCD approved facility, and documented via manifests. The reclaimed pad area will be restored to grade, excavated pasture area will be backfilled with fresh topsoil and terraced to surrounding area in order to facilitate vegetation, and prevent erosion. Sidewall and Bottom Samples will be retrieved as confirmation, and included in all Closure Documentation.

Upon completion of remediation activities: all surface areas off of the location area will be re-seeded according New Mexico State Land Office Guidelines. All closure documentation will be drafted and submitted to the proper parties of concern.

VII. Figures & Appendices

Figure 1 - Vicinity Map

Figure 2 - Site Plan

Appendix A – C-141

Appendix B – Groundwater


Appendix C – Analytical Results


Appendix D – Photo Documentation


Figure 1


Vicinity Map

Legend

 Feature 1

 Sample Point

 Sample Point

 Spill Area

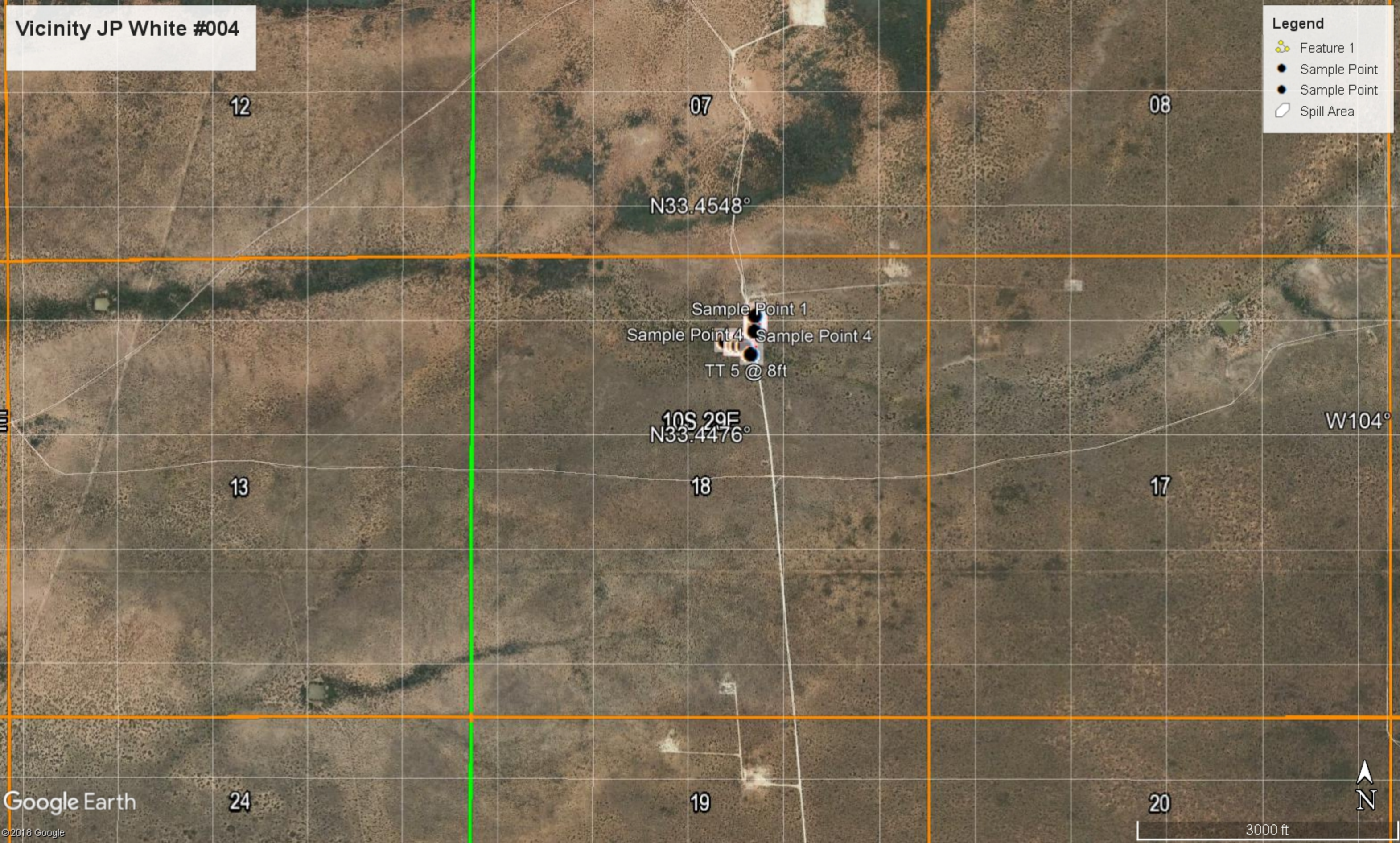





Figure 2 Site Plan

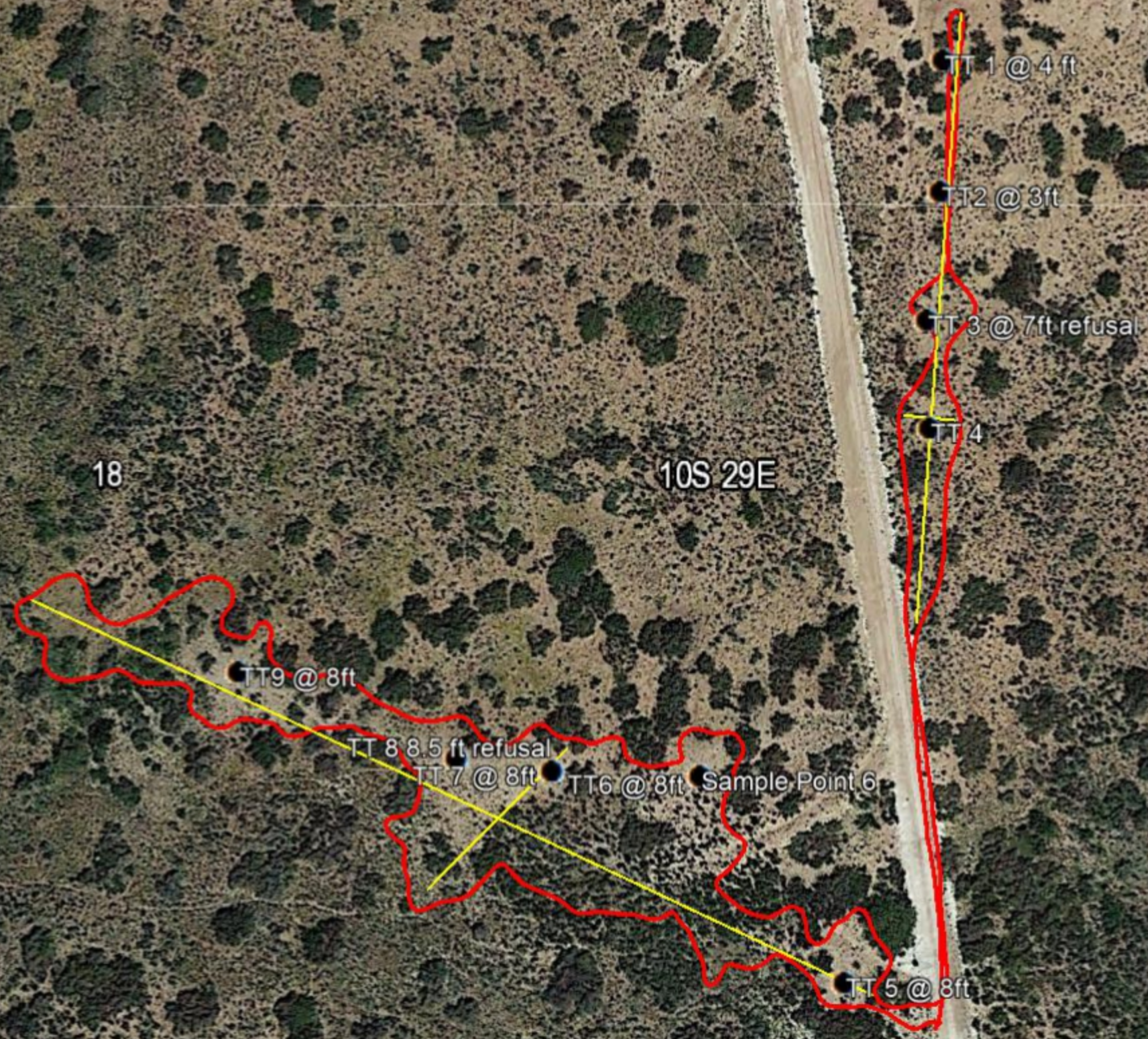
JP White #4

Legend

 Liner Placement

 Spill Area

 Test Trench



Appendix A

C-141

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	371985
District RP	2RP-5048
Facility ID	
Application ID	pAB1831934412

Release Notification

Responsible Party

Responsible Party Hadaway Consulting & Engineering	OGRID 371985
Contact Name Alan Hadaway	Contact Telephone 806-323-9811
Contact email: hadaway@hadeng.com	Incident # (assigned by OCD) NAB1831937668
Contact mailing address PO Box 188, Canadian, TX 79014	

Location of Release Source

Latitude 33.45105 Longitude -104.01894
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: JP White #4 (660' FNL & 1980' FEL of sec 18)	Site Type: Abandoned Well P&A in 1948
Date Release Discovered: November 8 2018	API# (if applicable) 30-005-00411

Unit Letter	Section	Township	Range	County
B	18	10S	29E	Chaves

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: LE Ranch-DK Boyd)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l? 136,000 mg/kg	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe) Water from P&A Wellbore	Volume/Weight Released (provide units) unknown Was advised as of 2 pm 11/9/2018 leak has stopped flowing	Volume/Weight Recovered (provide units) 100 bbl water trucked from emergency containment to disposal

Cause of Release: The Muirfield #2H (SHL 50' FSL & 1270' FEL of the same section 18) is a 1 mile lateral from south to north w/ a lateral toe bottom hole location approximately 1320 FEL and 100' FNL of Section 18. The well was frac stimulated and after stimulation a leak from the offset well described above was discovered on 11/8/2018. The offset well was drilled to a TD of 2875' in 1948 with only 15' of 10 3/4" conductor in the hole. The well was then P&A with one 10 sx cement plug at 2400' and one 5 sx cement plug at the surface.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1831937668
District RP	2RP-5048
Facility ID	
Application ID	pAB1831934412

Was this a major
release as defined by
19.15.29.7(A) NMAC?

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

☐ Yes ☐ No

The volume of release was greater than 25 bbl.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Immediate notice to Ray Podany @ OCD by John Maxey via telecom 11/8/2018. A follow up phone call to Mike Bratcher by John Maxey took place on 11/9/2018. Follow up email to Mike Bratcher and Maria Pruitt on 11/9/2018.

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: Allen Hadaway

Title: P.E.

Fx #61256

Signature: 

Date: 03/13/2019

email: hadaway@hadeng.com

Telephone: 806-323-9811

OCDOnly

Received by: _____

Date: 11/15/18

State of New Mexico
Oil Conservation Division

Incident ID	NAB1831937668
District RP	2RP-5048
Facility ID	
Application ID	pAB1831934412

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?

70 (ft bgs)

Did this release impact groundwater or surface water?

☐ Yes ☒ No

Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?

☐ Yes ☒ No

Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?

☐ Yes ☒ No

Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?

☐ Yes ☒ No

Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?

☐ Yes ☒ No

Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?

☐ Yes ☒ No

Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?

☐ Yes ☒ No

Are the lateral extents of the release within 300 feet of a wetland?

☐ Yes ☒ No

Are the lateral extents of the release overlying a subsurface mine?

☐ Yes ☒ No

Are the lateral extents of the release overlying an unstable area such as karst geology?

☐ Yes ☒ No

Are the lateral extents of the release within a 100-year floodplain?

☐ Yes ☒ No

Did the release impact areas not on an exploration, development, production, or storage site?

☐ Yes ☒ No

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

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

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Incident ID	NAB1831937668
District RP	2RP-5048
Facility ID	
Application ID	pAB1831934412

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: Allen HadawayTitle: P.E.Tx #61256Signature: Date: 03/13/2019email: hadaway@hadeng.comTelephone: 806-323-9811**OCD Only**

Received by: _____

Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAB1831937668
District RP	2RP-5048
Facility ID	
Application ID	pAB1831934412

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: Allen HadawayTitle: P.E. TX #61256Signature: Date: 03/13/2019email: hadaway@hadeng.comTelephone: 806-323-9811**OCD Only**

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____

Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAB1831937668
District RP	2RP-5048
Facility ID	
Application ID	pAB1831934412

Closure

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

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

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Allen Hadaway

Title: P.E. TX #61256

Signature: 

Date: 03/13/2019

email: hadaway@hadeng.com

Telephone: 806-323-9811

OCD Only

Received by: _____

Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____

Title: _____

Appendix B

Groundwater



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

(R=POD has been replaced, O=orphaned,

C=the file is closed)

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q	Q	Q	Sec	Tws	Rng	X	Y	DepthWell	DepthWater	WaterColumn
RA 09670		RA	CH	2	2	2	03	10S	29E	596107	3705129*	587		
RA 10205		RA	CH	3	4	4	03	10S	29E	595918	3703723*	487		
RA 10206		RA	CH	3	4	4	03	10S	29E	595918	3703723*	489		
RA 10838		RA	CH	1	4	1	17	10S	29E	591905	3701467*	100	70	30

Average Depth to Water: **70 feet**
Minimum Depth: **70 feet**
Maximum Depth: **70 feet**

Record Count: 4

PLSS Search:

Township: 10S **Range:** 29E

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

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

3/6/19 10:52 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER

Appendix C

Analytical Results

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-1 3ft

Project: JP White 4

Collection Date: 3/18/2019 9:45:00 AM

Lab ID: 1903991-001

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	4900	300		mg/Kg	100	3/26/2019 5:42:36 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	220	9.5		mg/Kg	1	3/25/2019 7:52:53 PM	43832
Motor Oil Range Organics (MRO)	130	48		mg/Kg	1	3/25/2019 7:52:53 PM	43832
Surr: DNOP	102	70-130		%Rec	1	3/25/2019 7:52:53 PM	43832
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/24/2019 9:59:31 PM	43820
Surr: BFB	91.2	73.8-119		%Rec	1	3/24/2019 9:59:31 PM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/24/2019 9:59:31 PM	43820
Toluene	ND	0.049		mg/Kg	1	3/24/2019 9:59:31 PM	43820
Ethylbenzene	ND	0.049		mg/Kg	1	3/24/2019 9:59:31 PM	43820
Xylenes, Total	ND	0.097		mg/Kg	1	3/24/2019 9:59:31 PM	43820
Surr: 4-Bromofluorobenzene	95.4	80-120		%Rec	1	3/24/2019 9:59:31 PM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-1 4ft

Project: JP White 4

Collection Date: 3/18/2019 10:00:00 AM

Lab ID: 1903991-002

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3800	150		mg/Kg	50	3/26/2019 5:55:01 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	190	9.5		mg/Kg	1	3/25/2019 8:41:25 PM	43832
Motor Oil Range Organics (MRO)	130	47		mg/Kg	1	3/25/2019 8:41:25 PM	43832
Surr: DNOP	96.0	70-130		%Rec	1	3/25/2019 8:41:25 PM	43832
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/24/2019 10:23:08 PM	43820
Surr: BFB	90.9	73.8-119		%Rec	1	3/24/2019 10:23:08 PM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/24/2019 10:23:08 PM	43820
Toluene	ND	0.047		mg/Kg	1	3/24/2019 10:23:08 PM	43820
Ethylbenzene	ND	0.047		mg/Kg	1	3/24/2019 10:23:08 PM	43820
Xylenes, Total	ND	0.094		mg/Kg	1	3/24/2019 10:23:08 PM	43820
Surr: 4-Bromofluorobenzene	95.5	80-120		%Rec	1	3/24/2019 10:23:08 PM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-2 3ft

Project: JP White 4

Collection Date: 3/18/2019 10:30:00 AM

Lab ID: 1903991-003

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2600	150		mg/Kg	50	3/26/2019 6:07:27 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/25/2019 9:29:47 PM	43832
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/25/2019 9:29:47 PM	43832
Surr: DNOP	92.5	70-130		%Rec	1	3/25/2019 9:29:47 PM	43832
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/24/2019 10:46:46 PM	43820
Surr: BFB	89.7	73.8-119		%Rec	1	3/24/2019 10:46:46 PM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/24/2019 10:46:46 PM	43820
Toluene	ND	0.048		mg/Kg	1	3/24/2019 10:46:46 PM	43820
Ethylbenzene	ND	0.048		mg/Kg	1	3/24/2019 10:46:46 PM	43820
Xylenes, Total	ND	0.096		mg/Kg	1	3/24/2019 10:46:46 PM	43820
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	3/24/2019 10:46:46 PM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-3 6ft

Project: JP White 4

Collection Date: 3/18/2019 10:40:00 AM

Lab ID: 1903991-004

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	24000	1500		mg/Kg	500	3/26/2019 6:19:52 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	38	9.2		mg/Kg	1	3/25/2019 9:53:55 PM	43832
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/25/2019 9:53:55 PM	43832
Surr: DNOP	94.8	70-130		%Rec	1	3/25/2019 9:53:55 PM	43832
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/24/2019 11:10:19 PM	43820
Surr: BFB	92.6	73.8-119		%Rec	1	3/24/2019 11:10:19 PM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/24/2019 11:10:19 PM	43820
Toluene	ND	0.049		mg/Kg	1	3/24/2019 11:10:19 PM	43820
Ethylbenzene	ND	0.049		mg/Kg	1	3/24/2019 11:10:19 PM	43820
Xylenes, Total	ND	0.098		mg/Kg	1	3/24/2019 11:10:19 PM	43820
Surr: 4-Bromofluorobenzene	97.8	80-120		%Rec	1	3/24/2019 11:10:19 PM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-3 7ft

Project: JP White 4

Collection Date: 3/18/2019 11:00:00 AM

Lab ID: 1903991-005

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	14000	600		mg/Kg	200	3/26/2019 6:57:06 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	45	10		mg/Kg	1	3/25/2019 10:18:00 PM	43832
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/25/2019 10:18:00 PM	43832
Surr: DNOP	87.8	70-130		%Rec	1	3/25/2019 10:18:00 PM	43832
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/24/2019 11:33:47 PM	43820
Surr: BFB	96.1	73.8-119		%Rec	1	3/24/2019 11:33:47 PM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/24/2019 11:33:47 PM	43820
Toluene	ND	0.049		mg/Kg	1	3/24/2019 11:33:47 PM	43820
Ethylbenzene	ND	0.049		mg/Kg	1	3/24/2019 11:33:47 PM	43820
Xylenes, Total	ND	0.098		mg/Kg	1	3/24/2019 11:33:47 PM	43820
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	3/24/2019 11:33:47 PM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-4 Surface

Project: JP White 4

Collection Date: 3/18/2019 11:05:00 AM

Lab ID: 1903991-006

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	160	60		mg/Kg	20	3/25/2019 1:07:12 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	16	9.3		mg/Kg	1	3/25/2019 10:42:03 PM	43832
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/25/2019 10:42:03 PM	43832
Surr: DNOP	91.5	70-130		%Rec	1	3/25/2019 10:42:03 PM	43832
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/25/2019 12:20:38 AM	43820
Surr: BFB	92.5	73.8-119		%Rec	1	3/25/2019 12:20:38 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/25/2019 12:20:38 AM	43820
Toluene	ND	0.047		mg/Kg	1	3/25/2019 12:20:38 AM	43820
Ethylbenzene	ND	0.047		mg/Kg	1	3/25/2019 12:20:38 AM	43820
Xylenes, Total	ND	0.093		mg/Kg	1	3/25/2019 12:20:38 AM	43820
Surr: 4-Bromofluorobenzene	98.2	80-120		%Rec	1	3/25/2019 12:20:38 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-4 1ft

Project: JP White 4

Collection Date: 3/18/2019 11:10:00 AM

Lab ID: 1903991-007

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	86	60		mg/Kg	20	3/25/2019 1:19:36 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	3/25/2019 11:06:04 PM	43832
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/25/2019 11:06:04 PM	43832
Surr: DNOP	91.0	70-130		%Rec	1	3/25/2019 11:06:04 PM	43832
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/25/2019 12:44:05 AM	43820
Surr: BFB	91.2	73.8-119		%Rec	1	3/25/2019 12:44:05 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/25/2019 12:44:05 AM	43820
Toluene	ND	0.046		mg/Kg	1	3/25/2019 12:44:05 AM	43820
Ethylbenzene	ND	0.046		mg/Kg	1	3/25/2019 12:44:05 AM	43820
Xylenes, Total	ND	0.093		mg/Kg	1	3/25/2019 12:44:05 AM	43820
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	3/25/2019 12:44:05 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-5 1ft

Project: JP White 4

Collection Date: 3/18/2019 11:50:00 AM

Lab ID: 1903991-008

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	6300	300		mg/Kg	100	3/26/2019 7:09:31 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/25/2019 11:30:04 PM	43832
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/25/2019 11:30:04 PM	43832
Surr: DNOP	92.8	70-130		%Rec	1	3/25/2019 11:30:04 PM	43832
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/25/2019 1:07:29 AM	43820
Surr: BFB	92.0	73.8-119		%Rec	1	3/25/2019 1:07:29 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/25/2019 1:07:29 AM	43820
Toluene	ND	0.047		mg/Kg	1	3/25/2019 1:07:29 AM	43820
Ethylbenzene	ND	0.047		mg/Kg	1	3/25/2019 1:07:29 AM	43820
Xylenes, Total	ND	0.094		mg/Kg	1	3/25/2019 1:07:29 AM	43820
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	1	3/25/2019 1:07:29 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-5 2ft

Project: JP White 4

Collection Date: 3/18/2019 12:15:00 PM

Lab ID: 1903991-009

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	8800	300		mg/Kg	100	3/25/2019 5:02:58 PM	43834

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-5 4ft

Project: JP White 4

Collection Date: 3/18/2019 12:30:00 PM

Lab ID: 1903991-010

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	4500	150		mg/Kg	50	3/26/2019 7:21:55 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/27/2019 7:37:48 PM	43833
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/27/2019 7:37:48 PM	43833
Surr: DNOP	99.4	70-130		%Rec	1	3/27/2019 7:37:48 PM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/25/2019 1:30:53 AM	43820
Surr: BFB	91.2	73.8-119		%Rec	1	3/25/2019 1:30:53 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/25/2019 1:30:53 AM	43820
Toluene	ND	0.048		mg/Kg	1	3/25/2019 1:30:53 AM	43820
Ethylbenzene	ND	0.048		mg/Kg	1	3/25/2019 1:30:53 AM	43820
Xylenes, Total	ND	0.096		mg/Kg	1	3/25/2019 1:30:53 AM	43820
Surr: 4-Bromofluorobenzene	95.4	80-120		%Rec	1	3/25/2019 1:30:53 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-5 6ft

Project: JP White 4

Collection Date: 3/18/2019 12:45:00 PM

Lab ID: 1903991-011

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	970	60		mg/Kg	20	3/22/2019 5:22:59 PM	43834

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-5 8ft

Project: JP White 4

Collection Date: 3/18/2019 12:50:00 PM

Lab ID: 1903991-012

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	250	60		mg/Kg	20	3/25/2019 1:56:49 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	3/27/2019 8:44:46 PM	43833
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/27/2019 8:44:46 PM	43833
Surr: DNOP	89.4	70-130		%Rec	1	3/27/2019 8:44:46 PM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/25/2019 1:54:18 AM	43820
Surr: BFB	91.6	73.8-119		%Rec	1	3/25/2019 1:54:18 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/25/2019 1:54:18 AM	43820
Toluene	ND	0.047		mg/Kg	1	3/25/2019 1:54:18 AM	43820
Ethylbenzene	ND	0.047		mg/Kg	1	3/25/2019 1:54:18 AM	43820
Xylenes, Total	ND	0.094		mg/Kg	1	3/25/2019 1:54:18 AM	43820
Surr: 4-Bromofluorobenzene	96.5	80-120		%Rec	1	3/25/2019 1:54:18 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-6 1ft

Project: JP White 4

Collection Date: 3/18/2019 1:55:00 PM

Lab ID: 1903991-013

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	7700	300		mg/Kg	100	3/26/2019 7:34:20 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/27/2019 9:07:04 PM	43833
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/27/2019 9:07:04 PM	43833
Surr: DNOP	94.9	70-130		%Rec	1	3/27/2019 9:07:04 PM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/25/2019 9:24:18 AM	43820
Surr: BFB	94.9	73.8-119		%Rec	1	3/25/2019 9:24:18 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/25/2019 9:24:18 AM	43820
Toluene	ND	0.049		mg/Kg	1	3/25/2019 9:24:18 AM	43820
Ethylbenzene	ND	0.049		mg/Kg	1	3/25/2019 9:24:18 AM	43820
Xylenes, Total	ND	0.099		mg/Kg	1	3/25/2019 9:24:18 AM	43820
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	3/25/2019 9:24:18 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-6 2ft

Project: JP White 4

Collection Date: 3/18/2019 2:00:00 PM

Lab ID: 1903991-014

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	5600	300		mg/Kg	100	3/25/2019 5:15:23 PM	43834

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-6 4ft

Project: JP White 4

Collection Date: 3/18/2019 2:10:00 PM

Lab ID: 1903991-015

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3600	150		mg/Kg	50	3/26/2019 7:46:44 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/27/2019 9:29:17 PM	43833
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/27/2019 9:29:17 PM	43833
Surr: DNOP	93.8	70-130		%Rec	1	3/27/2019 9:29:17 PM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/25/2019 9:47:49 AM	43820
Surr: BFB	92.7	73.8-119		%Rec	1	3/25/2019 9:47:49 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/25/2019 9:47:49 AM	43820
Toluene	ND	0.050		mg/Kg	1	3/25/2019 9:47:49 AM	43820
Ethylbenzene	ND	0.050		mg/Kg	1	3/25/2019 9:47:49 AM	43820
Xylenes, Total	ND	0.10		mg/Kg	1	3/25/2019 9:47:49 AM	43820
Surr: 4-Bromofluorobenzene	96.4	80-120		%Rec	1	3/25/2019 9:47:49 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-6 6ft

Project: JP White 4

Collection Date: 3/18/2019 2:30:00 PM

Lab ID: 1903991-016

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	870	60		mg/Kg	20	3/25/2019 2:34:03 PM	43860

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-6 8ft

Project: JP White 4

Collection Date: 3/18/2019 2:40:00 PM

Lab ID: 1903991-017

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	520	59		mg/Kg	20	3/25/2019 2:46:29 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	3/27/2019 9:51:37 PM	43833
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/27/2019 9:51:37 PM	43833
Surr: DNOP	94.1	70-130		%Rec	1	3/27/2019 9:51:37 PM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/25/2019 10:11:11 AM	43820
Surr: BFB	93.9	73.8-119		%Rec	1	3/25/2019 10:11:11 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/25/2019 10:11:11 AM	43820
Toluene	ND	0.047		mg/Kg	1	3/25/2019 10:11:11 AM	43820
Ethylbenzene	ND	0.047		mg/Kg	1	3/25/2019 10:11:11 AM	43820
Xylenes, Total	ND	0.093		mg/Kg	1	3/25/2019 10:11:11 AM	43820
Surr: 4-Bromofluorobenzene	99.5	80-120		%Rec	1	3/25/2019 10:11:11 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-7 1ft

Project: JP White 4

Collection Date: 3/19/2019 8:35:00 AM

Lab ID: 1903991-018

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	8900	300		mg/Kg	100	3/26/2019 7:59:09 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/27/2019 10:36:21 PM	43833
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/27/2019 10:36:21 PM	43833
Surr: DNOP	106	70-130		%Rec	1	3/27/2019 10:36:21 PM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/25/2019 10:34:57 AM	43820
Surr: BFB	94.6	73.8-119		%Rec	1	3/25/2019 10:34:57 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/25/2019 10:34:57 AM	43820
Toluene	ND	0.047		mg/Kg	1	3/25/2019 10:34:57 AM	43820
Ethylbenzene	ND	0.047		mg/Kg	1	3/25/2019 10:34:57 AM	43820
Xylenes, Total	ND	0.094		mg/Kg	1	3/25/2019 10:34:57 AM	43820
Surr: 4-Bromofluorobenzene	99.1	80-120		%Rec	1	3/25/2019 10:34:57 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-7 2ft

Project: JP White 4

Collection Date: 3/19/2019 8:45:00 AM

Lab ID: 1903991-019

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	8000	300		mg/Kg	100	3/26/2019 8:11:33 PM	43860

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-7 4ft

Project: JP White 4

Collection Date: 3/19/2019 9:00:00 AM

Lab ID: 1903991-020

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1800	60		mg/Kg	20	3/25/2019 4:25:44 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/27/2019 10:58:28 PM	43833
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/27/2019 10:58:28 PM	43833
Surr: DNOP	92.8	70-130		%Rec	1	3/27/2019 10:58:28 PM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/25/2019 10:58:37 AM	43820
Surr: BFB	92.6	73.8-119		%Rec	1	3/25/2019 10:58:37 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/25/2019 10:58:37 AM	43820
Toluene	ND	0.048		mg/Kg	1	3/25/2019 10:58:37 AM	43820
Ethylbenzene	ND	0.048		mg/Kg	1	3/25/2019 10:58:37 AM	43820
Xylenes, Total	ND	0.097		mg/Kg	1	3/25/2019 10:58:37 AM	43820
Surr: 4-Bromofluorobenzene	97.3	80-120		%Rec	1	3/25/2019 10:58:37 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-7 6ft

Project: JP White 4

Collection Date: 3/19/2019 9:10:00 AM

Lab ID: 1903991-021

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	480	60		mg/Kg	20	3/25/2019 4:38:09 PM	43860

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-7 8ft

Project: JP White 4

Collection Date: 3/19/2019 9:20:00 AM

Lab ID: 1903991-022

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	120	59		mg/Kg	20	3/25/2019 4:50:33 PM	43860
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	3/27/2019 11:20:48 PM	43833
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/27/2019 11:20:48 PM	43833
Surr: DNOP	94.0	70-130		%Rec	1	3/27/2019 11:20:48 PM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/25/2019 11:22:18 AM	43820
Surr: BFB	93.9	73.8-119		%Rec	1	3/25/2019 11:22:18 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/25/2019 11:22:18 AM	43820
Toluene	ND	0.050		mg/Kg	1	3/25/2019 11:22:18 AM	43820
Ethylbenzene	ND	0.050		mg/Kg	1	3/25/2019 11:22:18 AM	43820
Xylenes, Total	ND	0.099		mg/Kg	1	3/25/2019 11:22:18 AM	43820
Surr: 4-Bromofluorobenzene	98.6	80-120		%Rec	1	3/25/2019 11:22:18 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-8 1ft

Project: JP White 4

Collection Date: 3/19/2019 9:35:00 AM

Lab ID: 1903991-023

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	10000	600		mg/Kg	200	3/27/2019 5:25:38 PM	43879
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	3/27/2019 11:43:03 PM	43833
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/27/2019 11:43:03 PM	43833
Surr: DNOP	94.4	70-130		%Rec	1	3/27/2019 11:43:03 PM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/25/2019 11:45:52 AM	43820
Surr: BFB	92.9	73.8-119		%Rec	1	3/25/2019 11:45:52 AM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/25/2019 11:45:52 AM	43820
Toluene	ND	0.048		mg/Kg	1	3/25/2019 11:45:52 AM	43820
Ethylbenzene	ND	0.048		mg/Kg	1	3/25/2019 11:45:52 AM	43820
Xylenes, Total	ND	0.096		mg/Kg	1	3/25/2019 11:45:52 AM	43820
Surr: 4-Bromofluorobenzene	98.2	80-120		%Rec	1	3/25/2019 11:45:52 AM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-8 2ft

Project: JP White 4

Collection Date: 3/19/2019 9:55:00 AM

Lab ID: 1903991-024

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	8600	600		mg/Kg	200	3/27/2019 5:38:02 PM	43879

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-8 4ft

Project: JP White 4

Collection Date: 3/19/2019 10:05:00 AM

Lab ID: 1903991-025

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	7400	300		mg/Kg	100	3/27/2019 5:50:27 PM	43879
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/28/2019 12:05:17 AM	43833
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/28/2019 12:05:17 AM	43833
Surr: DNOP	95.4	70-130		%Rec	1	3/28/2019 12:05:17 AM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/25/2019 12:09:19 PM	43820
Surr: BFB	92.6	73.8-119		%Rec	1	3/25/2019 12:09:19 PM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/25/2019 12:09:19 PM	43820
Toluene	ND	0.046		mg/Kg	1	3/25/2019 12:09:19 PM	43820
Ethylbenzene	ND	0.046		mg/Kg	1	3/25/2019 12:09:19 PM	43820
Xylenes, Total	ND	0.093		mg/Kg	1	3/25/2019 12:09:19 PM	43820
Surr: 4-Bromofluorobenzene	97.6	80-120		%Rec	1	3/25/2019 12:09:19 PM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-8 6ft

Project: JP White 4

Collection Date: 3/19/2019 10:25:00 AM

Lab ID: 1903991-026

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1700	61		mg/Kg	20	3/26/2019 3:01:16 PM	43879

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-8 8ft

Project: JP White 4

Collection Date: 3/19/2019 10:35:00 AM

Lab ID: 1903991-027

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	750	60		mg/Kg	20	3/26/2019 3:38:31 PM	43879
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/28/2019 12:27:27 AM	43833
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/28/2019 12:27:27 AM	43833
Surr: DNOP	73.5	70-130		%Rec	1	3/28/2019 12:27:27 AM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/25/2019 12:32:49 PM	43820
Surr: BFB	92.6	73.8-119		%Rec	1	3/25/2019 12:32:49 PM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/25/2019 12:32:49 PM	43820
Toluene	ND	0.047		mg/Kg	1	3/25/2019 12:32:49 PM	43820
Ethylbenzene	ND	0.047		mg/Kg	1	3/25/2019 12:32:49 PM	43820
Xylenes, Total	ND	0.093		mg/Kg	1	3/25/2019 12:32:49 PM	43820
Surr: 4-Bromofluorobenzene	97.3	80-120		%Rec	1	3/25/2019 12:32:49 PM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-9 1ft

Project: JP White 4

Collection Date: 3/19/2019 11:05:00 AM

Lab ID: 1903991-028

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	14000	600		mg/Kg	200	3/27/2019 6:02:51 PM	43879
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	3/28/2019 12:49:40 AM	43833
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/28/2019 12:49:40 AM	43833
Surr: DNOP	97.4	70-130		%Rec	1	3/28/2019 12:49:40 AM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/25/2019 12:56:24 PM	43820
Surr: BFB	93.5	73.8-119		%Rec	1	3/25/2019 12:56:24 PM	43820
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/25/2019 12:56:24 PM	43820
Toluene	ND	0.049		mg/Kg	1	3/25/2019 12:56:24 PM	43820
Ethylbenzene	ND	0.049		mg/Kg	1	3/25/2019 12:56:24 PM	43820
Xylenes, Total	ND	0.098		mg/Kg	1	3/25/2019 12:56:24 PM	43820
Surr: 4-Bromofluorobenzene	98.4	80-120		%Rec	1	3/25/2019 12:56:24 PM	43820

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-9 2ft

Project: JP White 4

Collection Date: 3/19/2019 11:15:00 AM

Lab ID: 1903991-029

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	5700	300		mg/Kg	100	3/27/2019 6:40:04 PM	43879

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-9 4ft

Project: JP White 4

Collection Date: 3/19/2019 11:20:00 AM

Lab ID: 1903991-030

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	5400	300		mg/Kg	100	3/27/2019 6:52:28 PM	43879
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/28/2019 1:11:53 AM	43833
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/28/2019 1:11:53 AM	43833
Surr: DNOP	96.9	70-130		%Rec	1	3/28/2019 1:11:53 AM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/25/2019 6:01:51 PM	43828
Surr: BFB	92.0	73.8-119		%Rec	1	3/25/2019 6:01:51 PM	43828
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/25/2019 6:01:51 PM	43828
Toluene	ND	0.046		mg/Kg	1	3/25/2019 6:01:51 PM	43828
Ethylbenzene	ND	0.046		mg/Kg	1	3/25/2019 6:01:51 PM	43828
Xylenes, Total	ND	0.092		mg/Kg	1	3/25/2019 6:01:51 PM	43828
Surr: 4-Bromofluorobenzene	97.0	80-120		%Rec	1	3/25/2019 6:01:51 PM	43828

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-9 6ft

Project: JP White 4

Collection Date: 3/19/2019 11:40:00 AM

Lab ID: 1903991-031

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	540	60		mg/Kg	20	3/26/2019 4:53:00 PM	43879

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1903991**

Date Reported:

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-9 8ft

Project: JP White 4

Collection Date: 3/19/2019 11:55:00 AM

Lab ID: 1903991-032

Matrix: SOIL

Received Date: 3/21/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	370	60		mg/Kg	20	3/26/2019 5:05:24 PM	43879
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/28/2019 1:34:05 AM	43833
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/28/2019 1:34:05 AM	43833
Surr: DNOP	71.9	70-130		%Rec	1	3/28/2019 1:34:05 AM	43833
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/25/2019 6:25:22 PM	43828
Surr: BFB	93.0	73.8-119		%Rec	1	3/25/2019 6:25:22 PM	43828
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/25/2019 6:25:22 PM	43828
Toluene	ND	0.046		mg/Kg	1	3/25/2019 6:25:22 PM	43828
Ethylbenzene	ND	0.046		mg/Kg	1	3/25/2019 6:25:22 PM	43828
Xylenes, Total	ND	0.093		mg/Kg	1	3/25/2019 6:25:22 PM	43828
Surr: 4-Bromofluorobenzene	98.4	80-120		%Rec	1	3/25/2019 6:25:22 PM	43828

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative 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 at testcode		

Chain-of-Custody Record

Client: Safety & Environmental Solutions
 Mailing Address: 703 E. Clanton
Albuquerque NM 88240
 Phone #: 575-397-0570

email or Fax#: _____
 QA/QC Package: ☐ Level 4 (Full Validation)
☒ Standard ☐ Other _____
 Accreditation ☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Date	Time	Matrix	Sample Request ID
03/18	0155	S	71-6 1F
03/18	0205	S	71-6 2F
03/18	0210	S	71-6 4F
03/18	0230	S	71-6 6F
03/18	0240	S	71-6 8F
03/19	0835	S	71-7 1F
03/19	0845	S	71-7 2F
03/19	0900	S	71-7 4F
03/19	0910	S	71-7 6F
03/19	0920	S	71-7 8F

Date: 03/20 Time: 0800 Relinquished by: Sam Jun
 Date: 3/20/19 Time: 1900 Relinquished by: [Signature]

Turn-Around Time: 5 Day Rush
☐ Standard ☐ Rush
 Project Name: JP Utilities #4
 Project #: BAK-19-001

Project Manager: Allen
 Sampler: Son Jun
 On Ice: ☒ Yes ☐ No
 Sample Temperature: 4.1°C

Container Type and #	Preservative Type	HEAL No.
		1903991
		-013
		-014
		-015
		-016
		-017
		-018
		-019
		-020
		-021
		-022
		-023
		-024

Received by: [Signature] Date: 3/20/19 Time: 0900
 Received by: Vicki Date: 3/21/19 Time: 0905
EW

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request

BTEX + MTBE + TMBs (8021)	
BTEX + MTBE + TPH (Gas only)	X
TPH 8015B (GRO / DRO / MRO)	X
TPH (Method 418.1)	
EDB (Method 504.1)	
PAHs (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCBs	
8260B (VOA)	
8270 (Semi-VOA)	X
Chloride	X
1374 (8021)	X
Air Bubbles (Y or N)	

Remarks:

Chain-of-Custody Record

Client: Systech & Environmental

Solutions

Mailing Address: 703 E. Clifton

Albuquerque NM 87102

Phone #: 505-345-4107

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Date Time Matrix Sample Request ID

03/19	0935	S	71-8 150	
03/19	0935	S	71-8 250	
03/19	1005	S	71-8 450	
03/19	1025	S	71-8 650	
03/19	1035	S	71-8 850	
03/19	1105	S	71-9 150	
03/19	1115	S	71-9 250	
03/19	1120	S	71-9 450	
03/19	1140	S	71-9 650	
03/19	1155	S	71-9 850	

Date:	Time:	Relinquished by:
03/20	0800	<u>Sys Jour</u>
Date:	Time:	Relinquished by:
3/20/19	1900	<u>Sys Jour</u>

Turn-Around Time:

☐ Standard ☒ Rush

Project Name:

JP with 105-4

Project #:

BAC-19-001

Project Manager:

Allen Barb

Sampler:

Sys Jour

On Ice:

☒ Yes ☐ No

Sample Temperature: 4.1°C

Container Type and # HEAL No.

	1903991	
	-23-025	
	-24-026	
	-25-027	
	-26-028	
	-27-029	
	-28-030	
	-29-031	
	-30-032	
	-31-033	
	-32-034	

Received by:	Date	Time
<u>Sys Jour</u>	3/20/19	0900
Received by:	Date	Time
<u>W. Barb</u>	3/21/19	0905



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975

Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMBs (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	X
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	
8270 (Semi-VOA)	
Chloride	X
STX (8021)	X
Air Bubbles (Y or N)	

Remarks:

Appendix D

Site Photos

Site Photographs

JP White #004
Sec.18, TS 10S, R 29E



Aerial View of Spill Area



West side of lease road Test Trench 5



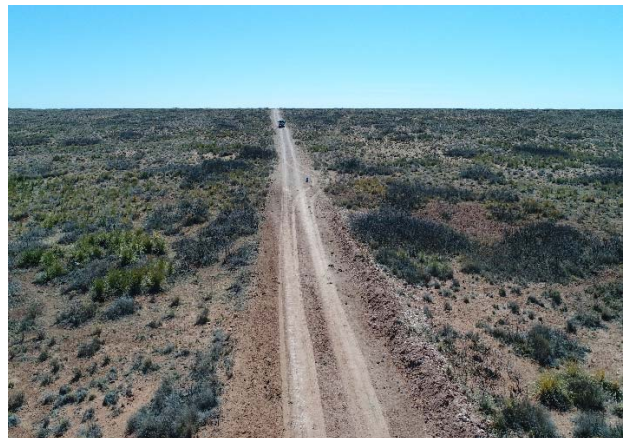
Previous Pad area that has been excavated



Test Trench 3 facing North



West Side of Lease road Test Trench 5



Location of spill crossing lease road

