

Callie Karrigan

Huskey-Mckay Federal No.1 Remediation Closure Report

2RP-5131

API NO. 30-005-61616

Release Date: December 14, 2018

Unit Letter O, Section 18, Township 8 South, Range 26 East

Chaves County

1/30/2019

Prepared By:



White Buffalo Environmental, Inc. 407 East Broadway Hobbs, NM 88240 Phone: (575)738-0424 Fax: (575)738-0430



January 30, 2019

Marathon Oil Company C/O Callie Karrigan 4111 S. Tidwell Street Carlsbad, NM 88220

State of New Mexico Oil Conservation Division C/O Mike Bratcher District II 811 S. First Street Artesia, NM 88210

Bureau of Land Management C/O Harley Davis 2909 West Second Street Roswell, NM 88201

RE: Huskey-Mckay Federal No. 1 API No: 30-005-61616

Dear Mr. Bratcher and Mr. Davis,

Marathon Oil Company retained White Buffalo Environmental to address the above environmental release for the site detailed herein.

The site is located in Chaves County. The Huskey-McKay Federal No. 1 release occurred on December 4, 2018. Approximately 6.47bbls of crude oil was released in the pasture area due to a 3rd party contractor who was in the process of flushing the flowline during a wellsite abandonment activity, when one of the fittings failed. The fitting was found to be corroded. No fluid was recovered due to the release occurring in a sandy loom area.

WBE immediately arrived onsite, when notified of the release. The crews working on the line made the appropriate repairs, while WBE began to move the saturated soil from the release point and stockpiled on plastic to minimize the environmental impact of this release. Upon site

assessment, there were two different release points, one labelled North release and the second labelled South release.

Groundwater Data

WBE conducted a groundwater study of the area and has determined that according to the New Mexico Office of the State Engineer the ground water depth in this area is averaged at 43'bgs. With the data collected during the ground water research, all wells within this area range from 12'bgs to 80'bgs. The 12'bgs well is labelled RA-04747. Please see the attached Water Column/Average Depth to Water Sheet.

Reclamation and Remediation Procedures

Immediately upon arrival, WBE assessed the release, measured, mapped, photographed and called in an Emergency One-call. Once the one-call was cleared WBE staff began to sample the surface of impacted area. At this time the heavy saturated soil was excavated and placed on plastic. Further delineation began December 5th of 2018.

The release area was fully delineated, vertically and horizontally to find the extent of the contaminated area. The Closure Criteria for Soils Impacted by a Release is below, based on ground water depth of under 50'bgs.

| DGW | Constituent | Method | Limit |
|------|-----------------------|----------------------------|-----------|
| ≤ 50 | Chloride | EPA 300.0 OR SM4500 CLB | 600 mg/kg |
| | TPH (GRO + DRO + MRO) | EPA SW-846 METHOD 8015M | 100 mg/kg |
| | GRO + DRO | EPA SW-846 METHOD 8015M | 50 mg/kg |
| | | EPA SW-846 METHOD 8021B OR | |
| | BTEX | 8260B | 10 mg/kg |
| | | EPA SW-846 METHOD 8021B OR | |
| | Benzene | 8260B | 10 mg/kg |

Based on the sample data obtained for this sampling event, all sample points were under the required limits. Please see the sample data, site map and lab analysis attached to this report.

Delineation

On December 5th 2018 White Buffalo Environmental personnel-initiated delineation of this site as per the Condition of Approval (COA) received from the NMOCD. The visually stained area was measured and surface soil samples were collected and field tested for chloride and BTEX. Field testing indicated that soil was impacted, therefore horizontal and vertical delineation of the site was completed to closure limits for the closure criteria for 50'bgs. Please find the sampling data and lab analyses for this site attached to this report herein.

Remediation

The impacted soil was excavated and stockpiled on plastic. WBE then hauled a total of 360 cubic yards to R360 for disposal. Both release areas depth of excavation varied from 4' to 6'bgs. Once the contamination was removed from the impacted area, Harley Davis with the BLM was notified of final sampling event and could not make it to the site. Final samples were extracted then taken to Cardinal Lab for confirmation. The closure sample data can be found in the sampling data sheet for this site as well on the attached analytical reports. Once verified by Cardinal labs backfilling of the excavation area was backfill using 84 yards of caliche/topsoil mix from left over soil from the reclaim from the well pad Huskey-McKay Federal #001. At which point 276 cubic yards of topsoil was purchased and hauled to site from the Cooper Ranch.

The area was fully backfilled and contoured to its natural state. The area was ripped and then reseeded with special seed requested from Cooper Ranch. Which consisted of Blue Grama, Sand Drop Seed, Plains Bristle Grass, Buckwheat, Four-Wing Salt Brush, Desert Globe Mallow and Alkali Sacaton purchased from Curtis and Curtis. Once hand broadcasted, the area was then watered and re-ripped to hold seed in place for revegetation purposes.

Closure Request

White Buffalo Environmental, along with Marathon Oil Permian, LLC would like to request the site closure for the release for 2RP-5131 dated December 4, 2018. Please find all the supporting documentation along with the final C-141 for this release attached herein.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

laden atali

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

Attachments: C141 Groundwater Data Sampling Data and Lab Analyses Site Diagram and Site Photographs Photographs Seed Tag Final C-141 District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources Department

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

)

| Incident ID | |
|----------------|--|
| District RP | |
| Facility ID | |
| Application ID | |

Release Notification

Responsible Party

| Responsible Party | OGRID |
|-------------------------|------------------------------|
| Contact Name | Contact Telephone |
| Contact email | Incident # (assigned by OCD) |
| Contact mailing address | |

Location of Release Source

| Latitude | |
|----------|--|
| | |

(NAD 83 in decimal degrees to 5 decimal places)

| Site Name | Site Type |
|-------------------------|----------------------|
| Date Release Discovered | API# (if applicable) |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| | | | | |

Surface Owner: State Federal Tribal Private (Name: _

Nature and Volume of Release

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

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

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

Initial Response

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

The source of the release has been stopped.

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

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

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

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

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

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

| Printed Name: | Title: |
|----------------------------|------------|
| Signature: Callin Karrigan | Date: |
| email: | Telephone: |
| | |
| OCD Only | |
| Received by: | Date: |

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| Incident ID | |
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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? | (ft bgs) |
|---|------------|
| Did this release impact groundwater or surface water? | 🗌 Yes 🗌 No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | 🗌 Yes 🗌 No |
| Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)? | 🗌 Yes 🗌 No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? | 🗌 Yes 🗌 No |
| Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? | 🗌 Yes 🗌 No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | 🗌 Yes 🗌 No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? | 🗌 Yes 🗌 No |
| Are the lateral extents of the release within 300 feet of a wetland? | 🗌 Yes 🗌 No |
| Are the lateral extents of the release overlying a subsurface mine? | 🗌 Yes 🗌 No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | 🗌 Yes 🗌 No |
| Are the lateral extents of the release within a 100-year floodplain? | 🗌 Yes 🗌 No |
| Did the release impact areas not on an exploration, development, production, or storage site? | 🗌 Yes 🗌 No |

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

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

| | Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. |
|---|---|
| | Field data |
| | Data table of soil contaminant concentration data |
| | Depth to water determination |
| | Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release |
| | Boring or excavation logs |
| | Photographs including date and GIS information |
| Ц | 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.

| Form C-141 | State of New Mexico | Incident ID |
|---|---|---|
| Page 4 | Oil Conservation Division | District RP |
| | | Facility ID |
| | | Application ID |
| regulations all operators a public health or the enviro failed to adequately inves addition, OCD acceptance and/or regulations. Printed Name: Signature: <u>Calle Kanigan</u> email: | re required to report and/or file certain release notifi onment. The acceptance of a C-141 report by the OC tigate and remediate contamination that pose a threa e of a C-141 report does not relieve the operator of re | est of my knowledge and understand that pursuant to OCD rules and cations and perform corrective actions for releases which may endanger CD does not relieve the operator of liability should their operations have t to groundwater, surface water, human health or the environment. In esponsibility for compliance with any other federal, state, or local laws Title: Date: Telephone: |
| OCD Only | | |
| Received by: | | Date: |

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<u>Remediation Plan Checklist</u>: Each of the following items must be included in the plan.

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Remediation 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) | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|
| <u>Deferral Requests Only</u> : Each of the following items must be conj | firmed 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 rules and regulations all operators are required to report and/or file ce which may endanger public health or the environment. The acceptan liability should their operations have failed to adequately investigate surface water, human health or the environment. In addition, OCD a responsibility for compliance with any other federal, state, or local la | ertain release notifications and perform corrective actions for releases ice of a C-141 report by the OCD does not relieve the operator of and remediate contamination that pose a threat to groundwater, cceptance of a C-141 report does not relieve the operator of | | | | | | | | | |
| Printed Name: | Title: | | | | | | | | | |
| Signature: | Date: | | | | | | | | | |
| email: | Telephone: | | | | | | | | | |
| OCD Only | | | | | | | | | | |
| Received by: | Date: | | | | | | | | | |
| Approved Approved with Attached Conditions of A | Approval Denied Deferral Approved | | | | | | | | | |
| Signature:] | Date: | | | | | | | | | |

State of New Mexico Oil Conservation Division

| Incident ID | |
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| District RP | |
| Facility ID | |
| Application ID | |

Closure

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

| <u>Closure Report Attachment Checklist</u> : Each of the following to | items must be included in the closure report. |
|--|--|
| A scaled site and sampling diagram as described in 19.15.29. | 11 NMAC |
| Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection) | s of the liner integrity if applicable (Note: appropriate OCD District office |
| Laboratory analyses of final sampling (Note: appropriate OD | C District office must be notified 2 days prior to final sampling) |
| Description of remediation activities | |
| | |
| and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and re- human health or the environment. In addition, OCD acceptance of | ations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in |
| Printed Name: | Title: |
| Signature: | Date: |
| email: | Telephone: |
| | |
| OCD Only | |
| Received by: | Date: |
| | of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible /or regulations. |
| Closure Approved by: | Date: |
| Printed Name: | Title: |
| | |



| (A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.) | (R=POD bccn repl O=orpha C=the fil | laced, ned, | | `` | | | | | 2=NE | 3=SW 4=SI | 3) JAD83 UTM in m | atara) | (In fee | st) | |
|---|---|----------------|--------------|-----|-------------|-----|--------|--------|-----------|---------------|----------------------|------------------|------------------|-------------|----------|
| water right file.) | closed) | DOD | | (| qua | ner | s are | smane | st to rar | gest) (N | | leters) | (m tec |) | |
| | | POD Sub- | | 0 | Q | 0 | | | | | | | | W | ater |
| POD Number | Code | | County | | | | Sec | Tws | Rng | Х | Y | DistanceDep | thWellDepth | | |
| RA 11333 POD1 | | RA | ED | 1 | 4 | | 27 | 19S | 26E | 558262 | 3721747 🌑 | 2997 | 160 | | |
| <u>RA 04747</u> | | RA | CH | | 2 | 3 | 06 | 08S | 26E | 561256 | 3723273* 🌍 | 3630 | 105 | 12 | 93 |
| RA 04202 | | RA | СН | 3 | 3 | 3 | 25 | 085 | 25E | 559198 | 3716305* 🌍 | 3653 | 200 | | |
| RA 04202 CLW251916 | 0 | RA | СН | 3 | 3 | 3 | 25 | 08S | 25E | 559198 | 3716305* 🌍 | 3653 | 200 | | |
| <u>RA_06879</u> | | RA | CH | | 1 | 1 | 36 | 08S | 25E | 559300 | 3716002* 🌍 | 3906 | 140 | 35 | 105 |
| <u>RA 04807</u> | | RA | CH | | 4 | 2 | 01 | 08S | 25E | 560473 | 3723678* 🌍 | 3950 | 110 | 68 | 42 |
| <u>RA 06860</u> | | RA | CH | | | I | 36 | 08S | 25E | 559503 | 3715799* 🌍 | 4047 | 182 | 80 | 102 |
| <u>RA 04774</u> | | RA | CH | | 2 | 1 | 10 | 08S | 25E | 556444 | 3722471* 🌍 | 4878 | 43 | 21 | 22 |
| | | | | | | | | | | | Averag | ge Depth to Wate | er: | 43 fee | t |
| | | | | | | | | | | | | Minimum Dej | oth: | 12 fee | et |
| | | | | | | | | | | | | Maximum Dep | oth: | 80 fee | t |
| Record Count: 8 | | | | | | | | | | | | | 1 IV | | |
| UTMNAD83 Radiu | <u>s Search (i</u> | n meters |) <u>:</u> | | | | | | | | | | | | |
| Easting (X): 560 | 0477.41 | | Nortl | ing | ; (Y |): | 3719 | 727 | | | Radius: 5000 | | | | |
| *UTM location was derived | from PLSS | - see Help |) | | | | | | | | | | | | |
| The data is furnished by the | MMOSE/ISC | and in an | antad has th | A | ale l | ant | with (| ha ava | meend un | devetanding t | hat the OSE/ISC m | ke no warranties | expressed or imp | lied concer | nine the |

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WATER COLUMN/ AVERAGE DEPTH TO WATER



New Mexico Office of the State Engineer Point of Diversion Summary

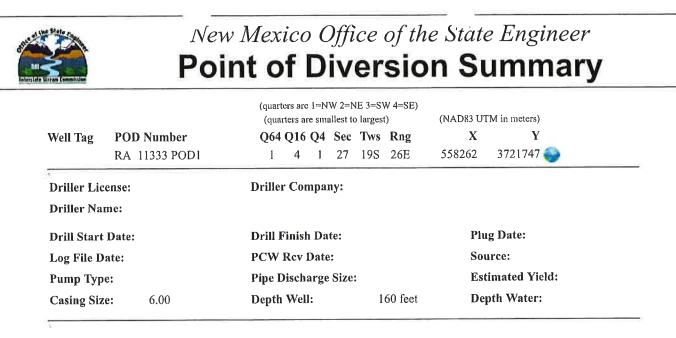
| | | | (quarters au (quarters a | | | | | (NAD83 U | TM in meters) | | |
|-----------------|-------|--------------------|-----------------------------|---------------|--------|---------|-----------|--------------|----------------|--|--|
| Well Tag | POD | Number | | | | Tws Rng | | X | Υ | | |
| | RA | 04747 | 2 | 3 | 06 | 08S | 26E | 561256 | 3723273* 🌍 | | |
| Driller Lice | ense: | 260 | Driller Co | mpa | ny: | CL | ARK, G. | J. | | | |
| Driller Nan | ne: | CLARK | | | | | | | | | |
| Drill Start Dat | | 01/01/1963 | Drill Finis | h Da | ite: | 0 | 1/01/1963 | 3 P I | ug Date: | | |
| Log File Da | ite: | 01/02/1963 | PCW Rev | PCW Rcv Date: | | | | | Source: | | |
| Ритр Туре | | | Pipe Disch | arge | e Size | :: | | Es | | | |
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| | 5 | | | 18 | | | | one/Grave | l/Conglomerate | | |
| | | | | | 45 | 4 | 7 Other/ | Unknown | | | |

*UTM location was derived from PLSS - see Help

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POINT OF DIVERSION SUMMARY



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POINT OF DIVERSION SUMMARY



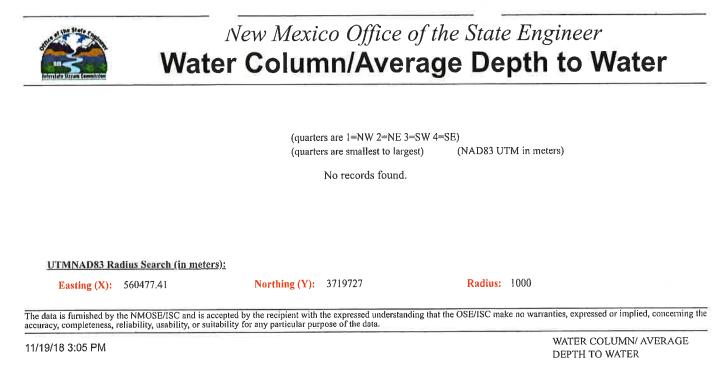
| | | (quarters are smallest | to largest) | (NAD83 UTM in meters) | |
|-------------|-----------------|------------------------|-------------|-----------------------|--|
| Well Tag | POD Number | Q64 Q16 Q4 Se | c Tws Rng | X Y | |
| | RA 04202 | 3 3 3 25 | 5 08S 25E | 559198 3716305* 🝚 | |
| Driller Lic | ense: | Driller Company: | | | |
| Driller Nar | ne: STEINBERGER | | | | |
| Drill Start | Date: | Drill Finish Date: | | Plug Date: | |
| Log File Da | ate: | PCW Rcv Date: | | Source: | |
| Pump Type | e: | Pipe Discharge Siz | :e: | Estimated Yield: | |
| Casing Size | e: 7.00 | Depth Well: | 200 feet | Depth Water: | |
| | | | | | |

*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.

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POINT OF DIVERSION SUMMARY



| MARATHO | ARATHON - HUSKEY-MCKAY FED 001 | | | | | | | | | | | | | |
|-----------|--------------------------------|-----------|-----|---------|----------|---------|---------|---------|-----|------|-------|--|--|--|
| Sample ID | Ft | Titration | PID | Lab-Chl | Lab-BTEX | Lab-GRO | Lab-DRO | Lab-MRO | TPH | Soil | Notes | | | |
| SP1 | SUR | 240 | 0 | | | | | | | | NORTH | | | |
| | 2' | 160 | 0 | 80 | <0.300 | <10 | <10 | <10 | <10 | CAL | | | | |
| SP2 | SUR | | 0 | | | | | | | | | | | |
| | 2' | | | | | | | | | | | | | |
| | 4' | | | | | | | | | | | | | |
| | 6' | 480 | | | | | | | | | | | | |
| | 8' | 160 | 0 | 32 | <0.300 | <10 | <10 | <10 | <10 | CAL | | | | |
| SP3 | SUR | 240 | 0 | | | | | | | | | | | |
| | 2' | 400 | 0 | 272 | <0.300 | <10 | <10 | <10 | <10 | CAL | | | | |
| SP4 | SUR | 400 | 0 | | | | | | | | | | | |
| | 2' | 1280 | 0 | | | | | | | | | | | |
| | 4' | 480 | 0 | | | | | | | | | | | |
| | 6' | 560 | 0 | 608 | <0.300 | <10 | <10 | <10 | <10 | CAL | | | | |
| | 8' | 400 | 0 | | | | | | | | | | | |
| | 10' | 400 | 0 | 160 | <0.300 | <10 | <10 | <10 | <10 | CAL | | | | |
| SP5 | SUR | 880 | 0 | | | | | | | | | | | |
| | 2' | 1840 | 0 | | | | | | | | | | | |
| | 4' | 1440 | 0 | | | | | | | | | | | |
| | 6' | 2720 | 0 | | | | | | | | | | | |
| | 8' | 160 | 0 | | | | | | | | | | | |
| | 10' | 160 | 0 | 176 | <0.300 | <10 | <10 | <10 | <10 | CAL | | | | |
| SW1 | SUR | 160 | 0 | | | | | | | | | | | |
| | 1' | 160 | 0 | | <0.300 | <10 | <10 | <10 | <10 | CAL | | | | |
| SW2 | SUR | 360 | 0 | | | | | | | | | | | |
| | 1' | 160 | 0 | - | <0.300 | <10 | <10 | <10 | <10 | CAL | | | | |
| SW3 | SUR | 160 | 0 | | | | | | | | | | | |
| | 1' | 160 | 0 | 80 | <0.300 | <10 | <10 | <10 | <10 | CAL | | | | |
| SW4 | SUR | 160 | 0 | | | | | | | | | | | |
| | 1' | 160 | 0 | 48 | <0.300 | <10 | <10 | <10 | <10 | CAL | | | | |

| Closure S | Samples | | | | | | | | | | |
|-----------|---------|-----|---|-----|--------|-----|-----|-----|-----|-----|--|
| SW1 | SUR | 612 | 0 | | | | | | | | |
| | 1' | 240 | 0 | | | | | | | | |
| | 2' | 30 | 0 | <16 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SW2 | SUR | 46 | 0 | | | | | | | | |
| | 1' | <16 | 0 | <16 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SW3 | 1' | 160 | 0 | <16 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| | 2' | 160 | 0 | <16 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SW4 | 1' | 80 | 0 | | | | | | | | |
| | 2' | 160 | 0 | <16 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| Sample ID | Ft | Titration | PID | Lab-Chl | Lab-BTEX | Lab-GRO | Lab-DRO | Lab-MRO | TPH | Soil | Notes |
|-----------|-----|-----------|-----|---------|----------|---------|---------|---------|-----|------|-------|
| SP1 | SUR | 240 | 0 | | | | | | | | SOUTH |
| | 2' | 240 | 0 | 80 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SP2 | SUR | 480 | 0 | | | | | | | | |
| | 2' | 240 | 0 | 192 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SP3 | SUR | 160 | 0 | | | | | | | | |
| | 2' | 160 | 0 | 32 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SW1 | SUR | 480 | 0 | | | | | | | | |
| | 1' | 240 | 0 | 80 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SW2 | SUR | 400 | 0 | | | | | | | | |
| | 1' | 240 | 0 | 32 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SW3 | SUR | 160 | 0 | | | | | | | | |
| | 1' | 160 | 0 | 32 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SW4 | SUR | 160 | 0 | | | | | | | | |
| | 1' | 160 | 0 | 32 | <0.300 | <10 | <10 | <10 | <10 | CAL | |

| Closure | Samples | | | | | | | | | | |
|---------|---------|------|---|------|--------|-----|-----|-----|-----|-----|--|
| SW1 | 1' | 80 | 0 | | | | | | | | |
| | 2' | 80 | 0 | 32 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SW2 | 1' | 80 | 0 | | | | | | | | |
| | 2' | 30 | 0 | <16 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SW3 | 1' | 80 | 0 | | | | | | | | |
| | 2' | 80 | 0 | <16 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| SW4 | 1' | 1040 | 0 | | | | | | | | |
| | 2' | 1520 | 0 | 1720 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| | 3' | 1200 | | | | | | | | | |
| | 4' | 945 | | | | | | | | | |
| | 5' | 344 | | 240 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| | | | | | | | | | | | |
| COM | | 320 | 0 | 288 | <0.300 | <10 | <10 | <10 | <10 | CAL | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |



December 12, 2018

NATALIE GLADDEN

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: HUSKEY - MCKAY FED #001

Enclosed are the results of analyses for samples received by the laboratory on 12/11/18 8:40.

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/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated 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. Keine

Celey D. Keene Lab Director/Quality Manager



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

| Received: | 12/11/2018 | Sampling Date: | 12/06/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/12/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SP 2 - 8' (NORTH) (H803615-01)

| BTEX 8021B | mg/ | /kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/11/2018 | ND | 2.04 | 102 | 2.00 | 3.14 | |
| Toluene* | <0.050 | 0.050 | 12/11/2018 | ND | 1.98 | 99.1 | 2.00 | 1.92 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/11/2018 | ND | 1.88 | 93.8 | 2.00 | 2.99 | |
| Total Xylenes* | <0.150 | 0.150 | 12/11/2018 | ND | 6.02 | 100 | 6.00 | 2.83 | |
| Total BTEX | <0.300 | 0.300 | 12/11/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 104 9 | % 73.3-12 | 9 | | | | | | |
| 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 | 12/11/2018 | ND | 448 | 112 | 400 | 0.00 | |
| TPH 8015M | mg/ | /kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/11/2018 | ND | 204 | 102 | 200 | 2.82 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/11/2018 | ND | 214 | 107 | 200 | 1.22 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/11/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 114 9 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 121 9 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/11/2018 | Sampling Date: | 12/06/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/12/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SP 5 - 10' (NORTH) (H803615-02)

| BTEX 8021B | mg | /kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|-----------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/11/2018 | ND | 2.04 | 102 | 2.00 | 3.14 | |
| Toluene* | <0.050 | 0.050 | 12/11/2018 | ND | 1.98 | 99.1 | 2.00 | 1.92 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/11/2018 | ND | 1.88 | 93.8 | 2.00 | 2.99 | |
| Total Xylenes* | <0.150 | 0.150 | 12/11/2018 | ND | 6.02 | 100 | 6.00 | 2.83 | |
| Total BTEX | <0.300 | 0.300 | 12/11/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 105 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg, | /kg | Analyzed By: AC | | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 176 | 16.0 | 12/11/2018 | ND | 448 | 112 | 400 | 0.00 | |
| TPH 8015M | mg, | /kg | Analyze | Analyzed By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/11/2018 | ND | 204 | 102 | 200 | 2.82 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/11/2018 | ND | 214 | 107 | 200 | 1.22 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/11/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 111 9 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 120 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/11/2018 | Sampling Date: | 12/06/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/12/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SP 1 - 2' (SOUTH) (H803615-03)

| BTEX 8021B | mg/ | /kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/11/2018 | ND | 2.04 | 102 | 2.00 | 3.14 | |
| Toluene* | <0.050 | 0.050 | 12/11/2018 | ND | 1.98 | 99.1 | 2.00 | 1.92 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/11/2018 | ND | 1.88 | 93.8 | 2.00 | 2.99 | |
| Total Xylenes* | <0.150 | 0.150 | 12/11/2018 | ND | 6.02 | 100 | 6.00 | 2.83 | |
| Total BTEX | <0.300 | 0.300 | 12/11/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 106 9 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | /kg | Analyzed By: AC | | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 80.0 | 16.0 | 12/11/2018 | ND | 448 | 112 | 400 | 0.00 | |
| TPH 8015M | mg/ | /kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/11/2018 | ND | 204 | 102 | 200 | 2.82 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/11/2018 | ND | 214 | 107 | 200 | 1.22 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/11/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 102 9 | % 41-142 | 2 | | | | | | |
| Surrogate: 1-Chlorooctadecane | 105 9 | % 37.6-14 | 7 | | | | | | |

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/11/2018 | Sampling Date: | 12/06/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/12/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SP 2 - 2' (SOUTH) (H803615-04)

| BTEX 8021B | mg/ | 'kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/11/2018 | ND | 2.04 | 102 | 2.00 | 3.14 | |
| Toluene* | <0.050 | 0.050 | 12/11/2018 | ND | 1.98 | 99.1 | 2.00 | 1.92 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/11/2018 | ND | 1.88 | 93.8 | 2.00 | 2.99 | |
| Total Xylenes* | <0.150 | 0.150 | 12/11/2018 | ND | 6.02 | 100 | 6.00 | 2.83 | |
| Total BTEX | <0.300 | 0.300 | 12/11/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 107 9 | 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | kg | Analyzed By: AC | | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 192 | 16.0 | 12/11/2018 | ND | 448 | 112 | 400 | 0.00 | |
| TPH 8015M | mg/ | 'kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/11/2018 | ND | 204 | 102 | 200 | 2.82 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/11/2018 | ND | 214 | 107 | 200 | 1.22 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/11/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 105 9 | % 41-142 | 2 | | | | | | |
| Surrogate: 1-Chlorooctadecane | 113 9 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/11/2018 | Sampling Date: | 12/06/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/12/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SP 3 - 2' (SOUTH) (H803615-05)

| BTEX 8021B | mg/ | ′kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/11/2018 | ND | 2.04 | 102 | 2.00 | 3.14 | |
| Toluene* | <0.050 | 0.050 | 12/11/2018 | ND | 1.98 | 99.1 | 2.00 | 1.92 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/11/2018 | ND | 1.88 | 93.8 | 2.00 | 2.99 | |
| Total Xylenes* | <0.150 | 0.150 | 12/11/2018 | ND | 6.02 | 100 | 6.00 | 2.83 | |
| Total BTEX | <0.300 | 0.300 | 12/11/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 105 9 | % 73.3-12 | 9 | | | | | | |
| 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 | 12/11/2018 | ND | 448 | 112 | 400 | 0.00 | |
| TPH 8015M | mg/ | ′kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/11/2018 | ND | 204 | 102 | 200 | 2.82 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/11/2018 | ND | 214 | 107 | 200 | 1.22 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/11/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 103 9 | % 41-142 | 2 | | | | | | |
| Surrogate: 1-Chlorooctadecane | 110 9 | % 37.6-14 | 7 | | | | | | |

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Celez D. Keine

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 |

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

| Sampler - UPS - Bus | •• | venniquisitetto). | Mongue | Relinquished By: | analyses. All claims including service. In no event shall Carr affiliates or successors arising | PLEASE NOTE: Liability and | | | | - | CN | N. | | 14863615 | Lab I.D. | | FOR LAB USE ONLY | Sampler Name: | Project Location: | Project Name: | Project #: | Phone #: | City: | Address: | Project Manager: | Company Name: | ~ 1 | | | Page 8 of 8 |
|---------------------|------------------|--|--------------|--------------------------------|---|---|---------|--|-------------|------------|-------------|------------|-------------|--|-----------------------------|----------------|------------------|---------------|-----------------------|---------------|----------------|--------------------|------------------|----------------|------------------|---------------|--|---------------------------------------|-------|-------------|
| Bus - Other: | (Circle One) | | Cueto | Ľ | anayses, An cause including index on regignized and any origin cause whatsoers index or share one working and received by cardina within 30 days after completion of the applicable service. In no event shall Cardinate biable for indexnation consequential damages, including without initiation, business interruptions, to so of rests of profits houring by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, repardless of whether such claim is based upon any of the above stated reasons or otherwise. | PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort. | 17 5 | | SP3-2 (| 592-2' (5 | Sr1-2. (S | 2-10. (N | 2-8' (| | Sample I.D. | | 0 | Mon | Husken | | | | | | | marat | 101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476 | | abora | D D D |
| -0.20 | 9 | Time: | 40 | 100 | cause whatsoever shall be been equental damages, including with e of services hereunder by Cardin | ient's exclusive remedy for any c | | | South G | buth G | enth (| lorth) G | North) (| GIR | | NOMP. | _ | Custo | -meka | | Project Owner: | Fax #: | State: Zi | | | non Oil | nd, Hobbs, NM 88240 FAX (575) 393-2476 | | torie | NN |
| 497 Pres Pres | Sample Condition | Received By: | autara | Received By: | red waived unless made in writing and receive out limitation, business interruptions, loss of u rai, regardless of whether such claim is based | aim arising whether based in con | | | X | - | - - × | - | - × | # CO GRO WAS ⁻ SOIL OIL | NTAINER JNDWAT FEWATE | IS TER R | MATRIX | | Jud Dol | | | | Zip: | | | | | | N | |
| 7 | t CHECKED BY: | | Allala | nol. | g and received by Cardinal within ons, loss of use, or loss of profits i aim is based upon any of the abo | tract or tort, shall be limited to the | | | - | XI | 21 X | × 12 | X 12 | ICE / OTHE | R : BASE: COOL | | ESERV. | | は き し に 世 | DR | city: Julio | Address: 8908 Vale | Attn: Steve Type | Company: White | P.O. #: | 1#//S/ | | | | |
| | BY: | Linu | REMARKS: | Phone Result: Fax Result: | thin 30 days after completion of the ints incurred by client, its subsidiarie above stated reasons or otherwise. | to the amount paid by the client for the | | | 2/6/18 2:38 | 46/18 2:28 | 16/18 2:16 | 16/18 1:40 | 00:00 81/11 | DATE TIME | | | SAMPLING | - | 1010-0999 | 14137 | | le Avet | g' | ite Bullalo | | 8/19/59/69 | | CHAIN- | | |
| | throw and the | Matalie. G | Ŋ. | IL: 1 Yes 1 No | applicable s, | e | | | × | XXX | x | X | XXX | <u></u> | hli 377 Pt | Ex | | le | 2 | | | 210 | | | | | | OF-CUSTOI | | |
| | | Matalie. Gladden @ while buffalo.com Matalie. Gladden @ white buffalo.com | 2 | Add'l Phone #: Add'l Fax #: | | | | | | | | | | | | | | | | | | | | | - 1 | ANALYSIS F | Kush | CHAIN-OF-CUSTODY AND ANALYSIS REQUEST | | |
| | 7 | rite puffale | a. L 1 11-11 | | | _ | | | | | | | | | | | | | | | | | | | 6 | REQUEST V | 1 nddy | LYSIS REQ | | |
| | | D. Can | | | | _ | - | | | | | | | | | | | | | | | | | | - | 1.10 | 3118 | UEST | | |

Guine



December 17, 2018

NATALIE GLADDEN

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: HUSKEY - MCKAY FED #001

Enclosed are the results of analyses for samples received by the laboratory on 12/14/18 8:50.

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/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated 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. Keine

Celey D. Keene Lab Director/Quality Manager



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

| Received: | 12/14/2018 | Sampling Date: | 12/10/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/17/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 1 - 1' NORTH (H803657-01)

| BTEX 8021B | mg, | /kg | Analyze | ed By: ms | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/14/2018 | ND | 2.01 | 101 | 2.00 | 3.50 | |
| Toluene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.95 | 97.7 | 2.00 | 2.85 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.91 | 95.4 | 2.00 | 2.71 | |
| Total Xylenes* | <0.150 | 0.150 | 12/14/2018 | ND | 5.79 | 96.5 | 6.00 | 2.22 | |
| Total BTEX | <0.300 | 0.300 | 12/14/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 99.7 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg, | /kg | Analyze | ed By: AC | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 16.0 | 16.0 | 12/14/2018 | ND | 432 | 108 | 400 | 3.64 | |
| TPH 8015M | mg, | /kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.7 | 200 | 0.439 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.4 | 200 | 0.217 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/14/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 74.9 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 75.7 | % 37.6-14 | 7 | | | | | | |

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/14/2018 | Sampling Date: | 12/10/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/17/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 2 - 1' NORTH (H803657-02)

| BTEX 8021B | mg/ | 'kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/14/2018 | ND | 2.01 | 101 | 2.00 | 3.50 | |
| Toluene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.95 | 97.7 | 2.00 | 2.85 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.91 | 95.4 | 2.00 | 2.71 | |
| Total Xylenes* | <0.150 | 0.150 | 12/14/2018 | ND | 5.79 | 96.5 | 6.00 | 2.22 | |
| Total BTEX | <0.300 | 0.300 | 12/14/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 101 9 | 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/kg | | Analyze | d By: AC | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 16.0 | 16.0 | 12/14/2018 | ND | 400 | 100 | 400 | 0.00 | |
| TPH 8015M | mg/ | kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.7 | 200 | 0.439 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.4 | 200 | 0.217 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/14/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 85.7 | % 41-142 | 2 | | | | | | |
| Surrogate: 1-Chlorooctadecane | 84.7 | % 37.6-14 | 7 | | | | | | |

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Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/14/2018 | Sampling Date: | 12/10/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/17/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 3 - 1' NORTH (H803657-03)

| BTEX 8021B | mg/ | ′kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/14/2018 | ND | 2.01 | 101 | 2.00 | 3.50 | |
| Toluene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.95 | 97.7 | 2.00 | 2.85 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.91 | 95.4 | 2.00 | 2.71 | |
| Total Xylenes* | <0.150 | 0.150 | 12/14/2018 | ND | 5.79 | 96.5 | 6.00 | 2.22 | |
| Total BTEX | <0.300 | 0.300 | 12/14/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 99.0 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | ′kg | Analyze | d By: AC | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 80.0 | 16.0 | 12/14/2018 | ND | 400 | 100 | 400 | 0.00 | |
| TPH 8015M | mg/ | ′kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.7 | 200 | 0.439 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.4 | 200 | 0.217 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/14/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 84.9 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 86.1 | % 37.6-14 | 7 | | | | | | |

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Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/14/2018 | Sampling Date: | 12/10/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/17/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 4 - 1' NORTH (H803657-04)

| BTEX 8021B | mg/ | ′kg | Analyze | d By: ms | | | | | |
|--------------------------------------|-------------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/14/2018 | ND | 2.01 | 101 | 2.00 | 3.50 | |
| Toluene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.95 | 97.7 | 2.00 | 2.85 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.91 | 95.4 | 2.00 | 2.71 | |
| Total Xylenes* | <0.150 | 0.150 | 12/14/2018 | ND | 5.79 | 96.5 | 6.00 | 2.22 | |
| Total BTEX | <0.300 | 0.300 | 12/14/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | <i>99.7</i> | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | ′kg | Analyze | d By: AC | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 48.0 | 16.0 | 12/14/2018 | ND | 400 | 100 | 400 | 0.00 | |
| TPH 8015M | mg/ | ′kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.7 | 200 | 0.439 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.4 | 200 | 0.217 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/14/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 87.4 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 87.0 | % 37.6-14 | 7 | | | | | | |

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Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/14/2018 | Sampling Date: | 12/10/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/17/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 1 - 1' SOUTH (H803657-05)

| BTEX 8021B | mg/ | kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/14/2018 | ND | 2.01 | 101 | 2.00 | 3.50 | |
| Toluene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.95 | 97.7 | 2.00 | 2.85 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.91 | 95.4 | 2.00 | 2.71 | |
| Total Xylenes* | <0.150 | 0.150 | 12/14/2018 | ND | 5.79 | 96.5 | 6.00 | 2.22 | |
| Total BTEX | <0.300 | 0.300 | 12/14/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 100 9 | 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | kg | Analyzed By: AC | | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 80.0 | 16.0 | 12/14/2018 | ND | 400 | 100 | 400 | 0.00 | |
| TPH 8015M | mg/ | kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.7 | 200 | 0.439 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.4 | 200 | 0.217 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/14/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 75.6 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 74.8 | % 37.6-14 | 7 | | | | | | |

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

| Received: | 12/14/2018 | Sampling Date: | 12/10/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/17/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 2 - 1' SOUTH (H803657-06)

| BTEX 8021B | mg/ | 'kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/14/2018 | ND | 2.01 | 101 | 2.00 | 3.50 | |
| Toluene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.95 | 97.7 | 2.00 | 2.85 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.91 | 95.4 | 2.00 | 2.71 | |
| Total Xylenes* | <0.150 | 0.150 | 12/14/2018 | ND | 5.79 | 96.5 | 6.00 | 2.22 | |
| Total BTEX | <0.300 | 0.300 | 12/14/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 99.5 | % 73.3-12 | 9 | | | | | | |
| 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 | 12/14/2018 | ND | 400 | 100 | 400 | 0.00 | |
| TPH 8015M | mg/ | kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.7 | 200 | 0.439 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.4 | 200 | 0.217 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/14/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 92.8 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 92.0 | % 37.6-14 | 7 | | | | | | |

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/14/2018 | Sampling Date: | 12/10/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/17/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 3 - 1' SOUTH (H803657-07)

| BTEX 8021B | mg/ | 'kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/14/2018 | ND | 2.01 | 101 | 2.00 | 3.50 | |
| Toluene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.95 | 97.7 | 2.00 | 2.85 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/14/2018 | ND | 1.91 | 95.4 | 2.00 | 2.71 | |
| Total Xylenes* | <0.150 | 0.150 | 12/14/2018 | ND | 5.79 | 96.5 | 6.00 | 2.22 | |
| Total BTEX | <0.300 | 0.300 | 12/14/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 101 9 | 73.3-12 | 9 | | | | | | |
| 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 | 12/14/2018 | ND | 400 | 100 | 400 | 0.00 | |
| TPH 8015M | mg/ | kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.7 | 200 | 0.439 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/14/2018 | ND | 195 | 97.4 | 200 | 0.217 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/14/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 91.6 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 90.5 | % 37.6-14 | 7 | | | | | | |

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Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/14/2018 | Sampling Date: | 12/10/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/17/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 4 - 1' SOUTH (H803657-08)

| BTEX 8021B | mg/ | kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/15/2018 | ND | 2.01 | 101 | 2.00 | 3.50 | |
| Toluene* | <0.050 | 0.050 | 12/15/2018 | ND | 1.95 | 97.7 | 2.00 | 2.85 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/15/2018 | ND | 1.91 | 95.4 | 2.00 | 2.71 | |
| Total Xylenes* | <0.150 | 0.150 | 12/15/2018 | ND | 5.79 | 96.5 | 6.00 | 2.22 | |
| Total BTEX | <0.300 | 0.300 | 12/15/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 102 9 | 73.3-12 | 9 | | | | | | |
| 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 | 12/14/2018 | 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 | 12/15/2018 | ND | 195 | 97.7 | 200 | 0.439 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/15/2018 | ND | 195 | 97.4 | 200 | 0.217 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/15/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 94.9 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 94.9 | % 37.6-14 | 7 | | | | | | |

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Celeg D. Keine

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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PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatscever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, whother business interruptors, loss of use, or loss of profits incurred by client, its subsidiaries, afflicate or successor arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

Page 10 of 11

| 101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476 Company Name: Wardthan Oul | 88240 -2476 | 8/14/ | | ANALYSIS REQUEST |
|---|---|---|--|---|
| Project Manager: Address: | | P.O. #: | | |
| City: State: | Zip: | 0 | 3 | |
| Phone #: Fax #: | | ss: 8908 Hale | We#210 | |
| Project #: Project Owner: | | city: Julla | | |
| ame: | | State: OK Zip: 7413 | 7 | |
| Project Location: Thuskey - mckay | 1 Jed 1 | Phone #: 918-660-0 | 200 | |
| Sampler Name: abod Hornar | diz | Fax #: | de | |
| | MATRIX | PRESERV. SAMPLING | - | |
| * RUSH* | RS TER | | E H | |
| Lab I.D. Sample I.D. | RAB OR (DNTAINE DUNDWA STEWATI L DGE | ier : D/Base: / Cool ier : | Chi BT TF | |
| | # C GF W/ SC OI | AC ICI OT DATE | TIME | |
| J-1-1 | × | 12/ioli8 | XX | |
| 3 SW3- 1 | | × 11/10/12/14 | V X X V | |
| Sw4-1' 1 | - | 12/10/18 1 | | |
| S I | G- X | × 12/10/18 12:51 | XX | |
| | G1 X | × 12/10/mg 1: | :24 × × × | |
| 7 Sw3-1 South | G I X | × 12/10/18 1: | XXX | |
| 8 sw4-1' South | G I X | × 12/0/3 2: | × × × 40: | |
| PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount cald by the client for the | edy for any claim arising whether based in contract | or tort, shall be limited to the amount paid by the | dient for the | |
| analyses. All claims including those for negligence and any other cause whatsoer shall be denoted whete undest made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be lable for incidental to consequential dranages, including without limitation, business interruptions, loss of vece, in the soft or port incidental to vece the services of ports including the services of each strain of the services of each strain of the service of the services of ports including the services in any other services and any other services the services the services the services the services the services the services of the services of the services of the services the services the services the services the services the services of the services the servi | shall be deemed waived unless made in writing and including without limitation, business interruptions, li der by Cardinal, regardless of whether such claim is | received by Cardinal within 30 days after comple oss of use, or loss of profits incurred by client, its s based upon any of the above stated reasons or | ution of the applicable subsidiaries, otherwise. | |
| Relinquished By: | 18 Received By: | Fax | Phone Result: Ves No | Add'l Phone #: Add'l Fax #: |
| Mongue Cueto Time; 50 | Daning Burne L | lealing REN | REMARKS: | 11 O hits building on m |
| Time: | | (| Matalue. Cil | Matalue. Gladelen (o white buffalle. can. |
| Delivered By: (Circle One) | | on CHECKED BY: (Initials) | Throw and and | |
| Sampler - UPS - Bus - Other: - 8.30 | 197 TYE | -1 | to to | |

Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

+ Cardinal rannot arrent verhal channes Dleace fav written channes to (272) 202_0208

米氏りらせ米



December 28, 2018

NATALIE GLADDEN

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: HUSKEY - MCKAY FED #001

Enclosed are the results of analyses for samples received by the laboratory on 12/27/18 15:00.

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/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated 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. Keine

Celey D. Keene Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/20/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | CLOSURE | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SOUTH COMPOSITE (H803795-01)

| BTEX 8021B | mg/ | ′kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 103 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg, | ′kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 288 | 16.0 | 12/28/2018 | ND | 400 | 100 | 400 | 7.69 | |
| TPH 8015M | mg/ | ′kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 83.0 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 78.7 | % 37.6-14 | 7 | | | | | | |

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/20/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | CLOSURE | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: NORTH COMPOSITE - 6' (H803795-02)

| BTEX 8021B | mg/ | /kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 102 9 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | /kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 624 | 16.0 | 12/28/2018 | ND | 400 | 100 | 400 | 7.69 | |
| TPH 8015M | mg/ | /kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 84.8 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 80.4 | % 37.6-14 | 7 | | | | | | |

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/21/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | CLOSURE | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 1 - 2' NORTH (H803795-03)

| BTEX 8021B | mg/ | /kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 98.7 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | /kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | <16.0 | 16.0 | 12/28/2018 | ND | 400 | 100 | 400 | 7.69 | |
| TPH 8015M | mg/ | /kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 86.5 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 83.0 | % 37.6-14 | 7 | | | | | | |

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Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/20/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | CLOSURE | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 1 - 2' SOUTH (H803795-04)

| BTEX 8021B | mg/ | 'kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 104 9 | 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | 'kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 32.0 | 16.0 | 12/28/2018 | ND | 400 | 100 | 400 | 7.69 | |
| TPH 8015M | mg/ | kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 84.4 | % 41-142 | 2 | | | | | | |
| Surrogate: 1-Chlorooctadecane | 80.7 | % 37.6-14 | 7 | | | | | | |

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Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/20/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | CLOSURE | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 2 - 1' NORTH (H803795-05)

| BTEX 8021B | mg/ | ′kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 103 9 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | ′kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | <16.0 | 16.0 | 12/28/2018 | ND | 400 | 100 | 400 | 7.69 | |
| TPH 8015M | mg/ | ′kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 83.5 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 81.9 | % 37.6-14 | 7 | | | | | | |

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Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/20/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | CLOSURE | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 2 - 1' SOUTH (H803795-06)

| BTEX 8021B | mg/ | ′kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 101 9 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | ′kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | <16.0 | 16.0 | 12/28/2018 | ND | 400 | 100 | 400 | 7.69 | |
| TPH 8015M | mg/ | ′kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 80.0 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 79.3 | % 37.6-14 | 7 | | | | | | |

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/21/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | CLOSURE | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 3 - 2' NORTH (H803795-07)

| BTEX 8021B | mg/ | kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 101 9 | 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | 'kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | <16.0 | 16.0 | 12/28/2018 | ND | 400 | 100 | 400 | 7.69 | |
| TPH 8015M | mg/ | 'kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 82.5 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 81.1 | % 37.6-14 | 7 | | | | | | |

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/21/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | CLOSURE | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 3 - 2' SOUTH (H803795-08)

| BTEX 8021B | mg/ | 'kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 101 9 | 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | 'kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | <16.0 | 16.0 | 12/28/2018 | ND | 400 | 100 | 400 | 7.69 | |
| TPH 8015M | mg/ | 'kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 80.2 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 78.0 | % 37.6-14 | 7 | | | | | | |

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/21/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | CLOSURE | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 4 - 2' NORTH (H803795-09)

| BTEX 8021B | mg/ | ′kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 99.8 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | ′kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | <16.0 | 16.0 | 12/28/2018 | ND | 400 | 100 | 400 | 7.69 | |
| TPH 8015M | mg/ | ′kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 83.7 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 81.5 | % 37.6-14 | 7 | | | | | | |

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/21/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | CLOSURE | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 4 - 2' SOUTH (H803795-10)

| BTEX 8021B | mg/ | ′kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 101 9 | 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | ′kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 1720 | 16.0 | 12/28/2018 | ND | 416 | 104 | 400 | 0.00 | |
| TPH 8015M | mg/ | ′kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 82.0 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 80.5 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

- 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

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claims based upon any of the above stated reasons or otherwise. Results relate only to the sample identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

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| Marathon Oil BILL TO ANALYSIS Callie Kaugan P.O. #: State: Zip: Attn: Steve Mc Farlin Analysis | State: Zip: Attn: Steve Type For Int | | Aver. | 1ress: 8908 4 | Ado | | Fax #: | | Phone #: | | |
| Marathon Oil BILL TO ANALYSIS Callie Karigan P.O. # company: White Bullato | 575) 393-2326 FAX (575) 393-2476 Marathan Oil ANALYSIS Collie Kougan P.O. #: Collie Kougan company: Whitz Bullalo | | R | 1 n | Attr | Zip: | State: | | City: | | |
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| | (575) 393-2326 FAX (575) 393-2476 | | | BILLTO | | | n Oil | maratho | Company Name: | | |
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* RUSH*



December 28, 2018

NATALIE GLADDEN

WHITE BUFFALO

8908 YALE AVE #210

TULSA, OK 74137

RE: HUSKEY - MCKAY FED #001

Enclosed are the results of analyses for samples received by the laboratory on 12/27/18 15:00.

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/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated 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. Keine

Celey D. Keene Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/21/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | LEAK | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SP 1 - 2' (H803796-01)

| BTEX 8021B | mg, | /kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifie |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 96.3 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg, | /kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 80.0 | 16.0 | 12/28/2018 | ND | 416 | 104 | 400 | 0.00 | |
| TPH 8015M | mg, | /kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 79.1 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 78.1 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/21/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | LEAK | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SP 3 - 2' (H803796-02)

| BTEX 8021B | mg/ | /kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 90.9 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg, | /kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 272 | 16.0 | 12/28/2018 | ND | 416 | 104 | 400 | 0.00 | |
| TPH 8015M | mg, | /kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 85.8 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 84.3 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 12/27/2018 | Sampling Date: | 12/21/2018 |
|-------------------|-------------------------|---------------------|----------------|
| Reported: | 12/28/2018 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | LEAK | Sample Received By: | Tamara Oldaker |
| Project Location: | MARATHON OIL - | | |

Sample ID: SP 4 - 6' (H803796-03)

| BTEX 8021B | mg | /kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.70 | 85.0 | 2.00 | 3.29 | |
| Toluene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.76 | 87.9 | 2.00 | 3.13 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/28/2018 | ND | 1.75 | 87.3 | 2.00 | 3.36 | |
| Total Xylenes* | <0.150 | 0.150 | 12/28/2018 | ND | 5.19 | 86.6 | 6.00 | 3.28 | |
| Total BTEX | <0.300 | 0.300 | 12/28/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 87.3 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg | /kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 608 | 16.0 | 12/28/2018 | ND | 416 | 104 | 400 | 0.00 | |
| TPH 8015M | mg | /kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 12/28/2018 | ND | 185 | 92.4 | 200 | 1.69 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/28/2018 | ND | 223 | 112 | 200 | 5.94 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/28/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 87.5 | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 84.7 | % 37.6-14 | 7 | | | | | | |

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

- 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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PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the sample identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

| 5 | *RUSH* | |
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| PLEASE NOTE: Liability and Damages analyses. In me users shall Cardinate in service. In me users shall Cardinate in affiliates or successors arising out of or Relinquished By: Relinquished By: Defiveked By: Sampler - UPS - Bus | Project Manager: Address: City: Project #: Project Location: Sampler Name: For LAB I.D. Lab I.D. Lab I.D. Z 2 3 |) Jo 9 abed |
| Damages, Cardinal's liability and clien finale biable for inedigence and any other ca out of or related to the parformances o (Circle One) Bus - Other: | Hunden Ma Hunden Ma Sp1 - 21 Sp3 - 21 Sp4 - 61 | DDDCC BDCCC |
| ts exclusive remedy for any claim arising whether buse whatsoever shall be deemed waived unless me transmissing whether buse transmission have under the cardinal, regardless of whe pate: Time: Date: Time: Date: Time: Date: Control Received By: Time: Date: Control Received By: Control Received By: | Image: State in the state i | LOTIES |
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| n cruc, shall be limited to the amount paid by the composition of the above stated reasons are dupon any of the above stated reasons REI Cruck CED BY: | ICE/COOL SERV. SAMPLING COTHER: OTHER: DATE DATE DATE DATE | |
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| ю.com | | <u>UEST</u> |



January 10, 2019

NATALIE GLADDEN WHITE BUFFALO 8908 YALE AVE #210

TULSA, OK 74137

RE: HUSKEY - MCKAY FED #001

Enclosed are the results of analyses for samples received by the laboratory on 01/09/19 16:15.

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/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated 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. Keine

Celey D. Keene Lab Director/Quality Manager



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

| Received: | 01/09/2019 | Sampling Date: | 01/07/2019 |
|-------------------|-------------------------|---------------------|---------------|
| Reported: | 01/10/2019 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | MARATHON OIL - | | |

Sample ID: SW 4 - 5' SOUTH (H900062-01)

| BTEX 8021B | mg/ | /kg | Analyze | d By: ms | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 01/10/2019 | ND | 2.09 | 105 | 2.00 | 1.78 | |
| Toluene* | <0.050 | 0.050 | 01/10/2019 | ND | 2.22 | 111 | 2.00 | 3.34 | |
| Ethylbenzene* | <0.050 | 0.050 | 01/10/2019 | ND | 2.21 | 111 | 2.00 | 0.317 | |
| Total Xylenes* | <0.150 | 0.150 | 01/10/2019 | ND | 6.79 | 113 | 6.00 | 0.690 | |
| Total BTEX | <0.300 | 0.300 | 01/10/2019 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 99.1 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/ | /kg | Analyze | d By: AC | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 240 | 16.0 | 01/10/2019 | ND | 416 | 104 | 400 | 3.77 | |
| TPH 8015M | mg/ | /kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | <10.0 | 10.0 | 01/10/2019 | ND | 240 | 120 | 200 | 1.28 | |
| DRO >C10-C28* | <10.0 | 10.0 | 01/10/2019 | ND | 226 | 113 | 200 | 3.48 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 01/10/2019 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 89.3 | % 41-142 | 2 | | | | | | |
| Surrogate: 1-Chlorooctadecane | 83.0 | % 37.6-14 | 7 | | | | | | |

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 01/09/2019 | Sampling Date: | 01/07/2019 |
|-------------------|-------------------------|---------------------|---------------|
| Reported: | 01/10/2019 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | MARATHON OIL - | | |

Sample ID: SP 4 - 8' (NORTH) (H900062-02)

| BTEX 8021B | mg/kg | | Analyze | d By: ms | | | | | |
|--------------------------------------|-----------------|-----------------|-----------------|--------------|--------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 01/10/2019 | ND | 2.09 | 105 | 2.00 | 1.78 | |
| Toluene* | <0.050 | 0.050 | 01/10/2019 | ND | 2.22 | 111 | 2.00 | 3.34 | |
| Ethylbenzene* | <0.050 | 0.050 | 01/10/2019 | ND | 2.21 | 111 | 2.00 | 0.317 | |
| Total Xylenes* | <0.150 | 0.150 | 01/10/2019 | ND | 6.79 | 113 | 6.00 | 0.690 | |
| Total BTEX | <0.300 | 0.300 | 01/10/2019 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 97.5 % 73.3-12 | | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/kg | | Analyzed By: AC | | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 160 16.0 | | 01/10/2019 | ND | ND 416 | 6 104 | 400 | 3.77 | |
| TPH 8015M mg/kg | | ′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 | 01/10/2019 | ND | 240 | 120 | 200 | 1.28 | |
| DRO >C10-C28* | <10.0 | 10.0 | 01/10/2019 | ND | 226 | 113 | 200 | 3.48 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 01/10/2019 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 88.9 | % 41-142 | 2 | | | | | | |
| Surrogate: 1-Chlorooctadecane | 82.4 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received: | 01/09/2019 | Sampling Date: | 01/07/2019 |
|-------------------|-------------------------|---------------------|---------------|
| Reported: | 01/10/2019 | Sampling Type: | Soil |
| Project Name: | HUSKEY - MCKAY FED #001 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | MARATHON OIL - | | |

Sample ID: COM - 8' (NORTH) (H900062-03)

| BTEX 8021B | mg/kg | | Analyze | d By: ms | | | | | |
|--------------------------------------|-----------------|-----------------|-----------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 01/10/2019 | ND | 2.09 | 105 | 2.00 | 1.78 | |
| Toluene* | <0.050 | 0.050 | 01/10/2019 | ND | 2.22 | 111 | 2.00 | 3.34 | |
| Ethylbenzene* | <0.050 | 0.050 | 01/10/2019 | ND | 2.21 | 111 | 2.00 | 0.317 | |
| Total Xylenes* | <0.150 | 0.150 | 01/10/2019 | ND | 6.79 | 113 | 6.00 | 0.690 | |
| Total BTEX | <0.300 | 0.300 | 01/10/2019 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PID | 97.3 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500Cl-B | mg/kg | | Analyzed By: AC | | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 128 16.0 | | 01/10/2019 ND | | 416 | 104 | 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 | 01/10/2019 | ND | 240 | 120 | 200 | 1.28 | |
| DRO >C10-C28* | <10.0 | 10.0 | 01/10/2019 | ND | 226 | 113 | 200 | 3.48 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 01/10/2019 | ND | | | | | |
| Surrogate: 1-Chlorooctane 90.9 % 41- | | % 41-142 | , | | | | | | |
| Surrogate: 1-Chlorooctadecane | 86.6 | % 37.6-14 | 7 | | | | | | |

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Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

| QR-03 | The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values. |
|-------|---|
| 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. Keine

Celey D. Keene, Lab Director/Quality Manager

| | Page 6 of 6 |
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| Ories | |

* RUSH*

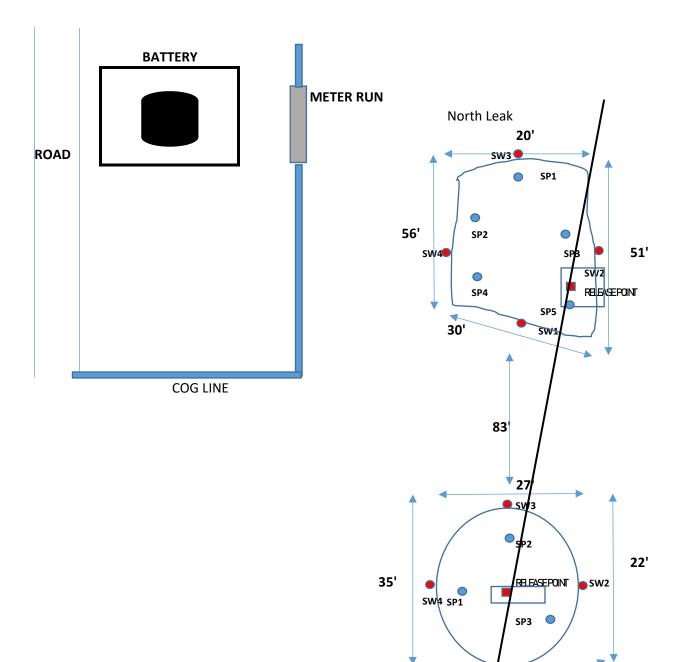
CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

| Company Name: Wavethon Oil | | ANALYSIS REOLIEST |
|--|---|--|
| Project Manager: Cally Kavigan | | |
| Address: | company: White Bullalo | |
| City: State: Zip: | | |
| Phone #: Fax #: | Address: 8908 Wale Avet 210 | |
| Project #: Project Owner: | las . | |
| Project Name: | State: OK Zip: 74/37 | |
| Project Location: Huskey - MCKay 2ed # | | |
| Sampler Name: | Fax #: | |
| FOR LAB USE ONLY | ESERV. SAMPLING | |
| (C)OMP. ERS | | EX |
| HOOOLOZ (G)RAB OR # CONTAINE GROUNDW/ | WASTEWAT SOIL DIL SLUDGE DTHER : ACID/BASE: CE / COOL DTHER : DA THE TIME | BT |
| 1544-5. South GI | × 1-7-19 1 | |
| 2 SP4-8. North GII | X X 1-7-19 1:30 - | 7 |
| ">Com - 8' North G 1 | × × 1-7-19 1:36 ~ | |
| | | |
| | | |
| | | |
| PLEASE NOTE: Liability and Damages. Cardinat's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the | hether based in contract or tort, shall be limited to the amount paid by the client for the | |
| anayses. All claims including mose for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applice service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, less of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. | oplic | able |
| And the stand of t | Fax Result: | Yes No Add'I Phone #: Yes No Add'I Fax #: |
| Time: 15 | JUNDOW REMARKS | |
| Received By: Time: | Lond | Matalie. Gladden @ white buffelo.com Matalie. Gladden @ white buffelo.com |
| | Sample Condition CHECKEDBY: | on gue, cuero co un lo |
| Sampler - UPS - Bus - Other: -6.644 | to No ANA | |

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+ Cardinal cannot accent verhal channes Dleace fav written channes to 15751 202-2228



South Leak

15'

SW1

12'

MARATHON - HUSKEY-MCKAY FED 001 RELEASE DATE: 12/4/18 API: 30-005-61616



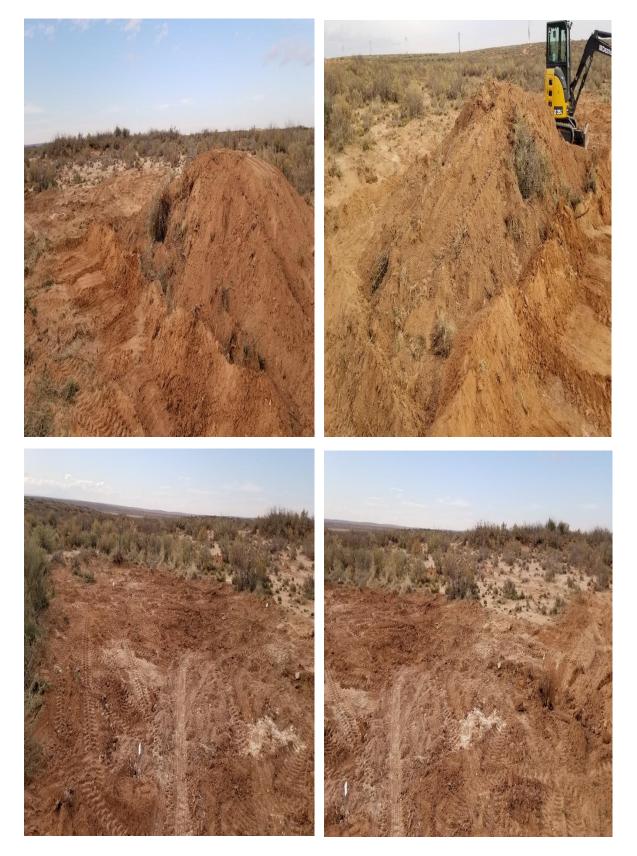


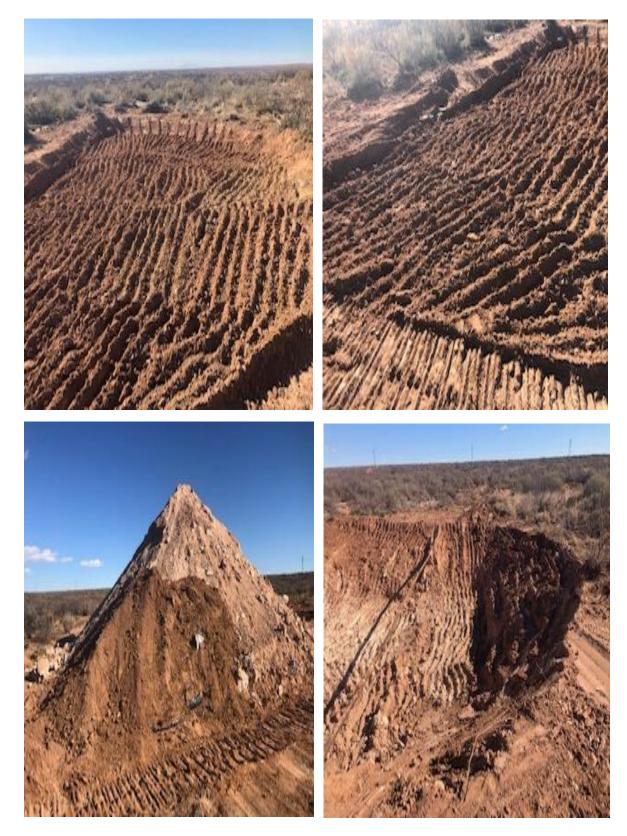








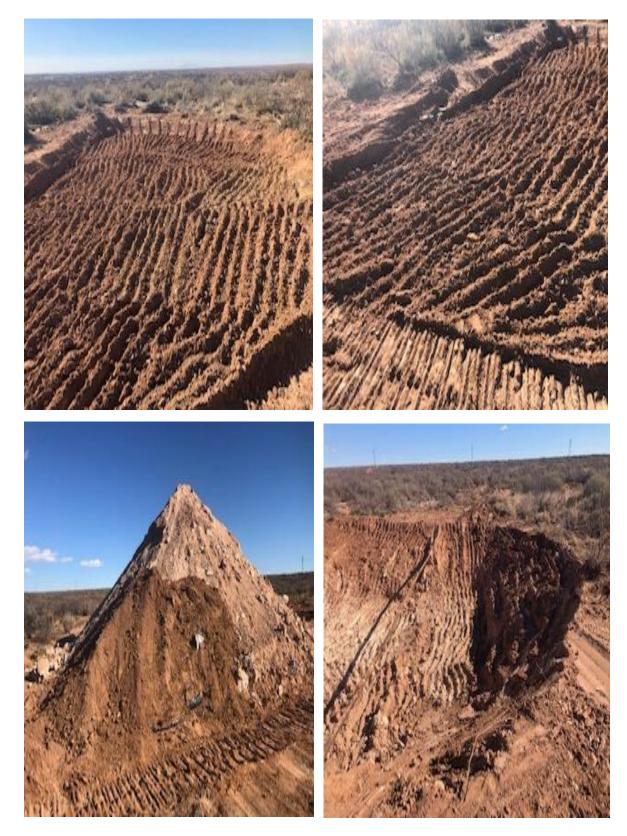










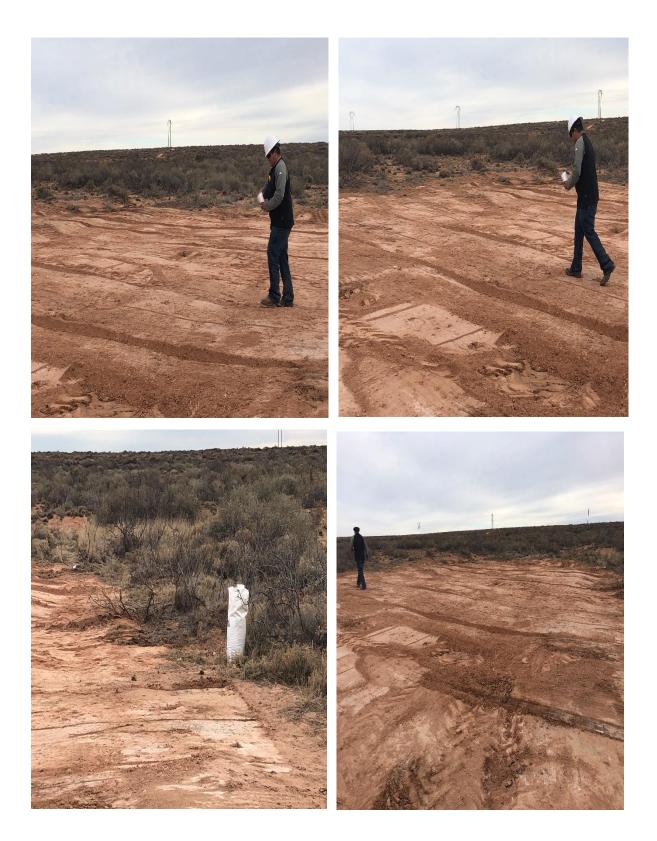




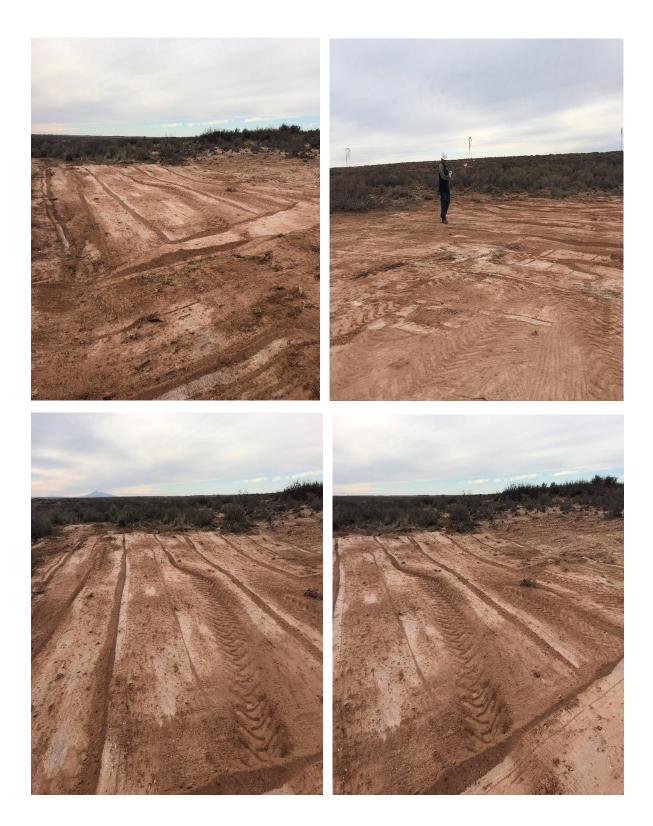




MARATHON HUSKEY-MCKAY 001 FLOWLINE LEAK AFTER SEEDING



MARATHON HUSKEY-MCKAY 001 FLOWLINE LEAK AFTER SEEDING



MARATHON HUSKEY-MCKAY 001 FLOWLINE LEAK AFTER SEEDING



Curtis and Curtis Seed

4500 North Prince Clovis, NM 88101 Phone: (575) 762-4759 www.curtisseed.com

White Buffalo Environmental 2 Acre Custom Mix 1 - 2 Acre Bag @ 20.94 Bulk Pounds

Total Test Total DIC

Lot#: M-15513

| | | | | | | | Total | Test | Total PLS | |
|---|---------------------|---|-------------|---------|-------------|---------|---------------|-------|-----------|--|
| | Item | Origin | | Purity | Germ | Dormant | Germination | Date | Pounds | |
| | Blue Grama | New Mexic | :0] | 10.73% | 34.00% | 55.00% | 89.00% | 11/18 | 2.00 | |
| | Variety Not St | ated | | | | | | | | |
| | Sand Dropseed | Colorado | | 9.84% | 4.00% | 93.00% | 97.00% | 04/18 | 2.00 | |
| | Variety Not St | ated | | | | | | | | |
| | Plains Bristlegrass | s Texas | | 9.95% | 18.00% | 78.00% | 96.00% | 07/18 | 2.00 | |
| | Variety Not St | ated | | | | | | | | |
| | Buckwheat | Missouri | 1 | 10.16% | 94.00% | 0.00% | 94.00% | 03/18 | 2.00 | |
| | Variety Not St | ated | | | | | | | | |
| | Four-Wing Saltbu | ishNew Mex | ico 🛛 | 11.37% | 84.00% | 0.00% | 84.00% | 08/18 | 2.00 | |
| | Variety Not St | ated | | | | | | | | |
| | Desert Globe Mall | low Mexico | | 9.65% | 99.00% | 0.00% | 99.00%(TZ) | 07/18 | 2.00 | |
| | Variety Not St | | | | | | | | | |
| | Alkali Sacaton | New Mexic | :0 2 | 29.54% | 95.00% | 2.00% | 97.00% | 07/18 | 6.00 | |
| | Variety Not St | ated | | | | | | | | |
| | | | | | | | | | | |
| (| Other Crop: | o: 0.38% There Are 1 Bags For This Mix | | | | | Total Bulk Pe | 20.94 | | |
| | Weed Seed: | 0.06% This Bag Weighs 20.94 Bulk Pounds | | | | | | | | |
| 1 | nert Matter: | 8.32% | Use T | his Bag | For 2 Acres | | | | | |
| | | | | | | | | | | |