



Chuck Johnston

REMEDIATION PLAN

Millman SB State #2

API NO. 30-015-24756

2RP-4983

Release Date: 9/11/2018

Unit Letter J, Section 16, Township 19S, Range 28E

Eddy County, New Mexico

December 3, 2018

Prepared By:



White Buffalo Environmental, Inc.

407 East Broadway

Hobbs, NM 88240

Phone: (575)738-0424

Fax: (575)738-0430



December 3, 2018

**Vanguard Natural Resources, Inc.
C/O Chuck Johnston
4001 Penbrook, Suite 201
Odessa, TX 79761**

**New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau – District II
C/O Maria Pruett, Environmental Specialist
811 S. First Street
Artesia, NM 88210**

**RE: Remediation Work Plan Request
Vanguard – Millman SB State #2
API No. 30-025-05430**

Dear Maria,

Vanguard Energy has retained White Buffalo Environmental to address the environmental concern detailed herein.

The site is located in Eddy County, New Mexico. The incident occurred due to an offset frac on a nearby well, that caused the separator to overpressure and release through the relief valve. A large area was sprayed by oil that covered approximately 304,920 sq. ft. of pasture and pad area.

Ground Water Data

WBE has conducted an extended groundwater study of the area and it has been determined that according to the New Mexico Office of the Engineer, the vadose zone depth at this release location is averaged at 167'bgs. The closest wells to this site are as follows:

**1,575 ft at a depth of 265'bgs
3,530 ft at a depth of 145'bgs
3,679 ft at a depth of 91'bgs**

Using the Table I, Closure Criteria for Soils Impacted by a Release Dated after 8/14/2018, the site falls under the site ranking of greater than 110'bgs. This site was delineated as to the new rule. The site ranking are as follows:

Depth	Constituent	Method	Limit
>100 feet	Chloride	EPA 300.0 OR SM4500 CL B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method	2,500 mg/kg
	GRO + DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

Background

The site had an accidental discharge of fluid associated with the Millman SB State #2. It was estimated that 28bbls of oil was released onto the pad and pasture area. No fluid was recovered due to this being a spray release only. This release occurred on September 11, 2018. On the day of the release a local backhoe contractor went out to the site to back-drag the location so that frac tanks could be brought in and placed on the location pad. The contaminated soil was stockpiled on location.

On October 30, 2018, White Buffalo Environmental personnel – initiated delineation of the site as per the Condition of Approval (COA) received from the NMOCD. Surface soil samples were collected and field tested for chloride, BTEX and TPH. The site was fully delineated, horizontally and vertically to show migration of chloride contamination. Soil samples were taken from forty-seven (47) sample points, starting at surface and then taken in 2' intervals by use of track-hoe. Each sample was tested for chloride and hydrocarbons. All samples came in under the required closure criteria for this release. Please see the surface samples on the sample data sheet. Surface samples are listed below:

SP1: 421 mg/kg chloride, no detection of BTEX or TPH
 SP2: 322 mg/kg chloride, no detection of BTEX or TPH
 SP3: 92 mg/kg chloride, no detection of BTEX or TPH
 SP4: 1018 mg/kg chloride, no detection of BTEX or TPH
 SP5: 515 mg/kg chloride, no detection of BTEX or TPH
 SP6: 72 mg/kg chloride, no detection of BTEX or TPH
 SP7: 1341 mg/kg chloride, no detection of BTEX or TPH
 SP8: 211 mg/kg chloride, no detection of BTEX or TPH
 SP9: 48 mg/kg chloride, no detection of BTEX or TPH
 SP10: 55 mg/kg chloride, no detection of BTEX or TPH
 SP11: 38 mg/kg chloride, no detection of BTEX or TPH
 SP12: 58 mg/kg chloride, no detection of BTEX or TPH
 SP13: 38 mg/kg chloride, no detection of BTEX or TPH
 SP14: 36 mg/kg chloride, no detection of BTEX or TPH
 SP15: 54 mg/kg chloride, no detection of BTEX or TPH
 SP16: 14 mg/kg chloride, no detection of BTEX or TPH
 SP17: 28 mg/kg chloride, no detection of BTEX or TPH

SP18: 34 mg/kg chloride, no detection of BTEX or TPH
SP19: 36 mg/kg chloride, no detection of BTEX or TPH
SP20: 48 mg/kg chloride, no detection of BTEX or TPH
SP21: 58 mg/kg chloride, no detection of BTEX or TPH
SP22: 60 mg/kg chloride, no detection of BTEX or TPH
SP23: 74 mg/kg chloride, no detection of BTEX or TPH
SP24: 42 mg/kg chloride, no detection of BTEX or TPH
SP25: 67 mg/kg chloride, no detection of BTEX or TPH
SP26: 46 mg/kg chloride, no detection of BTEX or TPH
SP27: 20 mg/kg chloride, no detection of BTEX or TPH
SP28: 64 mg/kg chloride, no detection of BTEX or TPH
SP29: 78 mg/kg chloride, no detection of BTEX or TPH
SP30: 38 mg/kg chloride, no detection of BTEX or TPH
SP31: 50 mg/kg chloride, no detection of BTEX or TPH
SP32: 32 mg/kg chloride, no detection of BTEX or TPH
SP33: 22 mg/kg chloride, no detection of BTEX or TPH
SP34: 36 mg/kg chloride, no detection of BTEX or TPH
SP35: 20 mg/kg chloride, no detection of BTEX or TPH
SP36: 12 mg/kg chloride, no detection of BTEX or TPH
SP37: 34 mg/kg chloride, no detection of BTEX or TPH
SP38: 24 mg/kg chloride, no detection of BTEX or TPH
SP39: 26 mg/kg chloride, no detection of BTEX or TPH
SP40: 68 mg/kg chloride, no detection of BTEX or TPH
SP41: 60 mg/kg chloride, no detection of BTEX or TPH
SP42: 34 mg/kg chloride, no detection of BTEX or TPH
SP43: 30 mg/kg chloride, no detection of BTEX or TPH
SP44: 30 mg/kg chloride, no detection of BTEX or TPH
SP45: 22 mg/kg chloride, no detection of BTEX or TPH
SP46: 30 mg/kg chloride, no detection of BTEX or TPH
SP47: 136 mg/kg chloride, no detection of BTEX or TPH

At this time vertical sampling continued on each sample point to verify that the surface staining had not migrated. WBE obtained 2'bgs samples and also determined that the contamination was well under the required levels. These samples were all taken to Cardinal Lab for confirmation. Please see the sample data sheet attached to this report. The 2'bgs confirmed samples are listed below:

SP1: 2'bgs – 384 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP2: 2'bgs – 320 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP3: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP4: 2'bgs – 768 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP5: 2'bgs – 352 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP6: 2'bgs – 48 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP7: 2'bgs – 1140 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP8: 2'bgs – 128 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP9: 2'bgs – 16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP10: 2'bgs – 48 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH

SP11: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, 11.4 mg/kg TPH
SP12: 2'bgs – 48 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP13: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP14: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, 12.9 mg/kg TPH
SP15: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP16: 2'bgs – <16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP17: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP18: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP19: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP20: 2'bgs – 48 mg/kg chlorides, <0.300 mg/kg BTEX, 16.4 mg/kg TPH
SP21: 2'bgs – 48 mg/kg chlorides, <0.300 mg/kg BTEX, 51.3 mg/kg TPH
SP22: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP23: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP24: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP25: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP26: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP27: 2'bgs – 16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP28: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP29: 2'bgs – 64 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP30: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP31: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP32: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP33: 2'bgs – 16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP34: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP35: 2'bgs – <16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP36: 2'bgs – <16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP37: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP38: 2'bgs – <16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP39: 2'bgs – 16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP40: 2'bgs – 64 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP41: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP42: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP43: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP44: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP45: 2'bgs – 16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP46: 2'bgs – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SP47: 2'bgs – 144 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH

The site was then fully delineated for horizontal extent. The horizontal delineation was sampled in 2' intervals until field samples indicated that we had reached the end of the horizontal investigation. SW1-SW15 were obtained and no contamination was found during the horizontal investigation. Please see the sample data sheet attached. The final sidewall samples were taken to Cardinal Lab and are listed below:

SW1: 2' – 16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW2: 2' – 48 mg/kg chlorides, <0.300 mg/kg BTEX, 426 mg/kg TPH
SW3: 2' – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH

SW4: 2' – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW5: 2' – <16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW6: 2' – <16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW7: 2' – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW8: 2' – <16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW9: 2' – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW10: 2' – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW11: 2' – 16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW12: 2' – <16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW13: 2' – <16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW14: 2' – 32 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH
SW15: 2' – 16 mg/kg chlorides, <0.300 mg/kg BTEX, <10 mg/kg TPH

Conclusion

With the delineation data, WBE suggest that only surface staining be remediated at this time. The stockpiled contaminated material that is currently on plastic will be hauled off to an approved disposal. The hydrocarbon sprayed mesquite will be removed and hauled off and both the location pad and pasture area will be back-dragged. The pasture area will be tilled and reseeded with BLM #3 seed for re-vegetation.

With a total of seven acres of sprayed surface, WBE would like to also use the delineation samples as closure samples. Thank you, for allowing White Buffalo Environmental to assist you in this matter. Please contact me with any questions and/or concerns.

Sincerely,



Natalie Gladden
Environmental & Regulatory Director
White Buffalo Environmental
407 East Broadway
Hobbs, NM 88240
Office (575) 738-0424
Fax (575) 738-0430
Cell (575) 390-6397
Email: natalie.gladden@whitebuffalo.com

Attachments:

- C-141 & COA
- Groundwater Data
- Sample Data and Remediation Site Map with Sample Points
- Lab Analyses
- Site Photos

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	NMAP1826969177
District RP	2RP-4983
Facility ID	N/A
Application ID	pMAP1826968910

Release Notification

Responsible Party

Responsible Party Vanguard Operating, LLC	OGRID 258350
Contact Name Jason Fisher	Contact Telephone 505—918-0523
Contact email jfisher@vnrenergy.com	Incident # (assigned by OCD) NMAP1826969177
Contact mailing address 4001 Penbrooke Suite 201 Odessa, TX 79762	

Location of Release Source

Latitude 32.658802

Longitude -104.1830902

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Millman SB State #2	Site Type Well Site
Date Release Discovered 9-11-2018	API# 30-015-24756

Unit Letter	Section	Township	Range	County
K	16	19S	28E	Eddy

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 28	Volume Recovered (bbls) 0
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release The well was hit by an offset frac causing the separator to overpressure and release through the relief valve. A large area was sprayed by oil on and off pad. The oil was estimated by calculating the displacement of the pipe string.

B&B Backhoe began scraping and stockpiling the soil. TRC will begin sampling to delineate the area and prepare a work plan.

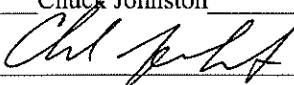

State of New Mexico
Oil Conservation Division

Incident ID	NMAP1826969177
District RP	2RP-4983
Facility ID	N/A
Application ID	pMAP1826968910

Was this a major release as defined by 19.15.29.7(A) NMAC? X Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? 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)? Yes by Chuck Johnston to Mike Bratcher by email 9-12-2018 5:04 pm.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u>Chuck Johnston</u>	Title: <u>EHS Operations Specialist</u>
Signature: 	Date: <u>9-24-2018</u>
email: <u>cjohnston@vnrenergy.com</u>	Telephone: <u>432-202-4771</u>
<u>OCD Only</u> Received by: 	
Date: <u>09/26/18</u>	

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	377' (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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	
District RP	
Facility ID	
Application ID	

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

Printed Name: Natalie Gladden Title: Environmental and Regulatory Director

Signature:  Date: 2/7/19

email: Natalie.Gladden@whitebuffalo.com Telephone: 575-390-6397

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

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: Natalie Gladden Title: Environmental and Regulatory Director

Signature: Natalie Gladden Date: 2/7/19

email: natalie.gladden@whitebuffalo.com Telephone: 575-390-6397

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

From: [Pruett, Maria, EMNRD](#)
To: [Bratcher, Mike, EMNRD](#); [Chuck Johnston](#)
Cc: [Mann, Ryan](#)
Subject: 2RP-4983 Millman SB State #2 C-141
Date: Wednesday, September 26, 2018 7:16:00 PM
Attachments: [2. OCD Signed Release Notification Millman SB State #2 C-141.pdf](#)
[image001.png](#)

Hello Mr. Johnston,

OCD has received your Release Notification C-141, thank you! This has been assigned 2RP-4983. Please let me know if you have any questions.

Best Regards,

Maria Pruett

Environmental Specialist
N.M. Oil Conservation Division
District 2
811 S. 1st Street
Artesia, NM 88210
Desk: 575 748-1283 X 101
Cell: 575 840-5963
Fax: 575748-9720

From: Chuck Johnston <cjohnston@vnrenergy.com>
Sent: Tuesday, September 25, 2018 9:17 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: Millman SB State #2 C-141

Mike, please find attached the C-141 form for the Millman SB State #2. We are scheduling TRC to sample and delineate.

Chuck Johnston
EHS / Operations Specialist
432-202-4771 Cell
432-248-8154 Office
4001 Penbrooke Ste. 201
Odessa, TX 79762



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 6	Q 4	Q 1	Q 3	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
CP 00361 POD1		CP	ED	3	1	3	09	19S	28E		576094	3615246*	1575	365	265	100
CP 00478 POD1		CP	ED	1	1	4	05	19S	28E		575300	3617036*	3530	312	145	167
CP 00502		CP	ED		1	1	18	19S	28E		573001	3614478*	3679	100	91	9
CP 00836 POD1		CP	ED		1	1	18	19S	28E		573001	3614478*	3679	110		
CP 00837 POD1		CP	ED		1	1	18	19S	28E		573001	3614478*	3679	110		
CP 00838 POD1		CP	ED		1	1	18	19S	28E		573001	3614478*	3679	110		

Average Depth to Water: **167 feet**

Minimum Depth: **91 feet**

Maximum Depth: **265 feet**

Record Count: 6

UTMNAD83 Radius Search (in meters):

Easting (X): 576609

Northing (Y): 3613757.25

Radius: 5000

*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.

10/12/18 3:21 PM

WATER COLUMN/ AVERAGE DEPTH TO
WATER




New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00478 POD1	1	1	4	05	19S	28E	575300	3617036* 

Driller License: 406

Driller Company: TIDWELL, CLYDE J.

Driller Name: CLYDE TIDWELL

Drill Start Date: 12/12/1969

Drill Finish Date: 12/23/1969

Plug Date:

Log File Date: 01/02/1970

PCW Rev Date: 11/01/1971

Source: Shallow

Pump Type: SUBMER

Pipe Discharge Size:

Estimated Yield: 7 GPM

Casing Size: 7.00

Depth Well: 312 feet

Depth Water: 145 feet

Water Bearing Stratifications:

Top Bottom Description

150 160 Sandstone/Gravel/Conglomerate

200 262 Sandstone/Gravel/Conglomerate

Casing Perforations:

Top Bottom

140 262

*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.

10/12/18 3:28 PM

POINT OF DIVERSION SUMMARY




New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00361 POD1	3	1	3	09	19S	28E	576094	3615246* 

Driller License:

Driller Company:

Driller Name: LOWE DRILLING CO.

Drill Start Date: 04/19/1971

Drill Finish Date: 05/13/1966

Plug Date:

Log File Date: 05/25/1971

PCW Rev Date:

Source: Shallow

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size: 8.63

Depth Well: 365 feet

Depth Water: 265 feet

Water Bearing Stratifications:

Top Bottom Description

265 365 Sandstone/Gravel/Conglomerate

Casing Perforations:

Top Bottom

288 348

*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.

10/12/18 3:23 PM

POINT OF DIVERSION SUMMARY

VANGUARD - MILLMAN SB STATE #2

Sample ID	Ft	Field Chl	Titration	PID	Lab-Chl	Lab-BTEX	Lab-GRO	Lab-DRO	Lab-MRO	TPH	Soil	Notes
SP1	SUR	402	421	0								
	2'	372	394	0	384	<0.300	<10	<10	<10	<10	CAL	
SP2	SUR	316	322	0								
	2'	298	302	0	320	<0.300	<10	<10	<10	<10	CAL	
SP3	SUR	81	92	0								
	2'	68	70	0	32	<0.300	<10	<10	<10	<10	CAL	
SP4	SUR	1005	1018	0								
	2'	801	824	0	768	<0.300	<10	<10	<10	<10	CAL	
SP5	SUR	506	515	0								
	2'	375	384	0	352	<0.300	<10	<10	<10	<10	CAL	
SP6	SUR	60	72	0								
	2'	58	62	0	48	<0.300	<10	<10	<10	<10	CAL	
SP7	SUR	1325	1341	0								
	2'	1105	1128	0	1140	<0.300	<10	<10	<10	<10	CAL	
SP8	SUR	206	211	0								
	2'	135	139	0	128	<0.300	<10	<10	<10	<10	CAL	
SP9	SUR	41	48	0								
	2'	28	19	0	16	<0.300	<10	<10	<10	<10	CAL	
SP10	SUR	52	55	0								
	2'	50	44	0	48	<0.300	<10	<10	<10	<10	CAL	
SP11	SUR	42	38	0								
	2'	35	38	0	32	<0.300	<10	11.4	<10	11.4	CAL	
SP12	SUR	55	58	0								
	2'	52	50	0	48	<0.300	<10	<10	<10	<10	CAL	
SP13	SUR	36	38	0								
	2'	34	36	0	32	<0.300	<10	<10	<10	<10	CAL	
SP14	SUR	32	36	0								
	2'	28	26	0	32	<0.300	<10	12.9	<10	12.9	CAL	
SP15	SUR	50	54	0								
	2'	50	48	0	32	<0.300	<10	<10	<10	<10	CAL	
SP16	SUR	<30	14	0								
	2'	<30	12	0	<16	<0.300	<10	<10	<10	<10	CAL	

SP17	SUR	<30	28	0								
	2'	<30	28	0	32	<0.300	<10	<10	<10	<10	CAL	
SP18	SUR	<30	34	0								
	2'	<30	30	0	32	<0.300	<10	<10	<10	<10	CAL	
SP19	SUR	<30	36	0								
	2'	<30	28	0	32	<0.300	<10	<10	<10	<10	CAL	
SP20	SUR	<30	48	0								
	2'	<30	42	0	48	<0.300	<10	16.4	<10	16.4	CAL	
SP21	SUR	52	58	0								
	2'	45	46	0	48	<0.300	<10	51.3	<10	51.3	CAL	
SP22	SUR	58	60	0								
	2'	38	42	0	32	<0.300	<10	<10	<10	<10	CAL	
SP23	SUR	70	74	0								
	2'	34	28	0	32	<0.300	<10	<10	<10	<10	CAL	
SP24	SUR	40	42	0								
	2'	40	38	0	32	<0.300	<10	<10	<10	<10	CAL	
SP25	SUR	72	76	0								
	2'	44	38	0	32	<0.300	<10	<10	<10	<10	CAL	
SP26	SUR	42	46	0								
	2'	37	34	0	32	<0.300	<10	<10	<10	<10	CAL	
SP27	SUR	<30	20	0								
	2'	<30	18	0	16	<0.300	<10	<10	<10	<10	CAL	
SP28	SUR	60	64	0								
	2'	36	34	0	32	<0.300	<10	<10	<10	<10	CAL	
SP29	SUR	86	78	0								
	2'	72	68	0	64	<0.300	<10	<10	<10	<10	CAL	
SP30	SUR	42	38	0								
	2'	38	36	0	32	<0.300	<10	<10	<10	<10	CAL	
SP31	SUR	46	50	0								
	2'	42	38	0	32	<0.300	<10	<10	<10	<10	CAL	
SP32	SUR	34	32	0								
	2'	28	26	0	32	<0.300	<10	<10	<10	<10	CAL	
SP33	SUR	<30	22	0								
	2'	18	14	0	16	<0.300	<10	<10	<10	<10	CAL	

SP34	SUR	40	36	0								
	2'	38	36	0	32	<0.300	<10	<10	<10	<10	CAL	
SP35	SUR	<30	20	0								
	2'	<30	18	0	<16	<0.300	<10	<10	<10	<10	CAL	
SP36	SUR	<30	12	0								
	2'	<30	12	0	<16	<0.300	<10	<10	<10	<10	CAL	
SP37	SUR	30	34	0								
	2'	28	26	0	32	<0.300	<10	<10	<10	<10	CAL	
SP38	SUR	<30	24	0								
	2'	<30	20	0	<16	<0.300	<10	<10	<10	<10	CAL	
SP39	SUR	<30	26	0								
	2'	<30	26	0	16	<0.300	<10	<10	<10	<10	CAL	
SP40	SUR	70	68	0								
	2'	54	50	0	64	<0.300	<10	<10	<10	<10	CAL	
SP41	SUR	62	60	0								
	2'	<30	28	0	32	<0.300	<10	<10	<10	<10	CAL	
SP42	SUR	<30	34	0								
	2'	<30	28	0	32	<0.300	<10	<10	<10	<10	CAL	
SP43	SUR	<30	30	0								
	2'	<30	28	0	32	<0.300	<10	<10	<10	<10	CAL	
SP44	SUR	<30	30	0								
	2'	<30	28	0	32	<0.300	<10	<10	<10	<10	CAL	
SP45	SUR	<30	22	0								
	2'	<30	14	0	16	<0.300	<10	<10	<10	<10	CAL	
SP46	SUR	<30	30	0								
	2'	<30	28	0	32	<0.300	<10	<10	<10	<10	CAL	
SP47	SUR	140	136	0								
	2'	108	122	0	144	<0.300	<10	<10	<10	<10	CAL	
SW1	SUR	<30	18	0								
	2'	<30	12	0	16	<0.300	<10	<10	<10	<10	CAL	
SW2	SUR	50	46	0								
	2'	42	38	0	48	<0.300	<10	288	138	426	CAL	
SW3	SUR	<30	30	0								
	2'	<30	30	0	32	<0.300	<10	<10	<10	<10	CAL	

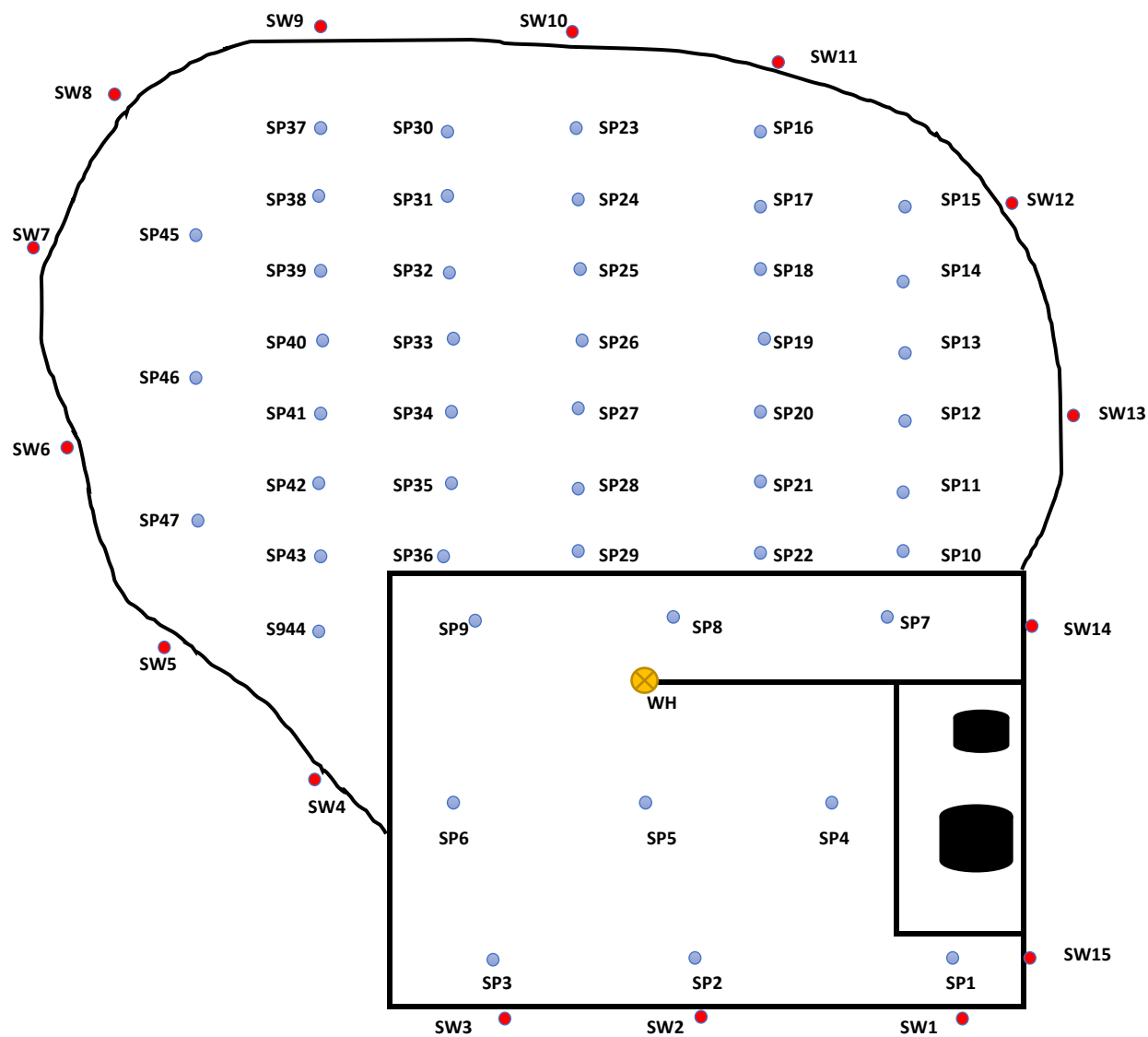
SW4	SUR	<30	28	0								
	2'	<30	26	0	32	<0.300	<10	<10	<10	<10	CAL	
SW5	SUR	<30	12	0								
	2'	<30	8	0	<16	<0.300	<10	<10	<10	<10	CAL	
SW6	SUR	52	50	0								
	2'	<30	20	0	<16	<0.300	<10	<10	<10	<10	CAL	
SW7	SUR	<30	30	0								
	2'	<30	30	0	32	<0.300	<10	<10	<10	<10	CAL	
SW8	SUR	<30	12	0								
	2'	<30	10	0	<16	<0.300	<10	<10	<10	<10	CAL	
SW9	SUR	<30	30	0								
	2'	<30	28	0	32	<0.300	<10	<10	<10	<10	CAL	
SW10	SUR	<30	28	0								
	2'	<30	28	0	32	<0.300	<10	<10	<10	<10	CAL	
SW11	SUR	<30	12	0								
	2'	<30	10	0	16	<0.300	<10	<10	<10	<10	CAL	
SW12	SUR	<30	14	0								
	2'	<30	12	0	<16	<0.300	<10	<10	<10	<10	CAL	
SW13	SUR	<30	20	0								
	2'	<30	18	0	<16	<0.300	<10	<10	<10	<10	CAL	
SW14	SUR	<30	30	0								
	2'	<30	30	0	32	<0.300	<10	<10	<10	<10	CAL	
SW15	SUR	<30	14	0								
	2'	<30	12	0	16	<0.300	<10	<10	<10	<10	CAL	

Vanguard Natural Resources

Millman SB State #2

Release date 9-11-18

2RP-4983



- Sample Points
- Side Wall Sample Points

November 12, 2018

NATALIE GLADDEN

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: MILLMAN SB ST #2

Enclosed are the results of analyses for samples received by the laboratory on 11/06/18 15:25.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 - 2' (H803191-01)

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTEX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.2 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	11/09/2018	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	175	87.6	200	13.0	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	182	90.8	200	13.7	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 94.0 % 41-142

Surrogate: 1-Chlorooctadecane 81.4 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 WHITE BUFFALO
 NATALIE GLADDEN
 8908 YALE AVE #210
 TULSA OK, 74137
 Fax To:

 Received: 11/06/2018
 Reported: 11/12/2018
 Project Name: MILLMAN SB ST #2
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 10/31/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 2 - 2' (H803191-02)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTEx	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 86.9 % 41-142

Surrogate: 1-Chlorooctadecane 86.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 3 - 2' (H803191-03)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTEx	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 83.1 % 41-142

Surrogate: 1-Chlorooctadecane 86.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 4 - 2' (H803191-04)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTEx	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 85.6 % 41-142

Surrogate: 1-Chlorooctadecane 85.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 5 - 2' (H803191-05)

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173		
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320		
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256		
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301		
Total BTEx	<0.300	0.300	11/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 87.8 % 41-142

Surrogate: 1-Chlorooctadecane 88.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 6 - 2' (H803191-06)

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173		
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320		
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256		
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301		
Total BTEx	<0.300	0.300	11/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.7 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 7 - 2' (H803191-07)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTEx	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.4 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1140	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 90.8 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 WHITE BUFFALO
 NATALIE GLADDEN
 8908 YALE AVE #210
 TULSA OK, 74137
 Fax To:

 Received: 11/06/2018
 Reported: 11/12/2018
 Project Name: MILLMAN SB ST #2
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/01/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 8 - 2' (H803191-08)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTEx	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.5 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 91.0 % 41-142

Surrogate: 1-Chlorooctadecane 91.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 9 - 2' (H803191-09)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTEx	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 93.1 % 41-142

Surrogate: 1-Chlorooctadecane 92.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 10 - 2' (H803191-10)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTEx	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 92.6 % 41-142

Surrogate: 1-Chlorooctadecane 92.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 11 - 2' (H803191-11)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/09/2018	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	11.4	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 95.2 % 41-142

Surrogate: 1-Chlorooctadecane 96.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 12 - 2' (H803191-12)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTEX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 95.4 % 41-142

Surrogate: 1-Chlorooctadecane 97.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 13 - 2' (H803191-13)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 91.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 14 - 2' (H803191-14)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	12.9	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 94.6 % 41-142

Surrogate: 1-Chlorooctadecane 94.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 15 - 2' (H803191-15)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTEx	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/09/2018	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 94.4 % 41-142

Surrogate: 1-Chlorooctadecane 94.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 16 - 2' (H803191-16)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/09/2018	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 94.3 % 41-142

Surrogate: 1-Chlorooctadecane 95.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 WHITE BUFFALO
 NATALIE GLADDEN
 8908 YALE AVE #210
 TULSA OK, 74137
 Fax To:

 Received: 11/06/2018
 Reported: 11/12/2018
 Project Name: MILLMAN SB ST #2
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/01/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 17 - 2' (H803191-17)

BTX 8021B			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72		
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5		
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND						

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 89.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 18 - 2' (H803191-18)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 93.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 19 - 2' (H803191-19)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	2.02	101	2.00	0.173	
Toluene*	<0.050	0.050	11/09/2018	ND	1.93	96.4	2.00	0.0320	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.85	92.6	2.00	0.256	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.81	96.8	6.00	0.301	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.2 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/09/2018	ND	400	100	400	0.00	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	176	88.0	200	9.72	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	192	96.1	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 20 - 2' (H803191-20)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/08/2018	ND	1.91	95.4	2.00	0.126		
Toluene*	<0.050	0.050	11/08/2018	ND	1.87	93.3	2.00	0.583		
Ethylbenzene*	<0.050	0.050	11/08/2018	ND	1.82	91.2	2.00	0.584		
Total Xylenes*	<0.150	0.150	11/08/2018	ND	5.51	91.8	6.00	0.251		
Total BTEx	<0.300	0.300	11/08/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	16.4	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 86.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/01/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 21 - 2' (H803191-21)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/08/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/08/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/08/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/08/2018	ND	5.51	91.8	6.00	0.251	
Total BTEX	<0.300	0.300	11/08/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	51.3	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 95.3 % 41-142

Surrogate: 1-Chlorooctadecane 95.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 23 - 2' (H803191-22)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/08/2018	ND	1.91	95.4	2.00	0.126		
Toluene*	<0.050	0.050	11/08/2018	ND	1.87	93.3	2.00	0.583		
Ethylbenzene*	<0.050	0.050	11/08/2018	ND	1.82	91.2	2.00	0.584		
Total Xylenes*	<0.150	0.150	11/08/2018	ND	5.51	91.8	6.00	0.251		
Total BTEX	<0.300	0.300	11/08/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 96.1 % 41-142

Surrogate: 1-Chlorooctadecane 85.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 24 - 2' (H803191-23)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/08/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/08/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/08/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/08/2018	ND	5.51	91.8	6.00	0.251	
Total BTEX	<0.300	0.300	11/08/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 99.3 % 41-142

Surrogate: 1-Chlorooctadecane 85.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 25 - 2' (H803191-24)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/08/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/08/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/08/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/08/2018	ND	5.51	91.8	6.00	0.251	
Total BTEX	<0.300	0.300	11/08/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 90.6 % 41-142

Surrogate: 1-Chlorooctadecane 76.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 26 - 2' (H803191-25)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/08/2018	ND	1.91	95.4	2.00	0.126		
Toluene*	<0.050	0.050	11/08/2018	ND	1.87	93.3	2.00	0.583		
Ethylbenzene*	<0.050	0.050	11/08/2018	ND	1.82	91.2	2.00	0.584		
Total Xylenes*	<0.150	0.150	11/08/2018	ND	5.51	91.8	6.00	0.251		
Total BTEx	<0.300	0.300	11/08/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 92.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 27 - 2' (H803191-26)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/08/2018	ND	1.91	95.4	2.00	0.126		
Toluene*	<0.050	0.050	11/08/2018	ND	1.87	93.3	2.00	0.583		
Ethylbenzene*	<0.050	0.050	11/08/2018	ND	1.82	91.2	2.00	0.584		
Total Xylenes*	<0.150	0.150	11/08/2018	ND	5.51	91.8	6.00	0.251		
Total BTEX	<0.300	0.300	11/08/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 93.8 % 37.6-147

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Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 28 - 2' (H803191-27)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 95.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 29 - 2' (H803191-28)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 93.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 30 - 2' (H803191-29)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 113 % 41-142

Surrogate: 1-Chlorooctadecane 99.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 WHITE BUFFALO
 NATALIE GLADDEN
 8908 YALE AVE #210
 TULSA OK, 74137
 Fax To:

 Received: 11/06/2018
 Reported: 11/12/2018
 Project Name: MILLMAN SB ST #2
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/02/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 31 - 2' (H803191-30)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126		
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583		
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584		
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251		
Total BTEx	<0.300	0.300	11/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 93.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 32 - 2' (H803191-31)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 93.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 33 - 2' (H803191-32)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 96.8 % 41-142

Surrogate: 1-Chlorooctadecane 86.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 WHITE BUFFALO
 NATALIE GLADDEN
 8908 YALE AVE #210
 TULSA OK, 74137
 Fax To:

 Received: 11/06/2018
 Reported: 11/12/2018
 Project Name: MILLMAN SB ST #2
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/05/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 34 - 2' (H803191-33)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126		
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583		
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584		
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251		
Total BTEx	<0.300	0.300	11/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 95.5 % 41-142

Surrogate: 1-Chlorooctadecane 88.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 35 - 2' (H803191-34)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/09/2018	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 36 - 2' (H803191-35)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 95.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 37 - 2' (H803191-36)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2018	ND	180	90.2	200	0.470	
DRO >C10-C28*	<10.0	10.0	11/08/2018	ND	206	103	200	5.82	
EXT DRO >C28-C36	<10.0	10.0	11/08/2018	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 91.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 38 - 2' (H803191-37)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/09/2018	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	<10.0	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 90.4 % 41-142

Surrogate: 1-Chlorooctadecane 86.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 39 - 2' (H803191-38)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/09/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	<10.0	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 85.8 % 41-142

Surrogate: 1-Chlorooctadecane 82.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 40 - 2' (H803191-39)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.91	95.4	2.00	0.126	
Toluene*	<0.050	0.050	11/09/2018	ND	1.87	93.3	2.00	0.583	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.82	91.2	2.00	0.584	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.51	91.8	6.00	0.251	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/09/2018	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	<10.0	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 92.5 % 41-142

Surrogate: 1-Chlorooctadecane 87.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 41 - 2' (H803191-40)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.63	81.5	2.00	2.61	
Toluene*	<0.050	0.050	11/09/2018	ND	1.76	88.1	2.00	1.24	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.84	92.2	2.00	0.505	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.56	92.7	6.00	0.118	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/09/2018	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	<10.0	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 89.1 % 41-142

Surrogate: 1-Chlorooctadecane 85.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 42 - 2' (H803191-41)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.63	81.5	2.00	2.61	
Toluene*	<0.050	0.050	11/09/2018	ND	1.76	88.1	2.00	1.24	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.84	92.2	2.00	0.505	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.56	92.7	6.00	0.118	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/09/2018	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	<10.0	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 83.5 % 41-142

Surrogate: 1-Chlorooctadecane 78.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 43 - 2' (H803191-42)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.63	81.5	2.00	2.61	
Toluene*	<0.050	0.050	11/09/2018	ND	1.76	88.1	2.00	1.24	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.84	92.2	2.00	0.505	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.56	92.7	6.00	0.118	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/09/2018	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	<10.0	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 84.2 % 41-142

Surrogate: 1-Chlorooctadecane 82.1 % 37.6-147

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Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 44 - 2' (H803191-43)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.63	81.5	2.00	2.61	
Toluene*	<0.050	0.050	11/09/2018	ND	1.76	88.1	2.00	1.24	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.84	92.2	2.00	0.505	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.56	92.7	6.00	0.118	
Total BTEX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/09/2018	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	<10.0	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 83.1 % 41-142

Surrogate: 1-Chlorooctadecane 80.5 % 37.6-147

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Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 45 - 2' (H803191-44)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.63	81.5	2.00	2.61	
Toluene*	<0.050	0.050	11/09/2018	ND	1.76	88.1	2.00	1.24	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.84	92.2	2.00	0.505	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.56	92.7	6.00	0.118	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/09/2018	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	<10.0	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 83.9 % 41-142

Surrogate: 1-Chlorooctadecane 81.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 46 - 2' (H803191-45)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.63	81.5	2.00	2.61	
Toluene*	<0.050	0.050	11/09/2018	ND	1.76	88.1	2.00	1.24	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.84	92.2	2.00	0.505	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.56	92.7	6.00	0.118	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/09/2018	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	<10.0	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 84.8 % 41-142

Surrogate: 1-Chlorooctadecane 82.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/06/2018
Reported: 11/12/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 47 - 2' (H803191-46)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2018	ND	1.63	81.5	2.00	2.61	
Toluene*	<0.050	0.050	11/09/2018	ND	1.76	88.1	2.00	1.24	
Ethylbenzene*	<0.050	0.050	11/09/2018	ND	1.84	92.2	2.00	0.505	
Total Xylenes*	<0.150	0.150	11/09/2018	ND	5.56	92.7	6.00	0.118	
Total BTX	<0.300	0.300	11/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	11/09/2018	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/09/2018	ND	172	86.1	200	7.44	
DRO >C10-C28*	<10.0	10.0	11/09/2018	ND	197	98.3	200	8.45	
EXT DRO >C28-C36	<10.0	10.0	11/09/2018	ND					

Surrogate: 1-Chlorooctane 80.3 % 41-142

Surrogate: 1-Chlorooctadecane 76.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



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

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

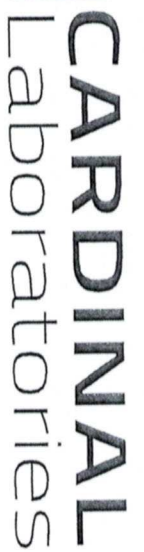
Company Name: <u>ANSWERED</u>		P.O. #:		BILL TO		ANALYSIS REQUEST																											
Project Manager:		Company: <u>White Buffalo</u>																															
Address:		Attn: <u>Steve McFarlin</u>																															
City:		State:		Zip:																													
Phone #:		Fax #:		Address: <u>8908 Yule Ave #210</u>																													
Project #:		Project Owner:		City: <u>Julia</u>																													
Project Name: <u>Newman SB St. 2</u>		State: <u>OK</u>		Zip: <u>74137</u>																													
Project Location:		Phone #: <u>918-660-0999</u>		Fax #:																													
Sample Name: <u>HOVARD CUETO</u>		FOR LAB USE ONLY		PRESERV.		SAMPLING																											
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER																							
				SOIL		OIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:																	
11		SP11-21		G		✓		✓		✓		✓		11/1/8 10:50		✓		✓		✓													
12		SP12-21		G		✓		✓		✓		✓		✓		11/1/8 9:59		✓		✓		✓											
13		SP13-21		G		✓		✓		✓		✓		✓		11/1/8 11:17		✓		✓		✓											
14		SP14-21		G		✓		✓		✓		✓		✓		11/1/8 11:41		✓		✓		✓											
15		SP15-21		G		✓		✓		✓		✓		✓		11/1/8 11:59		✓		✓		✓											
16		SP16-21		G		✓		✓		✓		✓		✓		11/1/8 1:30		✓		✓		✓											
17		SP17-21		G		✓		✓		✓		✓		✓		11/1/8 1:43		✓		✓		✓											
18		SP18-21		G		✓		✓		✓		✓		✓		11/1/8 11:56		✓		✓		✓											
19		SP19-21		G		✓		✓		✓		✓		✓		11/1/8 2:00		✓		✓		✓											
20		SP20-21		G		✓		✓		✓		✓		✓		11/1/8 2:14		✓		✓		✓											

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Relinquished By: <u>[Signature]</u>		Date: <u>11-6-18</u>		Received By: <u>[Signature]</u>		Date: <u>11-6-18</u>	
Time: <u>15:25</u>		Time: <u>15:25</u>		Time: <u>15:25</u>		Time: <u>15:25</u>	
Relinquished By:		Date:		Received By:		Date:	
Time:		Time:		Time:		Time:	

Delivered By: (Circle One)		Sample Condition		CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: <u>- 1.72 #497</u>		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		<u>TO</u>	

REMARKS: email: natalie.ekaden@whitebuffalo.com
Monique Cueto@whitebuffalo.com



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

Page 51 of 53

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

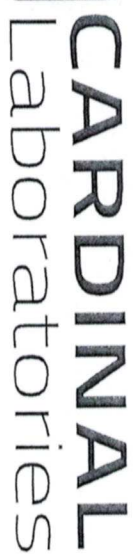
Company Name: <u>Vancouver</u>		P.O. #:		BILL TO		ANALYSIS REQUEST																													
Project Manager:		Company: <u>White Buffalo</u>																																	
Address:		City: <u>Stevie McFarlin</u>		Address: <u>8908 Yule Ave #210</u>																															
City:		State: <u>TX</u>		Zip: <u>79137</u>																															
Phone #:		Fax #:		City: <u>Julia</u>																															
Project #:		Project Owner:		State: <u>OK</u>		Zip: <u>74131</u>																													
Project Name: <u>William SB St.2</u>		Phone #:		Phone #: <u>918-660-0999</u>																															
Project Location:		Fax #:																																	
Sample Name: <u>House Creek</u>		FOR LAB USE ONLY																																	
Lab I.D. <u>H803191</u>		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		CHLORIDES		BTEX		TPH	
31		SP 32-2'		G																															
32		SP 33-2'		G																															
33		SP 34-2'		G																															
34		SP 35-2'		G																															
35		SP 36-2'		G																															
36		SP 37-2'		G																															
37		SP 38-2'		G																															
38		SP 39-2'		G																															
39		SP 40-2'		G																															
40		SP 41-2'		G																															

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Relinquished By: <u>[Signature]</u>		Date: <u>11-6-18</u>		Received By: <u>[Signature]</u>		Date: <u>11-6-18</u>		Time: <u>1:25</u>		Time: <u>1:25</u>	
Reinquinshed By: <u>[Signature]</u>		Date: <u>11-6-18</u>		Received By: <u>[Signature]</u>		Date: <u>11-6-18</u>		Time: <u>1:25</u>		Time: <u>1:25</u>	

Delivered By: (Circle One)		Sample Condition		CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: <u>-1.7%</u>		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		<u>STG</u>	

REMARKS: email: natalie.gladson@whitebuffalo.com
Monique Cueto @ whitebuffalo.com



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

Cardinal cannot accept verbal change Place for written change to 15751 202-2226

November 14, 2018

NATALIE GLADDEN

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: MILLMAN SB ST #2

Enclosed are the results of analyses for samples received by the laboratory on 11/08/18 14:40.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/08/2018
Reported: 11/14/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/06/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 1 - 2' (H803240-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73	
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98	
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22	
Total BTX	<0.300	0.300	11/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 91.1 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/08/2018
Reported: 11/14/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/06/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 2 - 2' (H803240-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73		
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98		
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81		
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22		
Total BTEx	<0.300	0.300	11/13/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	288	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	138	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 96.1 % 41-142

Surrogate: 1-Chlorooctadecane 99.5 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/08/2018
Reported: 11/14/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/06/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 3 - 2' (H803240-03)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73	
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98	
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22	
Total BTEx	<0.300	0.300	11/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/14/2018	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 91.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 WHITE BUFFALO
 NATALIE GLADDEN
 8908 YALE AVE #210
 TULSA OK, 74137
 Fax To:

 Received: 11/08/2018
 Reported: 11/14/2018
 Project Name: MILLMAN SB ST #2
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/06/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SW 4 - 2' (H803240-04)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73	
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98	
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22	
Total BTEx	<0.300	0.300	11/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/14/2018	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 98.5 % 41-142

Surrogate: 1-Chlorooctadecane 90.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/08/2018
Reported: 11/14/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/06/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 5 - 2' (H803240-05)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73	
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98	
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22	
Total BTEx	<0.300	0.300	11/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 96.3 % 41-142

Surrogate: 1-Chlorooctadecane 89.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 WHITE BUFFALO
 NATALIE GLADDEN
 8908 YALE AVE #210
 TULSA OK, 74137
 Fax To:

 Received: 11/08/2018
 Reported: 11/14/2018
 Project Name: MILLMAN SB ST #2
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/06/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SW 6 - 2' (H803240-06)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73	
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98	
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22	
Total BTX	<0.300	0.300	11/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 95.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 WHITE BUFFALO
 NATALIE GLADDEN
 8908 YALE AVE #210
 TULSA OK, 74137
 Fax To:

 Received: 11/08/2018
 Reported: 11/14/2018
 Project Name: MILLMAN SB ST #2
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/06/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SW 7 - 2' (H803240-07)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73	
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98	
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22	
Total BTX	<0.300	0.300	11/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/14/2018	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 94.0 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/08/2018
Reported: 11/14/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/06/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 8 - 2' (H803240-08)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73	
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98	
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22	
Total BTEx	<0.300	0.300	11/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 98.2 % 41-142

Surrogate: 1-Chlorooctadecane 90.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/08/2018
Reported: 11/14/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/06/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 9 - 2' (H803240-09)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73	
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98	
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22	
Total BTEx	<0.300	0.300	11/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/14/2018	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 97.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 WHITE BUFFALO
 NATALIE GLADDEN
 8908 YALE AVE #210
 TULSA OK, 74137
 Fax To:

 Received: 11/08/2018
 Reported: 11/14/2018
 Project Name: MILLMAN SB ST #2
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/07/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SW 10 - 2' (H803240-10)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73	
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98	
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22	
Total BTX	<0.300	0.300	11/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/14/2018	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 95.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/08/2018
Reported: 11/14/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/07/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 11 - 2' (H803240-11)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73	
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98	
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22	
Total BTEx	<0.300	0.300	11/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 97.8 % 41-142

Surrogate: 1-Chlorooctadecane 91.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 WHITE BUFFALO
 NATALIE GLADDEN
 8908 YALE AVE #210
 TULSA OK, 74137
 Fax To:

 Received: 11/08/2018
 Reported: 11/14/2018
 Project Name: MILLMAN SB ST #2
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/07/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SW 12 - 2' (H803240-12)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2018	ND	2.24	112	2.00	5.73	
Toluene*	<0.050	0.050	11/13/2018	ND	2.28	114	2.00	5.98	
Ethylbenzene*	<0.050	0.050	11/13/2018	ND	2.23	112	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/13/2018	ND	6.57	110	6.00	6.22	
Total BTEX	<0.300	0.300	11/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 92.7 % 41-142

Surrogate: 1-Chlorooctadecane 79.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/08/2018
Reported: 11/14/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/07/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 13 - 2' (H803240-13)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2018	ND	2.48	124	2.00	1.94	
Toluene*	<0.050	0.050	11/14/2018	ND	2.41	120	2.00	1.28	
Ethylbenzene*	<0.050	0.050	11/14/2018	ND	2.35	118	2.00	2.21	
Total Xylenes*	<0.150	0.150	11/14/2018	ND	7.33	122	6.00	1.96	
Total BTEX	<0.300	0.300	11/14/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 98.8 % 41-142

Surrogate: 1-Chlorooctadecane 83.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 WHITE BUFFALO
 NATALIE GLADDEN
 8908 YALE AVE #210
 TULSA OK, 74137
 Fax To:

 Received: 11/08/2018
 Reported: 11/14/2018
 Project Name: MILLMAN SB ST #2
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/07/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SW 14 - 2' (H803240-14)

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2018	ND	2.48	124	2.00	1.94		
Toluene*	<0.050	0.050	11/14/2018	ND	2.41	120	2.00	1.28		
Ethylbenzene*	<0.050	0.050	11/14/2018	ND	2.35	118	2.00	2.21		
Total Xylenes*	<0.150	0.150	11/14/2018	ND	7.33	122	6.00	1.96		
Total BTEx	<0.300	0.300	11/14/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 99.5 % 41-142

Surrogate: 1-Chlorooctadecane 85.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/08/2018
Reported: 11/14/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/07/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 15 - 2' (H803240-15)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2018	ND	2.48	124	2.00	1.94	
Toluene*	<0.050	0.050	11/14/2018	ND	2.41	120	2.00	1.28	
Ethylbenzene*	<0.050	0.050	11/14/2018	ND	2.35	118	2.00	2.21	
Total Xylenes*	<0.150	0.150	11/14/2018	ND	7.33	122	6.00	1.96	
Total BTX	<0.300	0.300	11/14/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/14/2018	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 93.8 % 41-142

Surrogate: 1-Chlorooctadecane 78.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

WHITE BUFFALO
NATALIE GLADDEN
8908 YALE AVE #210
TULSA OK, 74137
Fax To:

Received: 11/08/2018
Reported: 11/14/2018
Project Name: MILLMAN SB ST #2
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/07/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 22 - 2' (H803240-16)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2018	ND	2.48	124	2.00	1.94	
Toluene*	<0.050	0.050	11/14/2018	ND	2.41	120	2.00	1.28	
Ethylbenzene*	<0.050	0.050	11/14/2018	ND	2.35	118	2.00	2.21	
Total Xylenes*	<0.150	0.150	11/14/2018	ND	7.33	122	6.00	1.96	
Total BTX	<0.300	0.300	11/14/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/14/2018	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2018	ND	190	95.1	200	0.608	
DRO >C10-C28*	<10.0	10.0	11/10/2018	ND	195	97.3	200	0.466	
EXT DRO >C28-C36	<10.0	10.0	11/10/2018	ND					

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 84.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS1	Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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**VANGUARD
MILLMAN SB STATE #2
BEFORE PHOTOS**



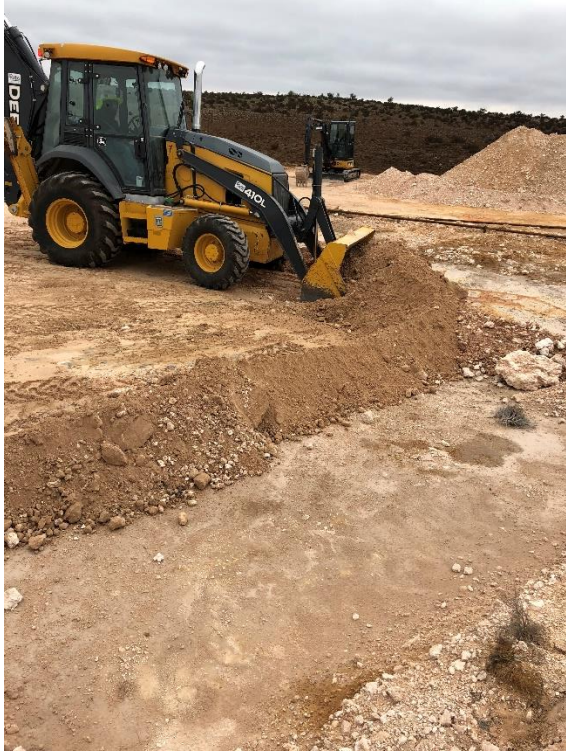
**VANGUARD
MILLMAN SB STATE #2
BEFORE PHOTOS**



**VANGUARD
MILLMAN SB STATE #2
DURING PHOTOS**



**VANGUARD
MILLMAN SB STATE #2
DURING PHOTOS**



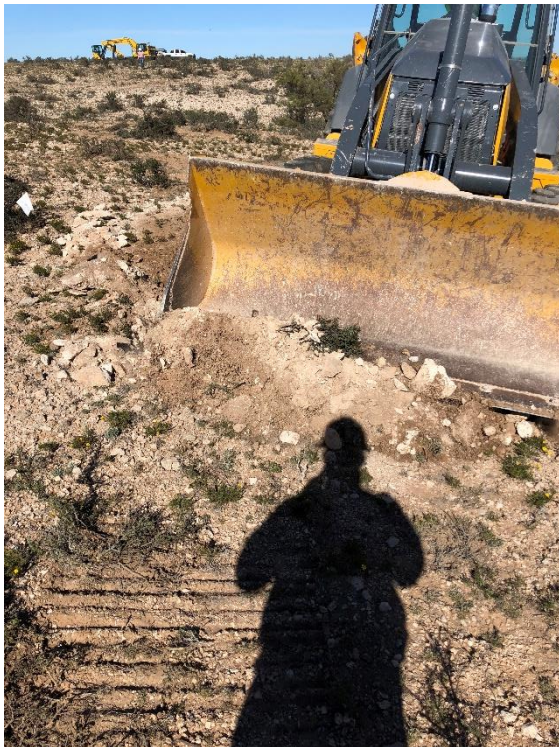
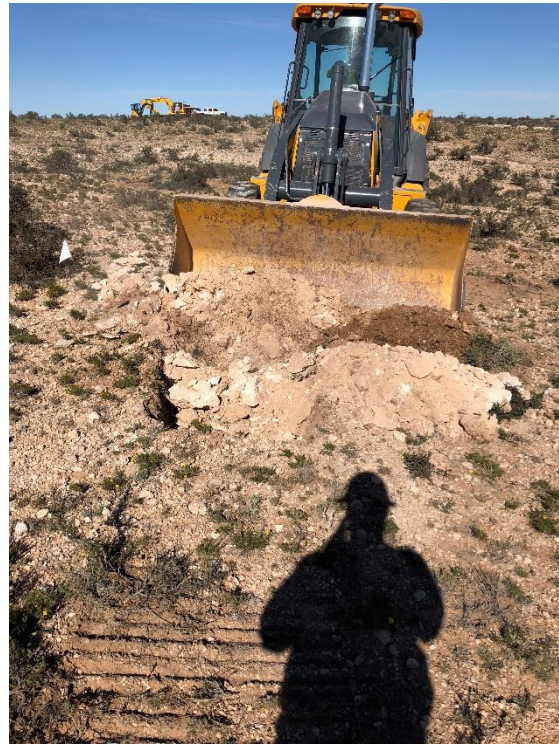
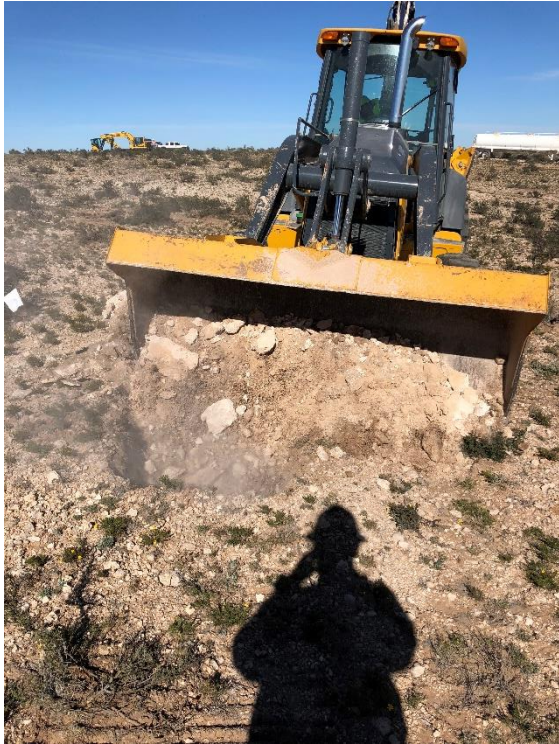
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MILLMAN SB STATE #2
DURING PHOTOS**



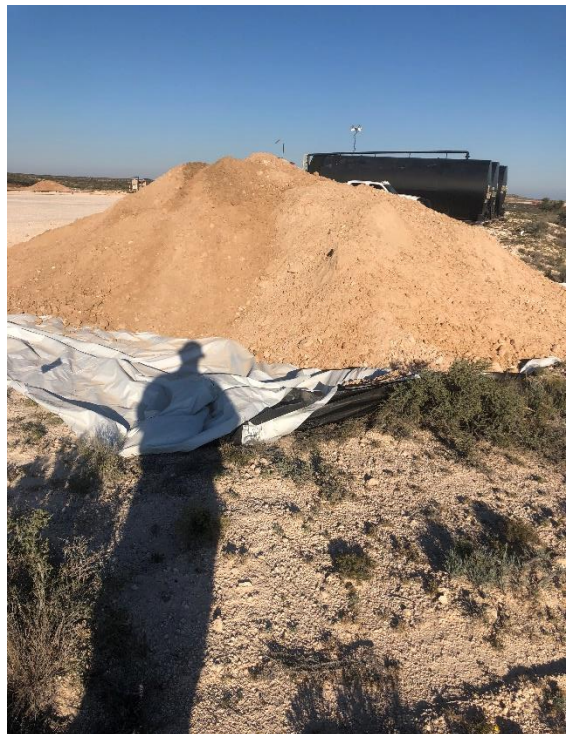
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MILLMAN SB STATE #2
DURING PHOTOS**



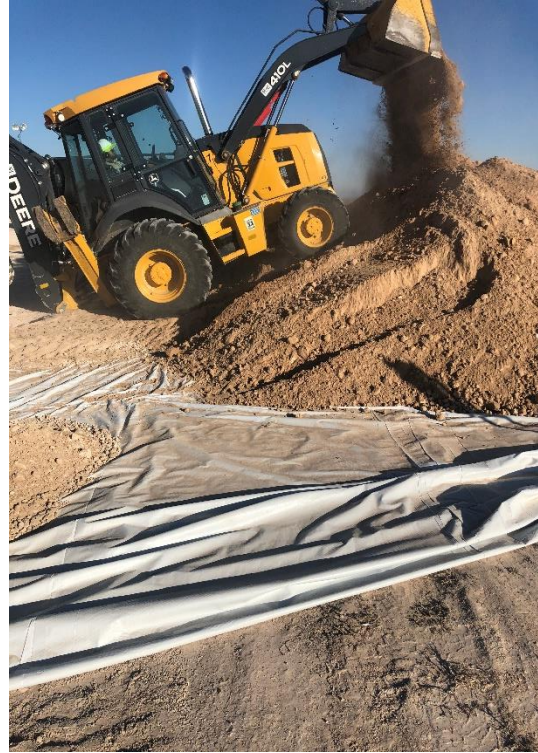
**VANGUARD
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